

★

fc 630.5

p/

24





0 2007 1206386 2
California State Library

56057

★
fc 630.5

P1

v. XXIV

July-Dec.

1882

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, JULY 1, 1882.

Number 1

The National Holiday.

The revolving months have brought us again to the eventful July, and to the holiday of holidays in the United States—the anniversary of the Declaration of Independence. By common consent and long usage, the Fourth of July has come to be regarded as the harvest time of patriotic thoughts and expressions, and is the day which both young and old Americans delight to honor, each in their own way. With the young it is a day of spectacles and tumult; with the old it is a rest and recreation, coupled with patriotic reflections and prophecies. To all, the day is welcome.

It has become trite to allude to the items of our national progress. The orations and essays of the Centennial year gave the country such a feast of these patriotic effusions that the appetite has cloyed of them, and the tendency has been of late to make Fourth of July eloquence assail the weaknesses of the nation, rather than extol its virtues. This is well enough, for the hosts of abuses and oppressions practiced by those in power and privilege have made the statement of the Declaration, that all men were created free and equal, seem a cruel satire. And yet, while one is keenly conscious of the defects of our governing, which admits of extortion by privileged classes, or malfassance by those in positions of trust, it must not be forgotten that, in these evils, we are not alone in the world, or that, if one should attempt to escape these wrongs by emigration to other lands, it would be but flying to illa we wot not of.

Every nation is entitled to be judged by its best work. This is the principle in ranking an artist or an author, and this is what we, as people, have a right to demand in all judgments passed upon our institutions. Moreover, no people can be fairly condemned for evils which they themselves see and acknowledge, and which they are struggling to remove. It is those who are enamored of their vices, or insensible to their evil conditions, that deserve the sharp sting of the satirist; those who are casting about for the means whereby to escape from bad conditions are entitled to encouragement and co-operation. But it is no new thing among satirists for them to fiercely denounce vices after every one has acknowledged them to be vices, and to send all their arrows at those who have thrown down their arms.

There is, no doubt, a less effective general administration of affairs here than abroad; but, before we take this too much to heart, it would be well to inquire into the compensating circumstances. We should scarcely be the gainers if we substituted the slovenly streets of our cities for the elegant boulevards of Paris, if, in so doing, we should have to saddle ourselves with Napoleonism. It is not difficult for arbitrary will to remedy a hundred minor evils; communities so governed always make the best show to the eye, and are superficially under far better regulation. There is no need of pointing out at what cost this elegance and outward serenity are purchased. One cannot deny the superiority in many particulars—by no means in all—of English law and administration; but it is clear we should be the losers if we bought with all this authority and smooth order, the supremacy of a class, the centralization of land and wealth, the impoverishment of the mass. It is not to be denied that we might have, and ought to

have, many of the advantages of foreign systems, without losing any that we now possess; it is, moreover, certain that, in time, we shall attain many of them; but in Nature and law there are always compensations, and hence we should not be in despair, even if a government, in pursuit of its own principle of the largest liberty, the largest space for unrestrained indi-

regulations which shall restrain public servants from assuming the place and prerogatives of masters.

There is good reason, then, for congratulation and rejoicing over our national progress. Our position in trade and manufactures, in fact, our industrial character generally, is the wonder and admiration of the

The Earthquake.

The severest earthquake which has visited the State since 1868 arrived on Tuesday morning at about half-past five. It frightened timid people, but did no bodily harm, as far as we have heard. The most interest in the event seems to have been manifested in San Jose, where hundreds of people rushed into the streets, many of them in their night toilets. The vibration of the earth was, apparently, from east to west, and lasted, with decreasing severity, during about 20 seconds. There was first a severe shock or jerk, followed by a rolling movement and then a gradual settling. In many parts of the city the buildings suffered more or less, the plaster being loosened and the walls cracked. The court house withstood the shock without any injury, but the walls of Welch's brick building, on First street, those of the Home Mutual Insurance Company, on Santa Clara street, the Normal School and others were more or less cracked. The Normal School suffered the worst, the walls being cracked in several places; in one place a cross section of the wall being separated entirely from the main wall running east and west. The building, however, is not damaged so as to render it unsafe. In other places, further west, the shock is reported as much more severe. In the Santa Cruz mountains reports come of broken windows and over-turned chimneys. One man reported the shock so severe where he was, in the mountains, as to throw him to the ground. No persons are reported injured.

The vibrations seem to have been more marked near the coast. At Stockton the shock was very slight.

How the Republic Gained a Citizen.

It is reported in anecdotes of the revolution, that on the day when the battle of White Plains occurred, Gen. Knyphausen, who commanded the German mercenaries, crossed the Hudson river, and with his troops took post about a mile from the Blue Bell tavern, preparatory to an assault on Fort Washington. That post was captured in the middle of November and Col. Ralle, of Knyphausen's army, who was killed at Trenton a few weeks afterward, made the Blue Bell his headquarters. Vandeventer's son then kept the tavern. He had a pretty sister, whose charms smote one of Ralle's aides so powerfully that he proposed marriage within 24 hours after they met. He was a fine-looking young Anspacher. He promised to remain in America when the war should be over, and vowed eternal fidelity to her. The maiden's heart was touched, first with sympathy, which speedily became transformed into the tender passion. Her mother consented to the marriage, but her brother stormed. The gallant Ralle, who had passed through a similar experience in his own country, favored the union, and, on the evening before his departure from the Blue Bell, the lovers were united in marriage, in the secrecy of the colonel's room, by the chaplain. The bride followed her husband in the chase of Washington across New Jersey, and the young Anspacher was slightly wounded, and was made a prisoner when his commander fell at Trenton. Refusing to be exchanged, he took the oath of allegiance to the newly declared republic at Morristown, and settled in east Jersey, where many of his descendants are now living.



THE HEROINE OF CONCORD. (See page 6.)

vidual action, should find it necessary to withhold its hands from some things that would be better if put under restrictions.

But it must be believed that the near future will bring great reforms in our national administration of affairs, so that our social system shall not be a fabric of petty tyrannies, while we still draw the breath of national freedom and independence. There has been great progress made of late in showing forth the discriminations, oppressions and extortions of monopolies. The courts have already held that the people had rights which must be respected. It is quite fair to believe that the movement will go on until men are found with courage and skill to frame

world. Our homes are improving, our children are enjoying educational advantages which the world cannot equal. In all our boundaries there is peace and plenty, while elsewhere wars rage and famine brings unuttered woes. Of a surety the national holiday of July, 1882, will be a goodly day to celebrate, and if the public demonstrations be far from the homes of some of our readers, they have still the opportunity for patriotic conversation or musings which may stir the blood and cheer the heart with patriotic pride. Let all, therefore, take part in the celebration, each in his own way, and thus show appreciation of our goodly heritage—a land of freedom and abundance.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Judge Temple's Decision.

EDITORS PRESS:—The long-looked-for decision in the Gold Run case has, at last, been rendered and published. The judgment was rendered in accordance with the prayer of the plaintiffs, and was based upon the truth of the complaint as set forth by them. Although a seeming triumph for the agriculturists, yet the decision is, virtually, a provisional license to hydraulic mining.

Judge Temple decrees that a perpetual injunction be enforced upon the defendants in the nuisance they are committing, but asserts, at the same time, that when they cause it to appear that efficient means have been provided to "impound, detain and hold back such tailings at any point in said American river above Alder creek, and that such means are sufficient to detain all boulders, cobble-stones, gravel and the heavier sand; then said defendants shall be entitled to have said decree vacated and set aside." In plain words, Judge Temple takes it upon himself to assert that he has been compelled to render a decision in accordance with the facts, but that he did so unwillingly, and would advise the hydraulic miners to construct dams for the retention of the "boulders, cobble-stones, gravel and the heavier sand," in order that he may have a pretense to rescind his decree.

Judge Temple has taken a position in this matter which he cannot sustain by any facts in the case. He claims that if the hydraulic miners succeed in holding back the heavier material, they will be exempt from any direct responsibility in the pollution of the natural waters. In his dependence upon the dams, which he proposes that they should build, he totally disregards the opinions of Col. Mendell and State Engineer Hall. In speaking of dams, Col. Mendell says, in his report to the War Department:

It may be asked whether the protection afforded in this way will be complete and include all grades of mining tailings. This cannot be claimed. The suspensory matter of fine sands and clay cannot be restrained in this way, or by any other method which does not provide a settling basin in which the water can be maintained in a quiescent state for some time. It may also be expected that during the flood stages in the early period of development, a certain portion of material of every grade may be suspended, and thus pass the crest of the barrier.

Mr. Hall states that from 40% to 60% of the debris of hydraulic mines consists of fine sand, clay and impalpable matter, which cannot be retained, except in an extensive settling reservoir. They recognize and point out both the inability of restraining this matter by a system of dams and its large share in the destruction of mining debris. The waters of our rivers would be as much polluted, and as unfit for domestic use and irrigation, even if they contained only the matter held in suspension, and if the navigability of the rivers was unimpeded by coarser material.

It is not the coarser grades of material alone that the agriculturist objects to. He is principally effected by that part of the debris—sand and clay—which succeeds in reaching the lower valleys and the mouths of the rivers. Of the 100,000 acres of land destroyed by mining debris, 95% of it is covered by material which is only deposited from suspension when the grade of the river bed is from eight to five feet per mile. According to Mr. Hall, 40% to 60% of this matter consists of fine sand and clay, and yet Judge Temple takes it upon himself to say that the nuisance will have been abated when the Gold Run company succeeds in impounding the coarser material, even if this 40% to 60% of fine material is carried in suspension by the rivers.

He totally overlooks the facts that we of the valleys will be satisfied with no less than entire justice; and that in promulgating a decree opposed, in spirit, at least, to the conclusions of the engineers in charge, he is making it too evident that his decision was influenced by other than purely judicial considerations. He has failed to uphold the equality before the law which is guaranteed by our Constitution to all citizens; for he says to us valley residents that we must be satisfied if we get a part of the hydraulic mining debris restrained, even if the water is still corrupted "with mud, and rendered less suitable for domestic and other purposes."

In our humble opinion we are satisfied that we have an inalienable right to the natural waters of our streams in their unpolluted purity and usefulness, and, until such rights are accorded and secured to us, no farmer of the whole Sacramento valley—and particularly of the seven counties lately banded together through their Supervisors for united action in this debris case—will rest content, and cease calling for justice to be administered in its simplicity and entirety. If Judge Temple decides that it is a nuisance to put 50,000,000 cubic yards of material in the American river, he cannot claim that the nuisance is abated if three-fifths of the matter be detained in the canyons by dams and other means. And more especially when he concedes that the matter held in suspension will still "corrupt the water with mud, and render it less suitable for domestic and other purposes."

In his 20th finding of facts Judge Temple states "that neither this State nor the United

States has licensed the defendants, or any mine, to dump his tailings into the stream, so as to be transported into any navigable river, stream or bay; nor has this State legalized the same; nor have the Sacramento or American rivers been dedicated to the use of miners as a place of deposit, or for a way to transport mining material." And, in his decree, he turns right around and tells the Gold Run Mining & Ditch Co. that they shall have the use of the American river to carry off and to transport to the mouth of the Sacramento and Bay of San Francisco the 8,000,000 or 10,000,000 cubic yards of fine sand and clay. To a learned judge these two assertions may not seem to be at all at variance; but to the practical man of common sense, and who is acquainted with the facts of the case, the position taken by Judge Temple seems inconsistent and untenable—not to say contradictory. We can look with some satisfaction to the fact that the judge was too honorable to decide in opposition to the facts and the present needs of the case, and that he has performed an unenviable duty, and one which has been shirked by some of our prominent judicial lights. There were undoubtedly great influences brought to bear, both directly and indirectly, in order to prejudice, willingly and otherwise, his decision.

Why the Issue is Against Hydraulic Mining.

Judge Temple does not seem to understand the reason for the farmers not objecting strenuously to other forms of mining than hydraulic. The principal reasons are three in number: 1. The amount of material deposited in the rivers from drift, placer and quartz mining is so insignificant as to merit no attention in the debris question. 2. The material is all suspensory, is only deposited in the rivers during high freshets, and is carried through the valley into the bays, never being largely deposited on the valley lands. 3. The nature of the material is such that a large per cent. of it makes good soil, whereas hydraulic debris is practically sterile. The former consists largely of alluvium and rock powder, with comparatively little sand and clay. Because the farmer, in the presence of hydraulic mining, does not complain of placer, quartz and drift mining, Judge Temple seems to think that they will be satisfied with a partial cessation of the injurious effects of hydraulic mining. He seems to have departed from his judicial power to an executive one. If we may not have full justice, what guarantee is there that it all may not soon be denied us?

If Judge Temple may tell us that water carrying fine sand and slickens must be accepted in lieu of the mechanically pure natural water, why may he not also tell us that we must accept gravel beds in place of our alluvial bottoms?

It is as much a nuisance to "corrupt the water with mud and to render it less suitable for domestic and other purposes" as it is to impair, temporarily, the navigability of a stream. The rivers are public property, and we, as citizens, have a right to enjoy to the utmost any advantages which may accrue from the use of the pure water. Because the hydraulic miners are above us, they have no right to use the waters in such a manner as to prevent our enjoying them. And if Judge Temple fancies that it is in his power to cause us to accept water fully loaded with clay and fine sand, in place of pure water, for "domestic and other uses," he has let his imagination run away with his knowledge.

Judge Temple admits that he is "somewhat moved to this by the consideration that otherwise mining cannot be prosecuted at all." It was his duty to administer justice simply as presented by the facts, and to leave out of consideration the effect it might have upon either of the parties in the action. If a man is suffering a nuisance at the hands of another, he is entitled to have the nuisance abated, irrespective of consequences to the infringer. The hydraulic miners are committing a nuisance, and it must be completely abated, even if the owners of the mines do suffer considerable losses thereby.

What is Gained by the Decision.

Unsatisfactory though the decision is, yet we have it now demonstrated judicially that the hydraulic miners are, at the present time, committing a nuisance. We knew that the law was on the side of the farmers, but are just becoming aware of the difficulty of securing an unbiased judicial opinion upon the equities of the case. The present Supreme Court will hardly evade a decision on the main points at issue; they have the decision of the sterling Judge Keyser, Judge Temple's decision, the support of the agricultural and commercial interests, and the demands of justice, which must, in the end, be appeased, to strengthen them in their determination to decide the case on its merits, rather than to evade a decision on it as did their predecessors.

If the Supreme Court sustains Judge Temple's decision, it will have the effect of excluding fully one-half of the present hydraulic miners from the controversy, for fully that part of the hydraulic mines could not support remedial measures and pay expenses. They will, therefore, become a losing investment, and the hydraulic method will be abandoned for some other process.

It will cause the hydraulic miners, as a class, to cease trying to evade the law, and to so conduct their business as not to interfere with the rights of others.

It will hold out to the valley residents the hope that they will, in the near future, be pro-

tected in their rights; and that they may still be allowed to spend their declining years in the homes of their youth.

If only this decision had been a straightforward and unequivocal one, and had assured protection in the future as well as in the present, we might have felt content with our efforts. But as it is, we must watch and wait; at the same time endeavoring to secure not only justice, but entire justice, and the integrity of our property, and those rights before the law which have so long been denied us.

M. H. DURST.

Wheatland, June 14, 1882.

Notes on Paraiso Springs.

EDITORS PRESS:—The tourist and health seeker can, at this season of the year, choose from several routes and find many interesting and pleasant features in either one he may select. There are many in other parts of the State, no doubt, who would enjoy the trip by the S. P. R. R., which, circling the bay, passes through San Mateo's palatial country villas, where wealth has been lavished on decorative arts. Passing rapidly the small towns and villages, soon the imposing city of San Jose is reached, and 50 miles of travel made. The passer sees but little of the city and is soon looking over a panorama of gardens, orchards and small farms, and some scattering remnants of Spanish grants, yet renting out to wheat growers, and lying almost unimproved and yearly growing poorer, like their owners. The whistle announces Gilroy, and 30 more miles have been added to the distance. (At this point the Hollister R. R. joins the main trunk.) Another short whirl among the San Juan hills brings you to Watsonville, the city of Pajaro valley, that rivals the county seat, Santa Cruz, for size and importance, and is 50 miles from San Jose. Here is a valley famed for richness and depth of soil, now mostly divided up in small farms and presenting nearly the picture of an Eastern farming community. Again you pass on between the hills and emerge soon into the valley of the Salinas, which is famed for good wheat lands, but is more sparsely settled, being held by several grants and some extensive interests that have been purchased, and only now are occupied by croppers or renters. At the distance of 18 miles from Watsonville, we reach Salinas City, the thriving county seat of Monterey county, a well-regulated inland city, with extensive territory from which to draw its patronage. If we are to judge from the church edifices, we would infer that they are giving some attention to theology. But we hasten on, passing the villages of Chualar and Gonzales, reach Soledad, the terminus of the S. P. R. R., 143 miles from San Francisco, about 5 o'clock p. m. Here sprung up a small town with three or four hotels, and a like number of livery stables. At the cars are the San Luis Obispo and the Paraiso Springs

Stage coaches waiting, and furnish the traveler with a change of programme. The new coach of the springs is quite inviting for ease and sight seeing. One hour's drive, crossing the Salinas river and valley, and gradually rising in the foot hills, brings you to a pleasant altitude to enjoy the view of a grand landscape.

Before you, in a spacious and picturesque lap of the mountains, you see a neat, cosy village of mansions and cottages, all so white and pure in the midst of shade trees, shrubs, vines and flowers, with the grand background of the Coast Range mountains towering up hundreds of feet higher, heavily covered with varied evergreen trees and shrubs. All that is picturesque and grand are before you—beauty and utility so happily blended. The site is protected from the harsh coast, north and west winds that are so cold and disagreeable at Soledad, yet open fully to the early sunlight, which will drive off the slight fog or dews that may settle at night. The multiplied laps, curves and folds of the sloping mountains would remind one of the artistic display of dress goods in show-windows. Bat, turning and looking back over the valley of the Salinas and Arroyo Seco, you have the grain fields, the cattle and sheep, the reaper and mower, the stage-coach and winding road, the trees, the distant cottages and the small city of Soledad; and beyond these is the extensive Gabilan range, forming a graceful frame-work for the picture on the north and east. From this central point the artist can get a fine panoramic view from every turn of his instrument, and a very fine view of the Paraiso Springs combination of hotel, mansions, cottages and camps, shady bowers, walks, bath-houses and recreation grounds, with ball alleys, shooting gallery and music-hall, and all fitted up with much care and good taste.

The Waters

Are flowing springs, hot and cold—sulphur, iron, magnesia and soda compound, hot and cold—and so happily compounded as to tempt the appetite for more and more after first imbibing, and from the first draught can be noticed beneficial effects on the system. They furnish warm and hot bathings of highly medicated natural waters; and their ample flow affords fresh supplies for successive bathers; nature's furnaces keep it always hot and ready.

The guests are daily treated to a free carriage ride. The ruins of the old Soledad Mission is yet one of the objects of interest to tourists here; and each must pay it a visit, as it speaks to each a lesson that after days will revive with interest. Tradition says that the

early fathers used these springs as restorers of health, and by way of great appreciation named the location Paradise. Their old vineyard now belongs to the springs and is still a prolific bearer.

The temperature of the water, in which are the plunge and side baths, is 120° Fahr., and by analysis shows 35.50 grains sulphate soda (Glauber salts) to the gallon. The diseases which seem to yield most readily to these waters are liver complaints, kidney trouble, eczema, dyspepsia, rheumatism, skin diseases, etc. The altitude and mildness of the climate, and rareness of fogs, make it a favorable resort for consumptives. Very favorable rates have been made with the railroad for the round trip from any station, including the stage fare both ways to depot, which ticket holds good for the season. This is a winter as well as summer sanitarium, and, judging by the specimens on the grounds while I was there, it gets some of the most robust and well-proportioned invalids that can be found anywhere (and the inference is that these gigantic, muscular frames owe much to these tonic waters for their extra proportions). A large number of families are making this their summer resort, and each year enlarges the circle of their acquaintance and the number of their patrons.

The railroad now takes away all the fatigue of the journey, and the visit, with Nature's own remedies, generally gives large evidence of benefits, if all are not cured. Man's failure often makes Nature's opportunity.

Mr. J. P. Reeve, the proprietor, seems to be an energetic business man, and has anticipated, apparently, all the real wants and necessities of the various classes who visit these natural sanitariums—cleanliness, neatness, convenience, and an entire absence and exclusion of everything that would offend good taste or mar the pleasure of guests of most sensitive tastes. But, to be sure and fill the whole bill, he has many choice, convenient, shady bowers for any sized camping parties, all convenient and yet retired. The ranch furnishes ample facilities for taking good care of carriage stock, if any should desire that accommodation. The stables of the springs also furnish livery accommodations for the guests. Those fond of fishing and hunting can have salmon spearing in the Salinas river, and trout fishing in the Arroyo Seco that runs up into the cool shades of the Coast Range mountains.

B. W. C.

THE APIARY.

Action Against Foul Brood.

A called meeting of the Ventura County Beekeepers' Association was held at Santa Paula, Saturday, June 10th. In the absence of the president, Mr. Wilkin took the chair, and stated the object of the meeting. He said the association had been called together for the purpose of devising means to rid the county of foul brood; as the present was not a very busy time for beekeepers, owing to the failure of the honey crop, he thought it a good time to make a united effort to get rid of the disease and prevent, if possible, its spreading to the mountains; he thought if it once got into the trees and rocks it would be impossible to check it, and beekeeping would become a very precarious business.

He suggested that a "foul brood inspector" be appointed to examine all apiaries where the disease existed, or was suspected to exist, and assist the owner to obliterate the disease.

Mr. Corey thought it too big an undertaking for one man; he thought there could be eight or ten persons found in the county with sufficient experience to assist in the work, and an inspector, if appointed, should be vested with power to appoint a sufficient number of deputies, so that the work might be thoroughly and speedily accomplished.

Wm. Strathearn thought that all the apiaries in the county should be examined, and certificates of health issued to those whose apiaries were found free from disease, and if any refused to have their bees examined, it would be an evidence that their bees were diseased, and that they were concealing the fact in order to sell out; but if no one would buy bees except from those who could show a certificate from an inspector appointed by the association, the habit of selling diseased bees would soon become obsolete, and all would be anxious to have their bees examined and the disease exterminated.

The convention coincided with Mr. Strathearn's views, and voted to appoint an inspector vested with power to appoint deputies and issue certificates to those whose bees were found free from disease.

R. Touchton was nominated for the position and elected by acclamation.

Mr. Corey moved that a tax of one cent per hive be levied on the members of the association, and suggested that all other beekeepers in the county contribute and forward to the Secretary a similar amount, for the purpose of creating a "foul brood fund," to defray the expenses of the inspector and his deputies. Motion carried. It was also thought advisable, where but few diseased colonies were found, to destroy them entire, the loss thus sustained to be made up by the association in bees, the owner bearing his proportion of the loss.

As to the extent of the disease, Mr. Ed-

mondson reported that he had had the disease in his apiary very bad. He thought he had got it reduced to less than a dozen cases, but was not certain; said he would be glad to have them examined by an expert and the diseased colonies destroyed.

Mr. Grimes said he thought he had got entirely rid of the disease, but nevertheless would be glad to have them examined, and if any cases were found he would destroy them; he expressed his willingness to assist in the work of eradicating foul brood, as did also Mr. Corey and others who had had experience with the disease.

As there was no other business to transact, the convention adjourned, to meet at Santa Paula the first Saturday in August.—*R. Touchlon, Sec., in "Signal."*

THE SWINE YARD.

Notes on Care and Food of Hogs.

We take from articles in the *National Live-stock Journal* the following notes on the care and feeding of swine:

Is the Pig a Filthy Animal?

The little animal that leads all our exports of animal products, and is likely to hold this lead for years to come, should not be charged with faults that belong primarily to his keepers. The pig is called the filthiest of our domestic animals; but this is made inseparable from his surroundings in most cases. The pig is a wonderful machine for the production of pork, bacon and hams. He is the greatest utilizer of food on the farm. He lays up in his body 20% of the dry substance of his food—a feat not performed by any other of our domestic animals—and proper provision should be made for the disposal of his excretion. The tidy dairyman cleans his cow stable every day, and some twice per day; but his pig pen is not cleaned till his pigs are likely to be submerged. Are the pigs or the owner chargeable with the filth?

Some years ago we tested the pig's disposition to keep clean where the opportunity was given, by placing in his pasture a shallow bath of clean water. This privilege was eagerly used, in preference to wallowing in a mud-hole some few rods off. This shallow bath was filled with fresh water three times per week, and it was noticed that the pigs seemed always to enjoy the renewal of the water. This certainly indicated a nice discrimination in cleanly habits.

Effects of Feeding Offensive Food to Pigs.

The prevailing notion that the hog has digestion equal to any undertaking in the way of converting crude or offensive food, leads many to give, in excessive quantities, whatever refuse happens to be on hand, whether spoiled grain, putrid meat, or other refuse. The result of such a mess, when given to a sow about to pig, or having a litter at her side, is inevitably damaging to the pigs. The milk glands act in such a case as an outlet for offending substances that get into the system through the stomach, or that, through any species of disordered action, are engendered within the system. From this it will readily be seen that the milk of an animal not in a perfect state of health must contain a considerable portion of the impurities that are, from hour to hour, given off.

The fact that poison taken into the system of the young, either human or brute, through the milk, acts so promptly, generally producing disorder of the stomach and bowels within a very few hours, is sufficient proof of the virulence of the poison, as well as of the importance of guarding against such accumulations within the system of the brood sow while suckling her young. Dry corn gives a tendency to feverishness. Too much sour slops, if the sow be debarred from access to the earth, ashes, charcoal, and like substances, capable of neutralizing the excess of acid, will derange digestion; the blood becomes impure, and, as stated, these impurities escape, in part, into the milk.

Morbid Appetite in Pigs.

We have found one quart of new-process linseed meal to each pig per day would satisfy when coal and ashes fail to do so. A quart of peas has also had a good effect. The pigs would crack the peas with great apparent relish. It is well, also, to mix a little finely pulverized bone with the salt when young hogs are fed almost wholly upon corn. Corn is deficient in phosphate of lime to form the growing bone. The bone may be prepared by burning, then pounding fine and grinding in a large coffee mill. But the bone meal, ground fine, may be purchased at three dollars per 100 lbs. Mix salt and ground bone in equal parts, and let pigs have access to it.

To explain the effect of the linseed meal and peas, we have only to remember that corn has only 1 1/2% of ash, while linseed meal has 6 1/2%; and this is rich in phosphate of lime or bone material, besides having three times as much muscle-forming matter. Peas have the same nutritive effect, only in a less degree. Linseed meal balances the corn and makes it a complete ration, satisfying all the wants of pigs. Cottonseed meal is the same class of food, a little less digestible. Wheat bran will have the same effect in a less degree. The pig feeder should endeavor to give a variety of food, not omitting scalded clover hay in winter and green clover in summer. This gives the bulk in food necessary to health.

FORESTRY.

Forest Trees of California—No. 2.*

Pacific Yew—(*Taxus brevifolia*.)

"Bows of the tough yew."—*Virgil*.

A tree 40 to 60, or even 75 ft. high, one to two (rarely three) feet in diameter; usually broadly conic in outline; sometimes more aspiring, but always of arboreal habit; body with a strong base, often unsymmetrically developed, or measuring one-fourth to one-third more in one diameter than another, covered with a flaky, thin, dark, cherry-red bark, rarely a little shreddy; long and slim branches, horizontal or slightly depending; twigs slender, in flat, fan-formed sprays, the shining green leaves, closely set on very short, tiny leaf-stems, arranged strictly in two rows, like redwood, hemlock, and trees of similar foliage, but rather darker, or richer, and much more glossy, varnished green, about three-fourths of an inch long, flat, line-like and sharp pointed, with a shade of lighter yellowish green beneath. The fruit is most charmingly ornamental, set underneath the finishing sprays in bright, translucent red fleshy cups, the oblong, cone-topped seed imbedded therein. This pretty pulpy cup is quite sweet and fruity—in short, edible.

Our yews are certainly not yellow-green, neither are they somber; for, first, the form is so free, open and airy, and the foliage such a cheerful, shining green, that it has altogether a vivacious effect; but were it dimly dense and formal, or dully dark and dirty in hue of bark, leaf, flower, or fruit, or stiff and heavy in any apparent sense, we might possibly, in some implied way, indorse, or at least copy, public sentiment. But, reader, if you please, put a beautiful sprig of it in our bouquet, cherry-rubbed fruit and all, and let it spirit us to the sweet spruce woods once more, happy as any child this side of Eden. Should any say, "It's in bad taste," why, then, we must refer them to the wise proverbs of gray antiquity, which declare there is no disputing about such matters, for they belong chiefly to that higher realm of yea, yea, and nay, nay. At all events, let us agree that the conic form, when duly open and free, is the lightest, as in this case noted; nor dwell long on the lengthened careless toss of horizontal branch and not too thickened spray, but winged with bright, perpetual verdure, perfect integrity of form, storm-proof against all ordinary contingencies, or with ready and vigorous replacement; tolerant of the most rigorous discipline, and patient of the greatest abuse, bright with those precious gemmed fruits in long succession, and that longevity "wherein the memory of man runneth not to the contrary." We say these, with unnumbered considerations, will forever commend the Pacific yew to our high estimation.

Although Homer and Virgil speak of "bows of the tough yew," they are not mentioned in English history until the time of the Saxons, when the wood became so popular as to be quite exhausted in many countries. Modern recreations of elite archery are largely and profitably reviving the old demand; the timber is now already being transported East and exported abroad. The matured heart timber is deep red or beefsteak colored, hard, heavy, and apt to be brittle if at all short or cross-grained; makes excellent pulleys, friction rollers, boxes, gudgeons, and for turning purposes in general is exceedingly valuable. Our species, at least, seems to stand well, for if half buried will slowly weather-wear away, but keeps its size and soundness below for ages. No doubt there are preferred sections in this as in all other timbers. The boughs, within moderate limits of tension, have the quick snap and short twang for the bow, like its renowned congeners, and have ever been used by the natives here as of yore, and by young America even unto our day. But some of our native tribes seem to prefer the willow-root bow for the belly, sinew-lined on the back, with ash for arrows, or the shoots of *tessaria borealis*. The Latin name *Taxus* is supposed to be derived from the Greek *Toxon*, a bow. It should be added that the bark is clean and thin, like madrono, sycamore, manzanita, and all such like trees, which, together with yew, flake off the old and renew their exterior bark every year. The flowers—male and female—are found on the same tree; staminate, or males, in little heads, seen solitary springing from axillary scaly buds, the yellow anthers standing out, shield or parasol shaped, with six to eight folds or cells opening beneath; the female, green, broad-scaly, at first like a tiny acorn, fairy cup and all, the upper united scale, or rather bractroid base, at length thickening into a nest-like, ruby-red, corollid, fleshy cup, the rim of which often becomes higher than the little nut-like seed that sits so pertly in it.

The Pacific yew is never naturally degraded, groveling low upon the ground, like the disconsolate Eastern one; and if we must needs personify it, like the true child of nature, or the barbarous Indian: Then let it be to him the "fighting wood," because he maketh of it the death-dealing bow; but to our more genial eye, it rejoices in a song of freedom and recreation, above, among the trees of the forest—after emblem of more elevated and cheerful views of life, or death, if you will, as only another and

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

higher step or birth in life, instinct with joy and gladness and the voice of melody.

It is found in the whole Coast range of California, and so northward to the Cascades, in Oregon, and to our Sierras, growing along cool, shady creek banks and in damp ravines and deep gorges, often in considerable numbers, as on Yew creek, in Mendocino county, and elsewhere, but never in groves.

Lumbering in the Mountains.

EDITORS PRESS:—While our people generally understand that our lumber is cut in the mountains in this State, I apprehend that few realize the enterprise required and the hardships attending the cutting and getting it out of localities where good saw timber can now be had. The timber suitable to make good lumber has long since been cut off the foothills, where the timber was easy, or comparatively easy, to get at, and the mill men are now forced to go further back into the mountains, where the canyons are very deep, and hills very steep and rugged.

I had the pleasure, a few days ago, of visiting the extensive mills and yards of Towle Bros., Dutch Flat, Placer county. There are three brothers of them, the oldest of whom, I suppose, does not exceed 45 years old. I am told they came to California (like most of us) without means, but had minds to work, and had (as subsequent developments have shown) plenty of pluck and energy. They, in common with other Californians and business men, have had their reverses, losses, hardships and trials; but, amid adversity or prosperity, they have always maintained a steady purpose, an unwavering integrity, as well as great energy. They were always, and are still polite, courteous, generous and accommodating, as well as honest. They commenced the lumbering business about the year 1859. Their first mill was a small water mill, cutting 3,000 to 4,000 ft. per day. Their next venture was also a water mill, but of larger capacity. This was near Dutch Flat. The next was a still larger mill on Canyon creek, above Alta, near what was then known as Zarr station, on the old wagon road. Next, they had a large steam mill at Cisco. Thence they went to Donner lake, during the time of constructing the Central Pacific railroad over the mountains. Here they built a mill of large capacity, and cut ties and shed timber for the railroad. From there they came back to this side and purchased a large mill on Canyon creek, at above Alta, and near where their principal yard, office, store and factory are now located, on the line of the C. P. R. R. Next, they built another mill still higher up the creek, and from that to their present mills, four in number—one near Emigrant Gap, the other three in Placer county, above Alta, located from two to ten miles from the line of the C. P. R. R. These are reached by a narrow-gauge railroad, which they have constructed over and through hills and canyons so steep and rugged that men of less enterprise would hardly have dared to attempt the construction of a mule trail. I have often traveled over rough country on railroads, but I think I have never seen as great a feat of engineering as this narrow gauge road. They have now in operation about 15 miles of this road, and are this summer constructing several miles more. They use about 50 cars and three locomotives. These roads are for drawing logs to the mills, and lumber from the mills out to the station or main line of the C. P. R. R. It is there loaded onto wide-gauge cars, and sent to market. Besides these cars and running locomotives, they have several stationary engines at different points along the line of their road, for drawing logs up out of steep canyons; they have tracks laid from these engine houses down into the steep canyons. In places, I should think the grade would equal an angle of 45°; the logs are snaked and drawn on tramways and skid roads to the lower end of the track in the gulches, and there loaded on cars and hauled up these steep tracks to the stationary engines, and from thence drawn by the locomotives to the mill. Their four mills have a capacity of 100,000 ft. every 12 hours.

Towle Bros. have in use about 150 oxen, 30 to 40 head of horses and mules; used last year about 750 tons of hay and 250 tons of barley. They are now working about 300 men, and have six or seven boarding houses in the mountains. They not only work up the saw timber on their lands, but work up the residue into wood and bring that out of the mountains on their railroad, same as their logs and sawed timber. They also have at Towles' station, near Alta, a large factory, where they manufacture, on an extensive scale, doors, windows, sash, blinds, mouldings, turning, fruit boxes, etc. They have eight telephones and 15 to 18 miles of line, reaching to their several mills and logging camps and also their residence and office at Dutch Flat. They are still enlarging and extending their business in all its departments. They say they now have timber enough to run them 10 years to come. They have branch yards at Newcastle, Wheatland and Tucson, Arizona. Notwithstanding their extensive facilities for getting out building material, they have not been able at all times to fill their orders. To be at their station on the C. P. R. R. for but one day and see the large force employed constantly in loading cars, one would naturally wonder where it could all be going to.

ROBT. WILLIAMSON.

Dutch Flat, June 23, 1882.

SHEEP AND WOOL.

The Mohair Industry.

"Sweet Hope! Celestial influence round me shed;
Waving your silver pinions o'er my head."—*Keats*.

EDITORS PRESS:—In a small work, issued from the Government printing office at Washington, on the "Origin and Growth of Sheep Husbandry, with Remarks on Angora Fleece," the compiler sums up as follows: "These facts show that the producers and manufacturers of Angora fleece have not yet arrived at a sufficiently clear understanding between themselves."

Having formed an identical conclusion, I at once wrote back to Mr. Farr a succinct statement of the misconceptions attending the mohair industry here, and told him that the buck whose fleece he had condemned was supposed to be pure, and, since he had cast discredit on his pedigree, I would be obliged to him to inform me where I could obtain an animal whose merits could be relied upon. Although the question appears to have been unexpected, his answer is far from being evasive:

HOLYOKE, Mass., July 10, 1877.

Martin Kirby, Angora Downs, Mariposa Co., California.—DEAR SIR:—Your favor of 26th instant, to hand, I am very sorry that I cannot give you such information as will put you on the track of getting pure blood in Angora goats.

We have received very nice hair from the following parties: Landrum & Rodgers, Cal., Charles Claggett, Cal., N. Gilmore, El Dorado Co., Cal., R. W. Scott, Lexington, Ky.

If I remember right, the best mohair of California growth, as a lot, was from Charles Claggett, although a few fleeces from Landrum & Rodgers were very choice. The bulk, however, of almost every lot received from the Pacific coast has been under the average of what good hair should be.

I am glad to note the anxiety you show to improve your stock. I have no doubt you will succeed.

I see the position you are placed in regard to getting pure blood bucks, and only wish I could give you some definite information.

Yours, truly,

H. M. FARR, Agent.

It was more in the excessive zeal of enthusiasm than in anticipation of such an answer that I wrote to Shirland & Thomas to know if they would sell the Sweepstakes buck of 1876, and at what figure. I was too late; he had been disposed of to a Calaveras company. The same year the goat sweepstakes for females was awarded to the Watsonville firm; so the 22d of January, 1877, found me in their corral, surrounded by 200 thoroughbreds. Neither the Sweepstakes nor her kid was for sale, the owner assuring me that if he were going to quit the business, he would just as soon sell to me as to any one; so I was obliged to be content with a female of scarcely less distinction, that had occupied a place in the first premium pen at the same exhibition. The price paid was \$200; expressage to Mariposa, \$20. As I had other business to transact, the goat is not charged with my expenses. Her pedigree being transferred to my records, and as I have to refer to them frequently in future, I forego the introduction of it here.

After the consummation of our transaction, but before leaving the corral, my attention was attracted to a couple of superannuated animals, whose general appearance indicated that they had seen better days. Consequently I asked the owner to set a price on them. There were six of them remaining—the last of the Georgia stock. If I would take them as a lot, I could have them at \$75 a head. If my associate approved of the transaction upon my return home, I would immediately forward the money.

There, in a dejected corner of the corral, stood the forlorn creatures, munching at their cud, with shrunken forms and tattered fleece, a woe-begone spectacle in comparison with the nymphs of the exhibition ground, who, in all the vigor and elasticity of youth, were flaunting the illusive drapery bequeathed to them by the imported Hercules.

At such a juncture I am reminded that even candor may become monotonous; and, as my pledge of April 1st to the professional element is unredeemed, in order to give variety to our subject, I will here introduce an illustration of their chronic abnegation:

Martin Kirby—DEAR SIR: We this day ship you six ewes, as per contract. Three of the old ewes died, two got chilled from shearing and a storm coming on them. We had to give you three younger ewes than we intended; but we never go back on a proposition, though we have lost \$100 on their sale. These are all good breeding ewes, when cared for, and the oldest one (No. 104) will bring four kids yet. We paid \$200 for her at two years old, and she has never missed a kid. The young ewe will show a fine fleece this year. If it were not for her fox ears she would be worth \$175 anywhere.—LANDRUM & RODGERS, Watsonville, March 23, 1877.

This is to certify that we have this day sold and shipped to Martin Kirby (73) six pure-breed Angora ewes, viz: One labeled "L. & R. 7," one "L. & R. 21," and one "L. & R. 35," all bred by ourselves from Peters' pure-breed ewes and imported bucks. Also one labeled, "Peters, 104," one of the ewes sent out by Holland, and billed "No. 1," one Peters, label "No. 112," and one "No. 35," all pure-breed ewes, ranging from four to 12 years old.

We have certified pedigrees for the purity of the Peters ewes, from Richard Peters, of Atlanta, Ga.—LANDRUM & RODGERS, Watsonville, March 23, 1877.

More anon. MARTIN KIRBY (73).

Darrab, Mariposa Co.

NEW DISINFECTANT.—Prof. Carlo Pavesi, of Italy, proposes as an improved disinfectant a solution composed of chloride of lime, camphor and glycerine. This mixture is capable of being used in all cases in which phenic acid is now employed, and its odor is less toxic than that of the latter. It is said to at once arrest the putrefaction of animal bodies, and is highly commended by the *London Medical Record*.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Temescal's Reunion.

[Written for the RURAL PRESS by CLARA DEMING.]

The good brothers and sisters of Temescal Grange favored other Patrons in the State with an invitation to be present with them at a reunion on June 17th, a day memorable in our national history, on which the "battle of Bunker Hill" was fought, more than a century ago.

This invitation was gladly accepted by several from Eden, Walnut Creek, Vallejo, Alhambra and Rio Vista Granges. Many others desired to attend, but circumstances over which they had no control forbade their journeying Temescal-ward. It was very gratifying to those of us thus situated to know that we were inquired after, and that those who were having such a good time could pause and wish we were there too.

They surely did have a good time, judging from the notes brought to us of this day's delights, participated in at Old Fellows' hall, in Oakland. The visitors were kindly received upon their arrival. W. M., C. Bagge, of Temescal, presided over the morning's closed meeting, and, as has been stated, this portion of the day was devoted to discussions upon the report of the committee appointed to confer with the League of Deliverance in regard to the question of the Chinese immigration. The resolutions were laid on the table, the Grange not caring to take action as a body on outside matters.

At one o'clock all serious matters were laid aside, and all became thoroughly imbued with the spirit of sociability as they proceeded to the banquet hall, there to make sad havoc of the tempting feast, spread in a manner most inviting. The table was decorated with a large number of handsome bouquets and set with all the home conveniences and luxuries. A pretty button-hole bouquet was placed beside every plate, each flower bearing with its perfume sweet savor of a kind, thoughtful heart somewhere in the background.

The viands were such as only noble Grange sisters know how to prepare. The beauty of the table was greatly enhanced by the liberal contribution of splendid cherries from Bro. J. V. Webster's fine orchard, in Fruit Vale. An hour or more was spent in this room, where wit, humor and interchange of various greetings were as freely passed around as the edibles.

Having satisfied the demands of the physical system, the members returned to the Grange room and the advertised open meeting held, W. M. Flint presiding. The indomitable spirit of our W. M., who was suffering from the effects of a cold, should give us new life in the Grange cause, and put some of us stay-at-homes to shame. Any man who will travel so far for the sake of giving pleasure to others, when he is sick enough to be at home under the best of care, ought to be recommended as a model Patron, as he is. Brother Flint believes in short speeches and something from every one, and, as nearly as we can learn, every brother and most of the sisters were called upon and gave their views upon the subjects brought up for consideration.

Little Miss Nellie Webster gave a declamation in a very satisfactory and pleasing manner; delighting and surprising her hearers with her ability. Thus a very pleasant afternoon was spent in genial fellowship until five o'clock, when the flying moments reminded them that home cares must be attended to and these pleasant reunions must all terminate somewhere. Adieus were soon spoken, and this day's proceedings placed upon memory's record-book beside others similarly spent.

Vallejo, Cal.

Whom to Vote For.

Now that election is approaching, the following remarks from an Eastern Grange exchange have especial weight here: There is much now said about the people electing men to office who are honest, and will do the will of their constituents. This is all very good, so far as it goes, but it is not enough. Honesty is one of the grandest traits of human character, but the statesman must not only be honest, but he must possess the requisite knowledge. It is a lamentable truth that a very large majority of our officials, at this time, do not possess the requisite knowledge to fit them for just and wise rulers. No person should be permitted to come before the people as a candidate for either State or national office without first passing a fair examination in the science of government and national economy. I would like to know how many of our State legislators and Congressmen could pass such an examination? It is a lamentable fact, that, at the present time, the requisite qualification for a candidate is to be skilled in the working of the machinery that is now running our Government. Ours is no longer a government of the people, but of party, and the first questions that come up in the selection of a candidate are: Is he true to our party? Is he a strong man? Is he a man that will beat our opponents? These are the all important characteristics of the candidates for office in the eyes of our leaders and of the people; and so long as this condition of things exists, there is no hope for the people to regain their power.

The Grange and the Country.

"Breathes there a man with soul so dead
Who never to himself hath said—
This is my own, my native land?"

Love of country is right, is proper, is born in us. Not alone the love of some valley or hillside, some mountain slope, some river's bank, but our whole country, our continent. As from the small colonies planted on the shores of the James, the Hudson, or by Plymouth Rock, has spread the grand tide of population that now covers all our States and Canada, from the Atlantic to the Golden Gate, or "where rolls the Oregon," so from humble efforts and small beginnings, our Order has grown and grown, rising as the morning sun, and spreading its bright beams of hope to the farmers all over our land, until it is the largest organization in America. —Grange Bulletin.

CONTRA COSTA ASSOCIATION MEETING.—A meeting of the stockholders of the newly incorporated Grangers' Warehousing and Business Association will be held in the Alhambra Grange hall, Martinez, on Monday, July 10th, at 10 o'clock A. M., for the purpose of adopting by-laws in accordance with the articles of incorporation.

Fourth of July Celebrations.

[Written for RURAL PRESS by CLARA DEMING.]

As civilization advances in our land, there seems to be a desire, among many of our people, for a better way of celebrating our nation's birthday, and keeping its earlier events fresh in the memory of our young people.

The general call seems to be for something new in the way of amusements on this day. The Yolo Mail makes a very good suggestion when it says: "Take the money heretofore spent for tomfoolery, and give it to the speakers and poets and musicians. Offer prizes for the best essays and declamations on the subjects of Republics and Freedom and Political Economy. Give the young people an impetus to learn something of the history of our nation; and let the Fourth of July be a day when all work is laid aside, and each and every citizen shows his love of country by giving at least one day to a genuine celebration and thankfulness of its establishment." This idea, combined with the novel procession and entertainment described in the supplement to the *Youth's Companion* of June 22d, would make a very interesting day for old and young.

Parents, get up some kind of entertainment at home, and choose the companions you would like to have come in and enjoy it with your children, rather than let them amuse themselves about the streets of the noisy town and with such companions as you would much prefer they should not be with. Make home the pleasantest place on earth to them on this day, as well as others. Love of home will cause love of country to sink deeper into the soul, and patriotic men and women will be the reward of your pains. No matter if it is some trouble to you— isn't the future of your child dearer than present comfort? Do you not desire the next generation to be a credit to the teachings of the present? The continuance of the Republic depends upon the true patriotism and honesty of your children.

Every child thinks he must have his fire-crackers on the Fourth of July, or else there is no fun at all. Provide him with a few fireworks, and he will be as well satisfied as though you had spent a great deal of money for him to burn up in a few moments. Take the remainder of what you feel able to spare, and give it to the fund for the literary tournament suggested, or else in providing tableaux of historical scenes and music for your home entertainment. You will find it beneficial to both yourself and children.

It will cause a furnishing of your knowledge of our country's past as you hunt up favorite scenes for the tableaux, and impress them upon the memories of the children in indelible letters.

Children always appreciate the trouble parents take for their amusement, and repay them with renewed demonstrations of their love, and by the delight they take in the pleasure thus provided.

We find the only true happiness we have is when we are giving pleasure to those around us. Vallejo, Cal.

COMPTON'S GATE.—Readers will find in this issue an advertisement of A. P. Compton's self-opening gate, which was brought forward prominently at last year's State fair. Since then it has been introduced in various parts of the State, and from all we hear it has given excellent satisfaction. It is worth the attention of all who contemplate the improvement of their exits and their entrances.

CHEAP STOCK RANGE.—Our advertising columns this week show cattle and sheep men where it is claimed that good land can be bought nearly as low as the rental of such land costs in many parts of California.

DURING the month of May 142,000 immigrants arrived in this country. Native Americans should take good care of themselves. In about five years they will be valuable as curiosities.

AGRICULTURAL NOTES.

CALIFORNIA.

LOS ANGELES.

CHERRIES.—Commercial: An impression has gone abroad that cherries do not thrive well in southern California. Such an impression is entirely erroneous, and injurious to the country. As fine cherries can be grown in Los Angeles and San Bernardino counties as ever grew in the State, and that is a strong statement, for California is unexcelled in the production of this most delicious fruit. Very excellent cherries were in the market yesterday from the San Gabriel valley, and also from the plain below the city, with no apparent difference in quality. Some people have planted cherry trees among orange trees, and subjected them to copious irrigation, which blasts the fruit and ruins the tree. The fine cherries raised in Pasadena and below the city are grown without irrigation, and are immensely profitable. It will surprise our citizens to know that our fruit dealers send away \$250 per day, for the purchase of cherries in the central part of the State, when all the cherries that we need, and more, too, can be grown at home.

THE ANAHEIM CORN CROP.—The corn crop in this vicinity looks fine, without exception, and is making a rapid growth.

EDUCATORS PRESS.—Long-continued foggy mornings have injured the setting of raising grapes to some extent; but new bunches are taking the place of those fallen. Both early and late table grapes are safe. —JEANNE C. CARR, Pasadena.

MENDOCINO.

WOOL AND HOPS.—Ukiah Press, June 23: The local wool market never was so quiet before, at this season of the year. Receipts have been free, and of good quality; but of purchasers there are none. Merchants disclaim any desire to buy, and it was with considerable hesitation that one gave the range of 22 to 25 cents as top figures. No late sales are reported at these or any other rates. Hop growers are very much encouraged by the harvest outlook, and the prospect of good prices. A bad year abroad finds a moderate stock on hand, and has induced a local dealer to offer 20 cents a lb. for the crop of several fields. In at least one case that offer was refused.

MODOC.

CROPS IN MODOC.—Adin Argus: All over Modoc county and Big valley, wheat is promising more abundant returns than ever before. The only danger seems to be from crickets and, possibly, frost. It is very seldom that frost has done any material damage to our grain crops; and, although the crickets have been with us for some time, the number seriously injured by these insects is very small. We may promise ourselves, then, a rich harvest; grain will be plenty, and will command a good price.

SAN BENITO.

CROP NOTES.—Advance, June 23: About half an ordinary crop of wheat will be harvested in this valley this year. The weather has been very favorable to grain for the past few weeks. The yield will exceed what was expected a short time ago.

SACRAMENTO.

FRUIT.—The fruit crop along the Sacramento river, in the vicinity of Walnut Grove, is said to be the finest and largest that has been known in the section for years. The farmers and fruit growers are jubilant over the prospects of heavy returns for their labor.

SANTA BARBARA.

CARPINTERIA.—Independent, June 24: Crops of all kinds are exceedingly fine in this valley this year, and, beyond doubt, will yield a large return. The fog and cloudy weather that have been prevailing for the last few weeks have been of great benefit to the growing crops. Fruit promises to be very plentiful this year. Apricots are deserving of particular notice, the only fear being that they are overdoing themselves.

SAN LUIS OBISPO.

STOCK.—Kern Californian, June 24: Mr. E. M. Crocker returned a few days ago from an extended tour in San Luis Obispo county, where he had gone for the purpose of buying cattle. He found the grazing prospects there more favorable than he had been led to believe, and for that reason did not effect as extensive purchases as he had anticipated, but brought away with him, nevertheless, a fine herd of valuable animals. He states that the crops of wheat and barley along the coast and in that vicinity are as good as could be desired, but were nearly all being cut for hay, for which a lively demand is anticipated. Over the same section he also found the grass excellent, and the dairy interest exceptionally flourishing. This business is chiefly in the hands of Swis, of whom great numbers are settled there. Those who do not own land and cows themselves frequently rent both, and find it profitable to do so, often paying as high as \$20 for the cows and \$2 per acre for the land, for the season. At two of the little shipping points he visited, he found teams in great numbers, laden with dairy products, waiting their turn to discharge. In the interior, however, the influence of drouth was perceptible, and things did not wear the same satisfactory appearance. But he does not take the view that the livestock interests will suffer. There will be grass and hay enough to carry them through without material suffering.

SANTA CLARA.

HORTICULTURAL SOCIETY.—Herald: The Horticultural Society met at their rooms, Martin's block, Saturday afternoon, Dr. Chapin in the chair. Mr. Vestal reported that Mr. Brewer, who lives 12 miles from town, had successfully used a decoction of bitter aloes and alcohol as a remedy for the scale bug. He had smeared this over the trees and the pest was killed even above the place where it was applied. Secretary Taylor read communications from D. W. Lane, Wright's station, offering to manufacture and deliver at the depot 10-lb. cherry boxes for 23 cents apiece. His prices for other boxes would be as follows: Apple boxes, 63 cents apiece; grape, peach and plum boxes, 43, 4 and 33 cents, according to size, delivered at the railroad in shooks; sides, bottoms and covers, one-fourth inch thick; heads, five-eighths inch thick. The matter of offering, through the Agricultural Society, a cup, to be engraved, "Horticultural Society Challenge Cup," as a premium for the best exhibit of different kinds of fruit during the coming fair, was left to a committee consisting of Messrs. Chapin, Townsend, Younger and Ward.

SANTA CRUZ.

FARMERS' ASSOCIATION.—Eds. Press: The regular monthly meeting of the Farmers' Association was held at the court house, Santa Cruz, on Monday, June 3, 1882, President J. S. Mattison in the chair. The Committee on the Rose Fair made the following report: The committee appointed by your association to take charge of the rose fair, in connection with the committee of ladies and gentlemen selected to act with them, would respectfully report: The fair was held at Olympic hall, Santa Cruz, May 19th and 20th; the exhibition of roses exceeded the utmost expectations of your committee, comprising some 300 varieties, many of them choice and rare; the attendance from the opening to the close was large, showing the full appreciation of the people of Santa Cruz for the efforts of this association to get up a fair of this kind that would reflect credit on Santa Cruz; the thanks of this association are especially due to the ladies of the executive committee for the interest that they took in securing roses for exhibition and for their taste in the arrangement of the tables; the total amount received was \$78.75; total expenses, \$65.35, showing a balance on hand of \$13.40. Respectfully submitted, C. L. Anderson, Roger Conant, Elmer Dakan, committee. On motion the report was received and ordered placed on file. On motion the matter of holding a fair next fall was referred to the Board of Managers, consisting of W. W. Waterman, C. L. Anderson, J. S. Wait, J. S. Mattison, and R. H. Swain, to report at some subsequent meeting. On motion W. H. Galbraith was proposed and elected a member of the association. There being no further business, the association adjourned to the first Saturday in July, 1882. —ROGER CONANT, Secretary.

YUBA.

HARVESTING.—Appeal, June 23: The cutting of barley is now generally in progress in Yuba and Sutter. The wheat is not yet fully ripe. It will probably be a week yet before the headers make great inroads into the wheat. It is said that wheat is not generally so far advanced in Sutter as it is in Yuba. Harvest hands are in general demand at \$2 per day and found.

NEW WAY TO MAKE BARRELS.—A Washington Territory newspaper says: The logging camp of the Matlath Manufacturing company is located at Carson, half a mile from Puyallup. They are getting out 20,000 ft. of cottonwood logs per day, using the labor of 17 men and four yoke of cattle. These logs are made into rafts and towed to the factory of the company at Seattle. The company thinks it has a great improvement in the sheet barrel, which is made by cutting a log into barrel length, softening them by a steam process and then shaving each piece into a long sheet, unrolled like a carpet. Each sheet is then crosscut into such a length that when the two ends are brought together it is given the size and form of a barrel without heads, the whole being done by machinery. This has been proved a great improvement over the stave barrel in cost of manufacturing, as well as in merits for use. The only drawback, if drawback it may be called, is that clear timber is required in this case, all the knotty timber being rejected; whereas, for staves knotty timber may be used. Consequently, the best of the cottonwood is now being culled out, and unless the supply of virgin forests of this kind proves illimitable, they will, after awhile, be compelled to return to the manufacture of staves exclusively.

TREATING WINE WITH ELECTRICITY.—A curious experiment, according to the Paris newspapers, has recently been made with wine in that city. A current of electricity was passed through a small cask of sour wine, and at the end of a few days the wine was found to be greatly improved in quality, and to have acquired that flavor which has hitherto been supposed to come of age. It is said that the discovery of this new maturing process is owing to the accident of a thunderstorm having greatly improved a cask of bad wine in the cellars of a vintner at Carcassonne.

THE Chicago Herald of the 20th inst. says, the Minneapolis mills are grinding California wheat, which is cheaper and better than the Minnesota variety. Sending wheat to Minnesota, however, is very much like carrying coals to Newcastle.

Reminiscence of Washington.

"You say," I remarked to the old negro who drove the hack, "that you were Gen. Washington's body servant?"

"Dat's so! Dat's jes so, massa. I done waited on Washington sense he was so high—no bigger'n a small chile."

"You know the story, then, about the cherry tree and the hatchet?"

"Know it?" Why, I was dar on de spot. I seen Mossa Gawge climb de tree after de cherries, and I seen him fling de hatchet at de boys who was stonin' him. I done chase dem boys off de place myself."

"Do you remember his appearance as a man—what he looked like?"

"Yes, indeedy. He was a kinder short, chunky man; sorter fat and hearty lookin'. He had chin whiskers and mustache and spectacles. Mossa generally he wore a high hat; but I seed him in a fur cap wid ear warmers."

"You were not with him, of course, when he crossed the Delaware—when he went across the Delaware river?"

"Wid him? Yes, sir; I was right dar. I was not more'n two feet off'n him as he druv across de bridge in his buggy! Dat's a fac'. I walked 'long side de off hind wheel of dat buggy all de way."

"You saw him, then, when he fought the British at Trenton?"

"Sho's you're born, I did. I held Mossa Gawge's coat an' hat while he fought the British at dat wery place. Mossa Gawge clinched him, and den dey rassled and rassled, and at first he fiew Mossa Gawge, and den Mossa Gawge flung him and set on him, and done hammered him till he cried 'nuff! Mossa Gawge won dat fight. I seed him wid me own eyes! An' I come home wid him in de kyars!"

"You weren't with him, though, when he shot the apple off the boy's head?"

"Who wa'n't wid him? I wa'n't? I was de only pusson dar 'ceptin' one white man. I loaded Mossa Gawge's revolver an' han'ed it to him, an' picked up de apple an' et it soon as he knocked it off. Nobody can't tell dish yer ole niggab nuffin 'bout dat circumstance."

"You know all the General's relations, too, I suppose? Martin Luther and Peter the Hermit, and the rest?"

"Knowed um all. Many and many's de time I done waited on de table when Mossa Gawge had um to dinner. I remember dem two gemmen jes' well's if I'd seen um yesterday. Yes, sah; an' I druv um out often."

"I've frequently seen pictures of Washington in which he is represented sitting upon a white horse. Did he really ride a white horse, or don't you recall the color of his horse?"

"Why, bress your soul; 'call de color ob de hoss—'call de color ob it! Do you see dish yer nigh hoss dat I'm a drivin' now, right? Well, dat's de werry hoss Mossa Gawge used to ride. He lef' it to me in his will."

Just then we reached the station, and I dismounted from the hack and paid Washington's body servant for his services. No doubt a longer conversation with him would have revealed other new and startling facts relating to the "Father of his Country."—*Max Adeler in Phil. Post.*

RENEWING PAINT WITHOUT BURNING IT OFF.

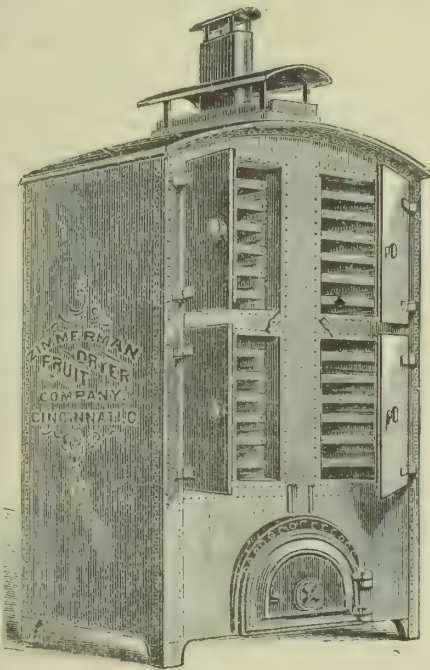
—The apparent cracking of paint on cars is frequently the cracking of the varnish only. When this is the case, the car can be prepared for repainting by going over [the surface with a sponge wet in strong ammonia and then scraping off the varnish with the wide square end of a spatula in two or three minutes after the ammonia is applied and before it is dry. This removes the first coat of varnish. If it is desired to remove another coat, it can be done by going over it again with the ammonia and following with the spatula. When the last coat to be removed is taken off, follow immediately with a plentiful washing with water to kill the ammonia, after which a little rubbing with pulverized pumice stone will give a smooth surface, which can be built upon with new coats of paint or varnish, as may be desired. The same method applies to cleaning the varnish from the veneers or solid woods of the inside finish. The car can be prepared for new coats in this way in one-fourth of the time necessary to scrape it down. When the car needs repainting after the varnish is removed, a light coat of lead is applied, then the car is puttied where needed, and a No. 0 sandpaper gives it a smooth surface ready for the new color. A car can be got ready for this coat in two days with the work of three men; while it would take the same men over a week to burn off the old paint and give it a lead coat and rough-stuff it, and another week to rub it down. —*National Car-builder.*

A REMARKABLE BLOCK OF AMBER.—Some fishermen of the Isle of Zaigst have fished up, opposite Stralsund, a piece of amber weighing more than eight lbs. It is nine and one-half inches long and five and one-half inches in circumference. It is a most remarkable piece of amber, having all the qualities which distinguish the rarest pieces, color dark yellow, shining like glass, and not transparent. It is rare that a piece of amber weighs a pound. The piece, which is preserved in the Museum of Natural History at Berlin, weighs about 14 lbs.

Family and Orchard Fruit Drying.

It is every year becoming more apparent that dried fruits are supplanting canned fruits, and that the growers are becoming less dependent upon the canning factories. It is also a settled fact that when nicely dried or evaporated fruit can be obtained, the best housekeepers are everywhere giving it the preference. Hence a fine opportunity exists for all fruit growers to make the most of their product; but to none is the opportunity more beneficial than those who raise fruit in moderate quantities, and those who reside in remote localities, from which it is next to impossible to get the fruit to market and realize anything from it after freight, waste and commissions are deducted. How many thousands of tons of fruit have gone to waste on this coast because it could not be profitably utilized! And fruit, too, of the finest quality. This great waste can be avoided and turned into a source of profit and wealth; for the demand for preserved fruits, whether by canning or drying, is practically without limit, especially in a country so extended as this, with so many sections where it cannot be raised, and where it is hailed, not only as a great luxury, but as largely conducive to health.

For several years past the principle of evaporating fruit has been applied in this State by several methods, but most of them are too expensive, except in large factory driers, which, while good in themselves, require the small growers to part with their fruit in a green state, and so lose much of the advantage that would accrue to them if they could by an inexpensive



The Large Size Zimmerman Fruit Drier.

method dry the fruit and send it to market themselves. Properly dried fruit will always command a market, and many a family that now sees quantities of fruit go to waste every year in their orchards or gardens, could, with an apparatus not costing too much, and simple of operation, put money in their pockets, and in this respect alone begin a system of economy so much needed among farmers here, that would lay the foundation for wealth in the future.

We give on this page an engraving showing the Zimmerman fruit drier, which is now largely used in this State, and which is reported to us as giving excellent results where an apparatus is wanted for home use. It is, as shown, a portable machine, and ready for use when delivered, without a dollar of expense on it. It is fire-proof, being constructed of galvanized iron, and cannot be burned down. It is cheap, and economical as to fuel required. There are over 13,000 now in use in the United States.

The Mechanics' Institute of this city awarded the Zimmerman drier a silver medal in 1880 for the "Best Fruit Drier." And the Mechanics' Institute of Portland, Or., awarded it a bronze medal in 1881 for "Best Exhibit Dried Fruit, Zimmerman Process."

Linforth, Rice & Co., 325 Market street, S. F., are the general agents for it on this coast. At their store may be seen prunes, plums and other fruits which have evaporated by the Zimmerman drier.

A NOVEL METHOD of taking lumber from the river has been put into practical operation by the Hannibal (Mo.) Transfer company. The scheme is to run flat cars down to the river bank and out on the bed of the river for a distance of 200 ft., and cribs of lumber are then floated on top of the flat cars and drawn out by two engines upon the bank. The cribs are 32 ft. long by 16 ft. wide, and contain 10,000 feet of lumber. They are then removed to the yards of the company and taken apart, the boards being washed by hydrant water clear of the sediment dirt which attaches as they come down the river. The method will have the effect of making it possible to handle several times the amount of lumber shipped in former years.

News in Brief.

THE rumor that the Russian government intends to impose export duty on grain is denied. The labor demonstration at Pittsburgh on the 17th had over 29,000 trades-unionists in line.

It is said that the Yukon river, in Alaska, is navigable (when not frozen) a distance of 2,700 miles.

A LARGE whale committed suicide by hanging himself with the telegraphic cable laid across the Persian gulf.

THE outlook for fine crops of all kinds has never been better than in almost all agricultural sections of Nevada.

It is expected that the Postoffice Department will have a surplus of \$1,000,000 at the close of the fiscal year, June 30th.

MR. CUNNINGHAM, a fruit grower at Griffin, Ga., has 60,000 peach trees in bearing condition, besides thousands of other kinds of fruit trees.

A LETTER from Fort McKinney states that cattle valued at \$13,500,000 are calmly grazing in what was, six years ago, absolutely an Indian country.

SIXTEEN thousand men are now employed in railroad construction in Florida. Eighty thousand people have settled in the State in the past 10 years.

Now that warm weather has come, says a Philadelphia paper, the rich and the tramps are both leaving town. Thus the cities get rid of all their idle population.

THE cyclone which ravaged Leavenworth, Kan., on Saturday week, took but 20 minutes to inflict a damage of \$200,000. The wind blew at the rate of 70 miles an hour.

A MEMBER of the Jewish Aid Society of New York city states that a number of Jewish refugees who refuse to work will be returned to Russia with their families.

MANY prospecting miners are striking out into the new districts along the line of the Carson & Colorado railroad. Strikes in that direction are being constantly reported.

A MAJORITY of the persons arraigned for crime, according to one of the best-known New York judges, are boys from 12 to 20 years of age, who have got into trouble while intoxicated.

THE Society of Decorative Art of California offers 11 cash prizes of from \$20 to \$100 each for the best pieces of embroidery according to specifications, the most artistic in design, color and work.

BEARS, principally of the cinnamon variety, are becoming very numerous in portions of Calaveras county, and the papers contain frequent reports of encounters between sheep herders and the animals.

THE Mexican government has granted an exclusive privilege to an American company, with exemption from taxation for 50 years, for a stock exchange and trust company at the city of Mexico, with a capital of \$1,000,000.

THE House, by 125 to 60, has refused to recommend the Internal Revenue bill, but recommended it to the Ways and Means Committee to report the abolition of all internal revenue taxes, except on bank circulation and distilled spirits.

OSTRICH farming is, next to wool and diamonds, the most important industry in Southern Africa. It was not successful until the eggs were hatched by a patent incubator, the parent bird not performing her duty well in confinement.

LIEUTENANT DANENHAUER has had an interview with Secretary Chandler with reference to having the remains of the *Jeannette* crew, found by Engineer Melville, transported to this country for proper interment in places selected by their families. The Secretary referred the matter to a special committee.

THE big bridge at St. Louis, which is owned and managed by a monopoly, is likely to have a competitor. The Chicago & Alton, the Vandalia, the Indianapolis & St. Louis and the Ohio & Mississippi railroads are preparing to build a new structure at or near that city, in order to escape the exorbitant charges imposed by the present company.

DURING the three spring months there were 388 suicides reported in this country—314 males and 74 females. The special tendency of Germans to self-destruction is indicated by the fact that no less than 140 cases were of that nationality, while 139 were Americans. The States reporting the greatest number were: Ohio, 54; Illinois, 46; Missouri, 30; Indiana, 27; and Wisconsin, 21.

ON Thursday, the 15th instant, the steamships *Prinz Friedrich* and *Discoverer* cleared from New Orleans with 41,938 sacks wheat, initial shipments from California via the Southern Pacific railroad. As yet the system of handling grain in bulk has not been introduced on the Pacific coast, and these shipments are in the form in which the cereal products of California are usually handled.

ENGINEER MELVILLE telegraphs from Ykaulski, under date of April 10th, as follows: I have searched the coast from the river Alank to the river Jana, but have found no trace of the second cutter, or of Lieutenant Chipps' party. I have buried the remains of Lieutenant De Long, Dr. Ambler, Jerome Collins, also of seamen Lee, Garth, Dressler, Knack, Ivorsen and Boyd, and the Chinese servant, Ah Tom. I have secured every paper pertaining to the expedition. Seaman Erickson and the Indian Alxia had already been buried on the river Lena. I am now en route to Irkoutsk.

S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, June 28, 1882.

The markets are usually dull, and lower rates are the talk. No actual trade can be expected until the Fourth is over. The latest from abroad is as follows:

LIVERPOOL, June 27.—Wheat: California spot lots are firmer, at 9s 9d@10s. Cargo lots are 46s 6d for just shipped, 49s for nearly due, and 48s 6d for off coast.

The Foreign Review.

LONDON, June 27.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The weather the past week was rainy. Most of the crops are in blossom. Trade in English Wheat consists of efforts to clear off damaged samples. Foreign is firmer in consequence of the moderate supply. Arrivals of foreign Flour are very small. Maize is rather against the buyers. Oats are firmer. Other Grains are unchanged. There were four fresher arrivals and two sales, with four cargoes withdrawn. The floating bulk of Breadstuffs shows a decrease as compared with that of the previous week. Sales of English Wheat during the week were 22,889 quarters, at 40s 11d per quarter, as against 24,119, at 45s per quarter, for the corresponding week of last year.

Freights and Charters.

The following is a summary of the engaged and disengaged Wheat tonnage in port and to arrive, according to the latest advices:

In port.	1882.	1881.
Engaged, tons.....	35,100	59,600
Disengaged, tons.....	32,800	760
To arrive, tons.....	300,400	356,900
Total.....	368,300	597,260
Decrease for 1882.....		28,960

The amount of tonnage under engagement yesterday to load Wheat was 30,600 tons, against 35,300 tons for the corresponding date last year, showing a decrease of 4,700 tons. There were 23 vessels under engagement yesterday morning at this port to load Wheat. The engaged and disengaged tonnage in port has a Wheat-carrying capacity for 101,300 short tons, against a capacity for 60,400 tons on the corresponding date last year, being an increase of 41,400 tons. Rates—Ship *W. J. Roth*, wood, 1,717 tons, Wheat to Liverpool direct, 47s 3d, Cork for U. K., except North sea ports, 50s 6d; German bark *Dora*, 462 tons, Wheat to Cape Town, private; British ship *Houghton Tower*, iron, 1,665 tons, Flour to Liverpool direct, 50s.

Eastern Wool Markets.

BOSTON June 24.—The Wool market has been quiet this week, but prices are unchanged. There is more or less excitement in Ohio and Michigan, but, generally speaking, buyers are holding back and are not disposed to operate at the high prices in the interior. Ohio X and XX, 46c@43c; Michigan and Wisconsin X, 38c@40c. Stocks light, and very little has been done. No. 1 Ohio has been selling at 45c@46c. Combing and delaine fleeces continue quiet at 43c@48c, including fine delaine and No. 1 combing. Unwashed Wools have been in demand, with considerable sales of Texas at 27c@33c, Western unwashed at 25c@33c for fine and medium grades, and 19c@23c for low and coarse. California Spring Wool has been selling more freely at 26c@39c, but is still rather quiet. Fall California has been sold at 12c@21c. Filled Wools have been in steady demand, with sales at 28c@43c for common and good supers, and 45c@48c for choice Eastern and Maine supers. Extra pulled has been selling at 40c@43c. Australia and New Zealand has been sold at 41c@44c, and Mediterranean carpet at previous prices. Sales of the week have been 1,500,000 lbs. of all kinds.

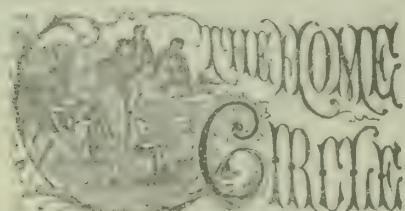
NEW YORK, June 26.—As a rule, the disposition of holders is still in favor of offering samples fairly, and keeping a sufficient portion of stocks in sight to meet all outlets offered, and this naturally gives buyers considerable advantage. There is, however, a failure to attract much additional demand of a general character, and the movement of supplies, in nine cases out of 10, has no other stimulus than clearly defined wants. Indeed, the market has been dull this week all around. All feeling, as expressed at the close, is tame, with advices of a similar condition of affairs in neighboring markets. Receipts have been steady and full, mainly Texas Wools, and the accumulation continues to pile up in a liberal proportion and in good assortments, the quality of this season's clip showing some improvement. From parties who have just returned from the interior we learn that a more conservative feeling appears to be developing at primary points; some few early sales were made at pretty nearly growers' views, but buyers soon withdrew, and asking rates have since been reduced, with recent sales at 35c in Ohio. Not much offered in Michigan as yet, but, so far, negotiations show 35c and upward asked, with 33c about the general bid. The stock of foreign Wools remains quiet, and to a great extent nominal in value. Cable advices from England report closing Wools rather quiet. Domestic was depressed at auction sales. Scotch opened at Glasgow with a fair attendance, at previous rates. Sales include 44,000 lbs of Spring California at 25c@28c; 42 bales secured, Fall, at 51c@53c; 1,000 lbs at 64c.

BAGS—Trade is dull. On exchange call Tuesday there were no sales. Bids and offers were: Calcutta, spot, \$9 bid, \$9 25 asked; Oakland, spot, \$8.70 asked; Jute, buyer July, \$8.50 bid. Sale on the grain exchange of 20,000 Dundee, July, \$8.95. Bids and offers were: Calcutta, June, \$9.12 bid, \$9.20 asked; July, \$9.25 asked.

BARLEY—Barley has dropped off frightfully, owing to the approach of the new crop. All talk is for future, which of course relate to the new crop. Sales were as follows (tons): 100 No. 1 feed, seller 3c, \$1.21; 20, \$1.20; 100, July, \$1.20; 100, October, \$1.22; 10 No. 2 feed, spot, \$1.15; 100 No. 2 brewing, seller 1882, \$1.27. Bids and offers were: No. 1 brewing, July, \$1.27 bid, \$1.25 asked; October, \$1.27 bid, \$1.35 asked; No. 2, brewing, July, \$1.27 asked; No. 1 feed, August, \$1.16 bid, \$1.19 asked; September, \$1.19 bid, \$1.20 asked; November, \$1.24 bid, \$1.24 asked; December, \$1.25 bid, \$1.28 asked; No. 2 feed, August, \$1.14 bid, \$1.17 asked; September, \$1.14 bid, \$1.15 asked; October, \$1.15 bid, \$1.17 asked; November, \$1.16 bid, \$1.19 asked; December, \$1.18 bid, \$1.19 asked; No. 1 Chevalier, July, \$1.65 asked; No. 3, July, \$1.25 asked; September, \$1.16 asked. On the 3 o'clock call, \$1.10 was bid, \$1.15 asked, for No. 2 feed, spot. Sales were: 200 No. 1 feed, November, \$1.24; 100 No. 2 feed, August, \$1.15; 50, September, \$1.15. Sales on the Grain Exchange of 100 tons No. 1 feed, October, \$1.21. Bids and offers were: No. 1 feed, July, \$1.19 asked; August, \$1.15 bid; September, \$1.19 asked; December, \$1.28 asked.

BEANS—Beans are unchanged.

(CONTINUED ON PAGE 12.)



A Story of the Revolution.

The Only Woman in the Town.

In Boston, at ten of the clock one April night, 1775, a church steeple had been climbed and a lantern hung out.

At ten, the same night, in mid-river of the Charles, oarsmen two, with passenger silent and grim, had seen the signal light out-swung, and rowed with speed for the Charlestown shore.

At eleven, the moon was risen, and the grim passenger, Paul Revere, had ridden up the Neck, encountered a foe, who opposed his ride into the country, and, after a brief delay, rode on, leaving a British officer lying in a clay pit.

At midnight a hundred ears had heard the flying horseman cry, "Up and arm. The regulars are coming out!"

You know the story well. You have heard how the wild alarm ran from voice to voice and echoed beneath every roof, until the men of Lexington and Concord were stirred and aroused with patriotic fear for the safety of the public stores that had been committed to their keeping.

You know how long ere the chill April day began to dawn, they had drawn, by horse power and by hand power, the cherished stores into safe hiding places in the depth of friendly forest coverts.

There is one thing about that day that you have not heard, and I will tell you now. It is how one little woman staid in the town of Concord, whence all the women save her had fled.

All the houses that were standing then are very old-fashioned now; but there was one dwelling-place on Concord common that was old-fashioned even then! It was the abode of Martha Moulton and "Uncle John." Just who "Uncle John" was, is not now known, but he was probably Martha Moulton's uncle. The uncle, it appears by record, was 85 years old, while the niece was only three-score and eleven.

Once and again that morning a friendly hand had pulled the latch string at Martha Moulton's kitchen entrance and offered to convey herself and treasures away, but, to either proffer, she had said: "No, I must stay until Uncle John gets the cricks out of his back, if all the British soldiers in the land march into town."

At last came Joe Devins, a lad of 15 years. Joe's two astonished eyes peered for a moment into Martha Moulton's kitchen, and then eyes and owner dashed into the room, to learn what the sight he there saw could mean.

"Whew! Mother Moulton, what are you doing?"

"I'm getting Uncle John his breakfast, to be sure, Joe," she answered. "Have you seen so many sights this morning that you don't know breakfast when you see it? Have a care there, for hot fat will burn," as she deftly poured the contents of a pan, fresh from the fire, into a dish.

Hungry Joe had been astir since the first drum had beat to arms at two of the clock. He gave one glance at the boiling cream and the slices of crisp pork swimming in it, as he gasped forth the words, "Getting breakfast in Concord this morning! Mother Moulton, you must be crazy."

As the little woman bent to take up the breakfast, Joe, intent on doing some kindness for her in the way of saving treasures, asked, "Shan't I help you, Mother Moulton?"

"I reckon I am not so old that I can't lift a mite of corn bread," she replied, with chilling severity.

"Oh, I didn't mean to lift that thing," he made haste to explain, "but to carry off things and hide 'em away, as everybody else has been doing half the night. I know a first-rate place up in the woods. Used to be a honey tree, you know, and it's just as hollow as anything. Silver spoons and things would be just as safe in it—but Joe's words were interrupted by unusual tumult on the street, and he ran off to learn the news, intending to return and get the breakfast that had been offered to him.

Presently he rushed back to the house, with cheeks aflame and eyes ablaze with excitement. "They're a coming!" he cried. "They're in sight down by the rocks. They see 'em marching, the men on the hill, do!"

"You don't mean that it's really true that the soldiers are coming here, right into our town?" cried Martha Moulton, rising in haste and bringing together with rapid flourishes to right and to left, every fragment of silver on it. Divining her intent, Uncle John, who was eating his breakfast, strove to hold fast his individual spoon, but she twitched it without ceremony out from his rheumatic old fingers, and ran next to the parlor cupboard, wherein lay her movable treasures.

"What in the world shall I do with them," she cried, returning with her apron well filled with treasures, and borne down by the weight thereof.

"Give 'em to me," cried Joe, "Here's a

basket, drop 'em in, and I'll run like a brush fire through the town and across the old bridge, and hide 'em as safe as a weasel's nap."

Joe's finger's were creamy; his mouth was half filled with Johnny-cake, and his pocket on the right bulged to its utmost capacity with the same, as he held forth the basket; but the little woman was afraid to trust him, as she had been afraid to trust her neighbors.

"No! No!" she replied, to his repeated offers. "I know what I'll do. You, Joe Devins, stay right where you are till I come back, and don't you ever look out of the window."

"Dear, dear me!" she cried, flushed and anxious when she was out of sight of Uncle John and Joe. I wish I'd given 'em to Col. Barrett when he was here before daylight, only, I was afraid I should never get sight of them again."

She drew off one of her stockings, filled it, tied the opening at the top with a string—plunged stocking and all into a pail full of water and proceeded to pour the contents into the well.

Just as the dark circle had closed over the blue stocking, Joe Devins' face peered down the depths by her side, and his voice sounded out the words: "O, Mother Moulton, the British will search the wells the very first thing. Of course, they expect to find things in wells!"

"Why didn't you tell me before, Joe? but now it is too late."

"I would, if I'd known what you was going to do; they'd been a sight safer in the honey tree."

"Yes, and what a fool I've been—flung my watch into the well with the spoons!"

"Well, well! Don't stand there looking," as she hovered over the high curb, with her hand on the bucket. Everybody will know, if you do, there."

Martha Moulton hurried back into the house. A smile broke suddenly over her fair face, displacing for a brief second every trace of care. "It's my only weapon, and I must use it," she said, making a stately courtesy to an imaginary guest, and straightway disappeared within an adjoining room. With buttoned door and dropped curtains the little woman made haste to array herself in her finest raiment. In five minutes she reappeared in the kitchen, a picture pleasant to look at. In all New England there could not be a more beautiful little old lady than Martha Moulton was that day. Her hair was guileless now of cobwebs, but haloed her face with fluffy little curls of silvery whiteness, above which, like a crown, was a little cap of dotted muslin, pure as snow. Her erect figure, not a particle of the hard-working day in it now, carried well the folds of a sheeny, black silk gown, over which she had tied an apron as spotless as the cap.

As she fastened back her gown and hurried away the signs of the breakfast she had not eaten, the clear pink tints seemed to come out with added beauty of coloring in her cheeks; while her hair seemed fairer and whiter than at any moment in her three-score and 11 years.

Once more Joe Devins looked in. As he caught a glimpse of the picture she made, he paused to cry out: "All dressed up to meet the robbers! My, how fine you do look! I wouldn't. I'd go and hide behind the nubbins. They'll be here in less than five minutes now," he cried, "and I'm going over the North bridge to see what's going on there."

"O Joe, stay, won't you?" she urged, but the lad was gone, and she was left alone to meet the foe, comforting herself with the thought, "They'll treat me with more respect if I look respectable, and if I must die, I'll die good-looking, in my best clothes, anyhow."

She threw a few sticks of hickory wood on the embers, and then drew out the little round stand, on which the family Bible was always lying. Recollecting that the British soldiers probably belonged to the Church of England, she hurried away to fetch Uncle John's "prayer book."

"They'll have respect to me, if they find me reading that, I know," she thought. Having drawn the round stand within sight of the well, and where she could also command a view of the staircase, she sat and waited for coming events.

Uncle John was keeping watch of the advancing troops from an upper window.

"Martha," he called, "you'd better come up. They're close by now."

To tell the truth, Uncle John himself was a little afraid. That is to say, he hadn't quite courage enough to go down, and, perhaps, encounter his own rheumatism and the king's soldiers on the same stairway; and yet he felt that he must defend Martha as well as he could.

The rap of a musket, quick and ringing, on the front door, startled the little woman from her apparent devotions. She did not move at the call of anything so profane. It was the custom of the time to have the front door divided into two parts, the lower half and the upper half. The former was closed and made fast, the upper could be swung open at will.

The soldier, getting no reply, and doubtless thinking that the house was deserted, leaped over the chained lower half of the door.

At the clang of his bayonet against the brass trimmings, Martha Moulton groaned in spirit, for if there was any one thing that she deemed essential to her comfort in this life, it was to keep spotless, speckless, and in every way unharmed, the great knocker on her front door.

"Good, sound English metal, too," she thought, "that an English soldier ought to know how to respect."

As she heard the tramp of coming feet, she only bent the closer over the Book of Prayer that lay open on her knee. Not one word did she read or see; she was inwardly trembling, and outwardly watching the well and the staircase. But now, above all other sounds, broke the noise of Uncle John's staff thrashing the upper step of the staircase, and the shrill, tremulous cry of the old man defiant, doing his utmost for the defense of his castle.

The fingers that lay beneath the book tingled with desire to box the old man's ears, for the policy he was pursuing would be fatal to the treasure in garret and in well; but she was forced to silence and inactivity.

As the king's troops, Major Pitcairn at their head, reached the open door and saw the old lady, they paused. What could they do but look, for a moment, at the unexpected sight that met their view: a placid old lady in black silk and dotted muslin, with all the sweet solemnity of morning devotion hovering about the tidy apartment and seeming to center at the stand by which she sat—this pretty woman, with pink and white face surmounted with fleecy little curls and crinkles and wisps of floating whiteness, who looked up to meet their gaze with such innocent, prayer-suffused eyes.

"Good morning, mother," said Major Pitcairn, raising his hat.

"Good morning, gentlemen and soldiers," returned Martha Moulton. "You will pardon my not meeting you at the door, when you see that I was occupied in rendering service to the Lord of all."

She reverently closed the book, laid it on the table, and arose, with a stately bearing, to demand their wishes.

"We're hungry, good woman," spoke the commander, "and your hearth is the only hospitable one we've seen since we left Boston. With your good leave, I'll take a bit of this." And he stooped to lift up the Johnny-cake that had been all this while on the hearth.

"I wish I had something better to offer you," she said, making haste to fetch plates and knives from the corner-cupboard; and all the while she was keeping eye-guard over the well. "I'm afraid the Concorders haven't left much for you to-day," she added, with a soft sigh of regret, as though she really felt sorry that such brave men and good soldiers had fallen on hard times in the ancient town.

At the moment she had brought forth bread and baked beans, and was putting them on the table, a voice rang into the room, causing every eye to turn toward Uncle John. He had gotten down the stairs without uttering one audible groan, and was standing, one step above the floor of the room, brandishing and whirling his staff about in a manner to cause even rheumatism to flee the place, while at the top of his voice he cried out:

"Martha Moulton, how dare you feed these—these—monsters—in human form!"

"Don't mind him, gentlemen, please don't," she made haste to say; "he's old, very old—85 his last birthday—and—a little hoity-toity at times," pointing deftly with her finger in the region of the reasoning powers in her own shapely head.

Summoning Major Pitcairn by an offer of a dish of beans, she contrived to say under cover of it:

"You see, sir, I couldn't go away and leave him. He is almost distracted with rheumatism, and this excitement to-day will kill him, I'm afraid."

Advancing toward the staircase with bold and soldierly front, Major Pitcairn said to Uncle John:

"Stand aside, old man, and we'll hold you harmless."

"I don't believe you will, you red-trimmed trooper, you," was the reply; and with a dextrous swing of the wooden staff, he mowed off and down three military hats.

Before any one had time to speak, Martha Moulton, adroitly stooping, as though to recover Major Pitcairn's hat, which had rolled to her feet, swung the stairway door into its place with a resounding bang, and followed up that achievement with a swift turn of two large wooden buttons, one high up, and the other low down, on the door.

"There!" she said, "he is safe out of mischief for a while, and your heads are safe as well. Pardon a poor old man, who does not know what he is about."

"He seems to know remarkably well," exclaimed an officer.

Meanwhile, behind the strong door, Uncle John's wrath knew no bounds. In his frantic endeavors to burst the fastenings of the wooden buttons, rheumatic cramps seized him and carried the day, leaving him out of the battle.

Meanwhile, a portion of the soldiery clustered about the door. The King's horses were fed within five feet of the great brass knocker, while, within the house, the beautiful little old woman, in her Sunday-best raiment, tried to do the dismal honors of the day to the foes of her country. Watching her, one would have thought she was entertaining heroes returned from the achievement of valiant deeds, whereas in her own heart she knew full well that she was giving a little to save much.

Nothing could exceed the seeming alacrity with which she fetched water from the well for the officers; and when Major Pitcairn gallantly offered his men to do the service, the little soul was in alarm, she was so afraid that "somehow, in some way or another, the blue stocking would get hitched on to the bucket." She knew that she must to its rescue, and so she bravely acknowledged herself to have taken a vow

(when, she did not say) to draw all the water that was taken from that well.

"A remnant of witchcraft," remarked a soldier within hearing.

"Do I look like a witch?" she demanded.

"If you do," replied Major Pitcairn, "I admire New England witches, and never would condemn one to be hung, or burned, or—smothered."

Martha Moulton never wore so brilliant a color on her aged cheeks as at that moment. She felt bitter shame at the ruse she had attempted; but silver spoons were precious, and, to escape the smile that went around at Major Pitcairn's words, she was only too glad to go again to the well, and dip slowly the high, overhanging sweep into the cool, clear, dark depths below.

During this time the cold, frosty morning spent itself into the brilliant, shining noon.

You know what happened at Concord on the 19th of April, in the year 1775. You have been told the story, how the men of Acton met and resisted the King's troops at the old North bridge; how brave Captain Davis and minute-man Hosmer fell; how the sound of their falling struck down to the very heart of mother earth, and caused her to send forth her brave sons to cry "Liberty or death!"

And the rest of the story—the 60 or more barrels of flour that the King's troops found and struck the heads from, leaving the flour in condition to be gathered again at nightfall; the arms and powder that they destroyed, the houses they burned—all these, are they not recorded in every child's history in the land?

While these things were going on, for a brief while, at midday, Martha Moulton found her home deserted. She had not forgotten poor, suffering, irate Uncle John in the regions above; and so, the very minute she had the chance, she made a strong cup of catnip tea (the real tea, you know, was brewing in Boston harbor).

She turned the buttons, and with a bit of trembling at her heart, such as she had not felt all day, she ventured up the stairs, bearing the steaming peace-offering before her.

Uncle John was writhing under the sharp thorns and twinges of his old enemy, and in no frame of mind to receive any overtures in the way of catnip tea; nevertheless, he was watching, as well as he was able, the motions of the enemy. As she drew near he cried out:

"Look out this window, and see. Much good all your scheming will do you."

She obeyed his command to look, and the sight she then saw caused her to let fall the cup of catnip tea and rush down the stairs, wringing her hands as she went, and crying out:

"Oh, dear! what shall I do? The house will burn and the box up garret. Everything's lost!"

Major Pitcairn, at that moment, was on the green in front of her door, giving orders.

Forgetting the dignified part she intended to play, forgetting everything but the supreme danger that was hovering in mid-air over her home—the old house wherein she had been born, and the only home she had ever known—she rushed out upon the green, amid the troops and surrounded by cavalry, and made her way to Major Pitcairn.

"The court house is on fire!" she cried, laying her hand upon the commander's arm.

He turned and looked at her. Major Pitcairn had recently learned that the task he had been set to do in the provincial towns that day was not an easy one; that, when hard pressed and trodden down, the despised rustics, in homespun dress, could sting even English soldiers; and thus it happened that, when he felt the touch of Mother Moulton's plump little old fingers on his military sleeve, he was not in the pleasant humor that he had been, when the same hand had ministered to his hunger in the early morning.

"Well, what of it? Let it burn! We won't hurt you, if you go in the house and stay there!"

She turned and glanced up at the court house. Already flames were issuing from it. "Go in the house and let it burn, indeed!" thought she. "He knows me, don't he? Oh, sir! for the love of heaven won't you stop it?" she said, entreatingly.

"Run in the house, good mother. That is a wise woman," he advised.

Down in her heart, and as the very outcome of lip and brain, she wanted to say, "You needn't 'mother' me, you murderous rascals!" but, remembering everything that was at stake, she crushed her wrath and buttoned it in as closely as she had Uncle John behind the door in the morning, and again, with swift gentleness, laid her hand on his arm.

He turned and looked at her. Vexed at her persistence, and extremely annoyed at intelligence that had just reached him from the North bridge, he said, imperiously, "Get away! or you'll be trodden down by the horses!"

"I can't go!" she cried, clasping his arm, and fairly clinging to it in her frenzy of excitement. "Oh, stop the fire, quick, quick! or my house will burn!"

"I have no time to put out your fires," he said, carelessly, shaking loose from her hold and turning to meet a messenger with news.

Poor little woman! What could she do? The wind was rising, and the fire grew. Flame was creeping out in a little blue curl in a new place, under the rafter's edge, and nobody cared. That was what increased the pressing misery of it all. It was so unlike a common country alarm, where everybody rushed up and down the streets, crying, "Fire! fire! f-i-r-e!" and

went hurrying to and fro for pails of water to help put it out.

Until that moment the little woman did not know how utterly deserted she was.

In very despair, she ran to her house, seized two pails, filled them with greater haste than she had ever drawn water before, and, regardless of Uncle John's imprecations, carried them forth, one in either hand, the water dripping carelessly down the side breadths of her fair silk gown, her silvery curls tossed and tumbled in white confusion, her pleasant face aflame with eagerness, and her clear eyes suffused with tears.

Thus equipped with facts and feeling, she once more appeared to Major Pitcairn.

"Have you a mother in old England?" she cried. "If so, for her sake, stop this fire."

Her words touched his heart.

"And if I do—?" he answered.

"Then your Johnny-cake on my hearth won't burn up," she said, with a quick little smile, adjusting her cap.

Major Pitcairn laughed, and two soldiers, at his command, seized the pails and made haste to the court house, followed by many more.

For awhile the fire seemed victorious, but, by brave effort, it was finally overcome, and the court house saved.

At a distance Joe Devins had noticed the smoke hovering like a little cloud, then sailing away still more like a cloud over the town; and he had made haste to the scene, arriving in time to venture on the roof, and do good service there.

After the fire was extinguished, he thought of Martha Moulton, and he could not help feeling a bit guilty at the consciousness that he had gone off and left her alone.

Going to the house he found her entertaining the king's troopers with the best food her humble store afforded.

She was so charmed with herself, and so utterly well pleased with the success of her pleading, that the little woman's nerves fairly quivered with jubilation; and, best of all, the blue stocking was still safe in the well, for had she not watched with her own eyes every time the bucket was dipped to fetch up water for the fire, having, somehow, got rid of the vow she had taken regarding the drawing of the water.

But now the feast was spent, and the soldiers were summoned to begin their painful march. Assembled on the green, all was ready, when Major Pitcairn, remembering the little woman who had ministered to his wants, returned to the house to say farewell.

'Twas but a step to her door, and but a moment since he had left it, but he found her crying; crying with joy, in the very chair where he had found her at prayers in the morning.

"I would like to say good-by," he said, "you've been very kind to me to-day."

With a quick dash or two of the dotted white apron (spotless no longer) to her eye, she arose. Major Pitcairn extended his hand, but she folded her own closely together, and said:

"I wish you a pleasant journey back to Boston, sir."

"Will you not shake hands with me before I go?"

"I can feed the enemy of my country, but shake hands with him, never!"

For the first time that day, the little woman's love of country seemed to rise triumphant within her, and drown every impulse to selfishness; or was it the nearness to safety that she felt? Human conduct is the result of so many motives that it is sometimes impossible to name the compound, although on that occasion Martha Moulton labelled it "Patriotism."

"And yet I put out the fire for you," he said.

"For your mother's sake, in old England, it was, you remember, sir."

"I remember," said Major Pitcairn, with a sigh, as he turned away.

"And for her sake I will shake hands with you," said Martha Moulton.

So he turned back, and across the threshold, in presence of the waiting troops, the commander of the expedition to Concord and the only woman in the town shook hands at parting.

Martha Moulton saw Major Pitcairn mount his horse; heard the order given for the march to begin, the march of which you all have heard. You know what a sorry time the red-coats had of it in getting back to Boston; how they were fought at, every inch of the way, and waylaid from behind every convenient tree-trunk, and shot at from tree-tops, and aimed at from upper windows, and besieged from behind stone walls, and, in short, made so miserable and harassed and overworn, that at last their depleted ranks, with the tongues of the men parched and hanging, were fain to lie down by the roadside and take what came next, even though it might be death. And then the dead they left behind them!

Ah! there's nothing wholesome to mind or body about war, until long, long after it is over, and the earth has had time to hide the blood, and send it forth in sweet blooms of liberty, with forget-me-nots springing thick between.

The men of that day are long dead. The same soil holds regulars and minute-men. England, who overruled, and the provinces, that put out brave hands to seize their rights, are good friends to-day, and have shaken hands over many a threshold of hearty thought and kind deeds since that time.

The tree of Liberty grows yet, stately and fair, for the men of the Revolution planted it well and surely. God himself hath given it increase. So we gather to-day, in this our story,

a forget-me-not more, from the old town of Concord.

When the troops had marched away, the weary little woman laid aside her silken gown, resumed her homespun dress, and immediately began to think of getting Uncle John down stairs again into his easy chair; but it required more aid than she could give to lift the fallen man. At last Joe Devins summoned returning neighbors, who came to the rescue, and the poor nubbins were left to the rats once more.

Joe climbed down the well and rescued the blue stocking, with its treasures unharmed, even to the precious watch, which watch was Martha Moulton's chief treasure, and one of very few in the town.

Martha Moulton was the heroine of the day. The house was besieged by admiring men and women that night and for two or three days thereafter, but when, years later, she being older, and poorer, even to want, petitioned the General Court for a reward for the service she rendered in persuading Major Pitcairn to save the court house from burning, there was granted to her only \$15, a poor little forget-me-not, it is true, but just enough to carry her story down the years, whereas, but for that, it might never have been wafted up and down the land.—*Wide Awake*.

YOUNG FOLKS' COLUMN.

Thusie's Fourth of July.

It was different from any other Fourth of July. There wasn't a man, woman or child in Bayfield whose blood did not tingle with a patriotic desire to "celebrate" the birthday of our nation's liberty.

The day was everything that could be desired. Early the crowds began to assemble and the village green was gay with the happy folk who came proudly from their simple homes. Was ever anything quite so fine—the singers marching into the dilapidated old church with their books; the tables in the grove of fine maples just a little distance off fast becoming resplendent under the fingers of ambitious matrons and rosy-cheeked maidens; the grand new band, blaring and drumming so joyously that lazy farm-horses came hurrying up the steep hills to be there in time; the little streamers of red, white and blue bespangling the harnesses; the big flag floating from the church belfry; the cannon booming on the village green.

Thusie just clasped her hands and sighed. She had "run and raced herself most to death," as Aunt Martha observed, thus early in the day. She had fallen down and scraped the skin off from a large place on her knee; she had torn a hole in her best frock; but what cared she for such slight mishaps? Was she not part and parcel of this glorious Fourth of July? Tired as she was she swung her own small flag bravely, and glanced with pride at the little bunch of red, white and blue ribbons that Aunt Fanny had pinned on her white dress; and then away she went again, her small figure curvetting and frisking in and out as she "celebrated" with the other children.

Well, the oration was over. What it was about, Thusie, for her life, couldn't have told. But the big words sounded fine; and when, at the end of all the names which were conscientiously read by Mr. Slocum, the children, by a preconcerted arrangement, stood up and waved their flags, didn't she spring to her small feet! and didn't she wave her flag!

"Thusie, come here!" called Sarah Jones. "I want to tell you something. No, Nelly Smith, you ain't comin'! You'll go and tell!" And Sarah dragged Thusie off, and with an arm around her waist and persuasion in her voice, she told of a secret—O, such a great one!—and enlarged enthusiastically upon it to the two or three other girls who were graciously allowed to join.

"Now you see, girls, this is what we're going to do. Don't you never tell—certain true, black and blue, hope I may die if I do!" you must say; because, you see, it's a great secret."

"O, no, Sarah!" said timid little Frasier Newcomb, "that's wicked."

"Poh! no, you goosie! it don't mean anything."

What Sarah wanted them to say it for if it didn't mean anything, the girls didn't clearly see; but they repeated the magic words.

"There now! I can tell you with some comfort," said Miss Sarah, seating herself on the grass in a sheltered nook, which example was followed by the others till they formed a circle; then, in a low voice and with many mysterious gestures, she unfolded the wonderful news.

"Well, girls, you know the fire-works to-night?"

At this, Thusie gave an ecstatic little wriggle. Sarah gave her a push.

"Thusie Bassett, you sat on my toe!"

Then she went on: "Well, you all know we can't see anything on the green, the folks crowd and jam so; so we—that is, us five—are going up into the old belfry!"

"O!—O!" screamed two or three of the girls.

"Sh! if you don't want all the boys coming."

"But, Sarah, I don't see how," said one of the girls.

"They won't let us. You know Deacon Smith said nobody must go up there; 'twan't safe, he said. He said the old shell would break through or tumble off if a great crowd got in."

"Anybody knows better than that, and be-

sides, we ain't a crowd! I guess 'tain't coming down for five girls! And just think how we can see the rockets and comets from the big window!"

"It would be splendid," said Roxy Thompson, "but I should be frightened most to death, Sarah."

"And isn't there mice—and things?" timidly asked Lucia Russell.

Thusie said nothing. She knew her mother never would hear to the lovely plan. Besides, she was to go with the rest of the family to "Uncle John's." O, dear! if she could only do as she was a mind to, like Sarah.

"Besides, it will be dark, Sarah," pursued Lucia.

"No 'twon't; it'll be as light's anything. Why, the fire-works go shooting up, whiz! bang! all through the sky!"—and Sarah suited the action by an expressive fling. "You know, girls," she said, "they've decided to ring the bell when they're ready to set off the fire-works. Well, when Joe Vance goes up to ring it, we must be all ready to creep up after him. He's awful slow, you know; and besides, he'll be making such a noise with the bell he can't possibly hear us. And I'm going to have my pocket full of candy, and we can sit up there and see the whole thing just elegant! So, Thusie, you be sure and be here. We're to meet under the big oak tree. And Frasier, if you tell, there'll be the most awful things happen to you! And Lu, don't wait to wash all the dishes for your Aunt Betsey; she can do 'em for once. And Tildy—"

"If you want any dinner, come along; they're all sitting down!" screamed Rob Davis, poking his head into their retreat with a whoop that made them jump.

Away they all ran, and fire-works and belfry were soon forgotten in the glories of that table—a real Fourth of July celebration table! Fowers, pyramids of cakes, with flags flying from the apex, cookies, tarts, iced loaves—every cook had done her best.

Sunset was coming on before the last left the tables, and even then Thusie had scarcely thought over her promise. She only vaguely realized what a forbidden thing she and the others were going to do. I think if she had really and fairly reflected upon it, she would have refused to have anything to do with the whole thing, and stood firm. "My think always comes afterwards," a little girl once said, "and it's most always a sorry think!"

Well, the sun went down. Great gold and red clouds came out all over the sky; there was one cloud nearly white, with deep red borders and a rosy center, on the blue patch that had been so bright through the day.

"See, it's put on red, white and blue!" called Henry Carter, and all the children rushed to see.

"Thusie," said her mother, as she drew her little girl, who was racing along with the others, towards her, "I am going home now to put Gracie to bed; and when you get ready you run right along up to Uncle John's. Aunt Fanny went an hour ago, she was so tired."

Thusie's heart gave a naughty little leap. Was anything ever so convenient! Merry groups were already getting "the best places" for a good view. She knew it must be time to be at the meeting-place under the big oak. Away she ran with rapid footsteps, and was soon under its shelter. She was the first one there, but in a minute Sarah Jones and Tildy Thompson rushed up and threw their arms around her; then Lucia came—all there but Frasier.

"Why don't she come, the stupid thing!" fretted Sarah. "There's old Joe crossing the green, now; we can't wait for her any longer."

That moment, Frasier, panting and frightened, hurried up and was pulled into their shelter.

"What made you so late?" demanded Sarah.

"Oh! I couldn't help it," panted Frasier. "I had to run every step of the way. My little brother Teddy and cousin Augusta would come, and old, fat Mrs. Brown wanted me to get her a chair, and then I tumbled down and—"

"Well, never mind," said Sarah, "you're here now, at last. Come girls, now for it!" And with many a whisper and giggle they stole along under cover of the darkness after old Joe, who was blundering up the stairs, making so much racket himself that he couldn't hear anything else.

"O, mercy!" whispered Sarah, "I ran my head into a horrid cobweb, and it's all in my eyes."

"Sh! Sh!" And they sped on lightly.

"Frasie Newcomb, you shan't scream, so there!" A big mouse, unaccustomed to such interruptions, had flounced across the floor, right across the children's feet. Clang—clang! clingity—clang! How queer the old bell sounded up here!

Joe, they could see above them, as his figure swayed back and forth, and they wondered how he could possibly get up there upon the rickety little ladder. Wasn't it delightful though, up in this dim, forbidden spot—all shadowy nooks and mysterious recesses—lighted weirdly by the lurid glare from the fire-work stand outside. How queer all the people looked moving down on the green!

The grand show of the evening now began. The girls held their breath as they watched, entranced in the dirty old window, crouching together very uncomfortably, trying hard to think they were having a nice time. And O! it was so warm and stifling.

"Phew! How close it is! Do open the window, Sarah!" gasped little Frasier at last.

But it wouldn't open.

"I wish we had stayed out on the green," wailed Tildy.

Suddenly Sarah screamed.

"Why, as sure as you're alive they're going round to the side of the church, girls, with that splendid wheel of liberty! O, hurry, hurry, hurry!" and she began to scramble down and pick her way over the rickety landing to the belfry stairs. Her mates, supposing her close behind, reached the front outer door, and were soon scattered in various directions among their friends, and lost in the delightful enjoyments.

Thusie turned, after going down the stairs, the wrong way. Near the foot there was a closet—a little old musty place for odds and ends—a place that very few knew existed. The door of this closet stupid Joe had left open when he went for a pole that was wanted; and Thusie, in her bewilderment, stumbling along the narrow passageway, turned into this door and fell headlong over an old worm-eaten stool standing in the middle of the floor. She struck her forehead with great violence on the floor beyond, and knew no more.

And now the show was over. Everybody was getting ready for home. Old Joe was locking the church. Couldn't any friendly hand rouse little Thusie? Aunt Fanny, safe at "Brother John's," supposed her with her mother on the green. This was why Thusie wasn't missed by anyone. Couldn't something have whispered to the loving mother, as she sat there in her low rocking-chair—kept at home herself from Uncle John's by sick little baby Gracie, crooning soft melodies into the fretful little ears—of the danger and loneliness that threatened her little Thusie!

The old church door shut with a bang. This it was, probably, that fairly roused Thusie from the swoon out of which she was slowly coming.

In those first dreadful moments Thusie never knew what she did. She groped her way out at last to the main passage. There was a window up to which she managed to climb and press her frightened little face piteously to the pane. From time to time, as she had groped her way along, she had called and shouted and then paused to listen. She soon began to realize this was of no use.

She said over all her prayers, even those of her babyhood. And then she watched and waited. It seemed to her hours, but, in reality, it was only late bedtime through the village; the lights, one after another, went out, and all were peacefully settling for the night.

What was that! Surely nothing but a mouse nibbling at the old wood-work. Again. That was no mouse! Thusie would have said she smelt something burning, only she must have been dreaming. She pinched herself to keep awake. But no! there certainly was a little flame of fire shooting up its determined tongue right there on the very roof of the porch. Locked up in an old church, with the fire that had somehow caught from the fireworks and been smouldering, until now it had broken out! All the people at home and in bed!

Thusie knew enough to realize that the old weather-beaten structure could never withstand the test. If she could only ring the old bell! But Joe always put up the ladder and secured it by a hook when he finished ringing. She rattled the window; she screamed; she crawled to the door and tried with all her might—which was quite considerable now—to shake it; anything to make a noise.

She could see the fire slowly growing bigger. What was one flame had now become two, with a swift increasing velocity that threatened the whole building.

"Oh, dear! I wanted fireworks, and now I have got them," moaned Thusie.

Still the awful cracking as the dry timbers took fire, and the smoke began to come in through the big cracks. She flung herself down on the floor; she could not look up any more.

"Fire! fire! The church is on fire!" in what seemed to Thusie the voice of an angel, rang thru h the stillness.

It was Farmer Brown going home late in his wagon. The old church porch was wreathed in flames when his first wild cry rang over the startled village.

Thusie rushed back to the window. She felt the hot rush of the flames pushing in at the cracks and the rickety window. The light of the bright fire fell upon her white dress, whiter face and disordered hair, making a strange picture; but she was not yet discovered by the excited crowd. At last Job Sawyer, a stalwart rough blacksmith, but with a heart tender as a child, cried out:

"Why! there's a little gal up there!"

All eyes were turned up to the window, and a second's pause fell upon them all. Then Job sprang upon another man's shoulder, swung himself up to the railing, and, with one blow from his powerful fist, shattered the window to fragments. He grasped Thusie, passed her to the trembling crowd below. Thusie heard the voices about her, as in a dream.

"Why, it's little Thusie Bassett!"

"Sakes alive! how did it happen?"

"What if it had been my Jane?"

"Where's her mother?"

She only knew she was in her father's arms—safe now! And she knew no more, until in her own dear home she came to herself with a great gasp; and there she was, looking into the blessed face of her mother. And six simple little words were on her lips, unuttered, involuntary, but never forgotten, never annulled: "I will always mind my mother."



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may be necessary in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.
Per line25 .80 \$2.20 \$5.00
Half inch (1 square) \$1.50 \$3.00 10.00 24.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 1, 1882.

TABLE OF CONTENTS.

EDITORIALS.—The National Holiday; The Earthquake; How the Republic Gained a Citizen, 1. The College of Agriculture; Harvest Hands Wanted, 3. Life and Worth of Washington, 9.
ILLUSTRATIONS.—The Heroine of Concord, 1. George Washington, 9.
CORRESPONDENCE.—Judge Temple's Decision; Notes on Paraiso Springs, 2.
THE APRIARY.—Action Against Foul Brood, 2-3.
THE SWINE YARD.—Notes on Care and Food of Pigs, 3.
FORESTRY.—Forest Trees of California.—No. 2; Lumbering in the Mountains, 3.
SHEEP AND WOOL.—The Mohair Industry, 3.
PATRONS OF HUSBANDRY.—Temescal Reunion; Whom to Vote for; The Grange and the Country, 4.
AGRICULTURAL NOTES, from the various counties of California, 4.
NEWS IN BRIEF on page 5 and other pages.
HOME CIRCLE.—A Story of the Revolution, 6-7.
YOUNG FOLKS COLUMN.—Thursie's Fourth of July, 7.
QUERIES AND REPLIES.—On the Occurrence of Smut, 8.
MISCELLANEOUS.—Fourth of July Celebrations, 4. Reminiscence of Washington, 5. Columbia (Poetry), 9.

Business Announcements.

Agricultural Implements, Fisher & Hamilton, S. F.
Excursion to Alaska, Goodall, Perkins, S. F.
Berkshire Pigs, G. M., S. F.
The California Chief, Jacob Price, San Leandro, Cal.
Stock Ranch for Sale, S. N. Laughlin, Castroville, Cal.
Merino Bucks, J. H. Schneider, Cornwall Station, Cal.
Thrashing Engine, H. P. Gregory & Co., S. F.
Fruit Drier, Linforth, Rice & Co., S. F.
Self-Opening Gate, A. P. Campion, San Jose, Cal.
Steam Plows, H. N. Chauncey, S. F.
Dividend Notice, The German Savings and Loan Society.
Dividend Notice, San Francisco Savings Union, S. F.

The Week.

There bids fair to be a long Fourth of July season decreed to the city people, for the banks, which are the barometers of commercial life, announce their intention to close their doors from Saturday noon until the morning of Wednesday. It is probable, then, that wholesale and speculative business will well nigh cease, and the sharps of trade and finance will fly to whet their wits in rural scenes. If our friends find their solitudes suddenly peopled, they will know that the city has burst its borders. And yet there will be a celebration in the city for the benefit of those who cannot get away, and those rural residents who delight in the reign of racket and the pomp of parade. The civil and military organizations will appear in procession. The streets will be decorated, and the pedestrian will walk in a shower of torpedoes and bombs. Let those who enjoy these sensations partake.

In the country there will be celebrations at various points. Haywards, in Alameda county, will be the nucleus for the patriotic from the surrounding towns, and an old-fashioned celebration is promised. Similar deeds will be done in other places. Let all partake. Let the day be observed for its memories and its promises.

THE MISSISSIPPI CANAL.—The project of connecting the Mississippi with the great lakes via the Illinois and Chicago rivers is constantly gaining ground. The latest proposition is for a much larger waterway than was at first suggested—nothing less than a first-class ship canal, with extensive wharfage room, etc.

The College of Agriculture.

Effort to Promote its Value.

The needs of the College of Agriculture are now being brought to public attention by the friends of the institution. As was recorded in the RURAL PRESS at the time, there was an important meeting held at Berkeley in May last. There were present President Reid, Secretary Bonte and Prof. Hilgard, of the University; J. V. Webster, Secretary of the State Grange; Amos Adams, Secretary of the Grangers' Business Association; I. C. Steele, Past Master of California State Grange; Hon. Thomas McConnell, of Sacramento county; Seneca Ewer, of St. Helena, Napa county, and Hon. Hugh M. Larue, of Sacramento. After considerable time spent in the interchange of views, a resolution, offered by Mr. Adams, was adopted, providing that an appropriation of \$15,000 should be urged upon the next Legislature, for the purpose of establishing and maintaining a larger field of experimental work connected with and under the especial charge of the agricultural department of the University, and that Prof. Hilgard should prepare a statement for publication, setting forth the difficulties, necessities and wants of the Agricultural College, in order that agriculturists and all others concerned might have a clear conception of the subject, and that petitions be prepared and sent to the several sections of the State for signatures, praying the Legislature to make the appropriation.

In accordance with the foregoing instructions, Prof. Hilgard addressed the following

Letter to the Governor:

Hon. Geo. C. Perkins, Governor of California.—DEAR SIR: I take the liberty of presenting for your consideration the following facts relating to the work of the Department of which I have charge:

It is generally understood that the "Morrill Act" establishing the agricultural colleges in the several States, contemplates especially the education and instruction of youth in the sciences related to agriculture and the mechanic arts.

In the effort toward the fulfillment of the practical objects contemplated by that Act, considerable diversity of opinion has prevailed, and has found expression in a corresponding diversity of organization in the colleges established in the several States. Without entering upon a discussion of these, and of their respective merits, it may be said that one point has made itself prominently felt in all, namely: The need of a detailed knowledge of the agricultural features and special adaptations of the States and their several agricultural subdivisions, and of the experimental investigation of the numerous practical problems that most the farmer at every turn, and upon the solution of which so often depends the question of profit or loss, success or failure. While the performance of the work of agricultural surveys and experiment stations by the colleges is not directly prescribed as one of their functions, it is the fundamental Act, experience has shown it to be one of the most important means at their command for benefiting agriculture at the present time; not only by the actual demonstration of the best methods of treating soils and crops under endlessly varying local conditions, but also in showing farmers the advantages to be derived from an intelligent observation of facts, and from the application of scientific knowledge and principles to their pursuit; thus inducing them to give to their sons the opportunity of acquiring agricultural knowledge for themselves, by the institutions created for that purpose. The experiment station work seems, at the present stage of our agriculture, to offer the most direct mode of benefiting both the present and the future generations; since attendance upon agricultural schools will always be small so long as the soil is unexhausted, and offers to the farmer, for the time being, rewards nearly as great as those realized by the more advanced culture. Such a state of things can, it is true, be only of short duration, even in the most productive regions; and where cultures and methods involving large permanent investments prevail—as is the case in the vineyards, orchards and irrigated lands of California—ordinary business prudence leads men to forego, and endeavor to provide against, the inevitable and disastrous consequences of irrational and exhaustive cultivation.

It is thus that, compared with other and much older States, California has a more vital and immediate interest in progressive and rational agriculture; the more as her varied climates and soils present endless and most attractive opportunities for varied cultures and forage crops. It is thus that the experiment station work carried on so far by the agricultural department of the University, although very limited in its means, has nevertheless attracted considerable attention, and has been able to throw light on many important practical questions; as may be seen from the three reports of work thus far published. Besides a general investigation of the soil of the State, of the nature and remedies for the "alkali" with which some regions are afflicted; of the nature and effects of waters serving or intended to serve for irrigation; analyses of fruits, materials for sugar making, of grapes, wines, and musts. There have been made on the grounds of the University extended culture experiments on the effects of various fertilizers and methods of culture on the large number of new varieties of species of forest trees from the East, Europe, Asia and Australia, have been grown from imported seed, and some of these, with other plants, have been distributed to intelligent persons in various parts of the State for trial. The University grounds are being utilized for the purposes of an illustrative and experimental arboretum, in which the adaptation of forest trees to the climate and for practical purposes will be tested. The investigation of noxious and beneficial insects, and of the means for repressing insects and other pests—such as the ground squirrel, for which an efficacious antidote has been found—is also in active progress.

It is perhaps needless to discuss the utility of these investigations toward the progress of agriculture and a knowledge of the resources of the State, which will be increased and diffused by the publication of an agricultural map of the State, to be issued this year by the census office. The utility would be greatly increased by the establishment of other experiment stations, located in representative localities in the several climatic and soil regions of the State, where local questions could be best investigated and determined, in co-operation with the central station at the University. To some extent, this function has been performed by intelligent farmers in the various sections. But experimental work is of necessity expensive, and especially so where a great variety of operations is carried on on a small scale, as is the case at the University. The pecuniary benefits to be expected as their ultimate outcome will be altogether outside of the experimental grounds; and at the present time, the demand upon the department for information, investigation and experiment has completely outrun its resources and the provisions made thereto by previous legislatures.

After a gradual expansion of operations to a reasonably satisfactory extent in 1881, the exhaustion of funds has rendered necessary a material and discouraging contraction during the present season; it being impossible to supply the deficit out of the diminished income of the University. Under these circumstances, and in view of the impending session of the Legislature, it seems proper to make a public statement of the facts, for the information of all those interested in agricultural progress, and in order to elicit from them an expression of opinion regarding the desirability of

continuing, and if possible, expanding still farther, the work of investigation of the agricultural capabilities and resources of the State. It has thus far been carried on under the stress of inadequate means and appliances, largely by voluntary or underpaid services. It cannot be indefinitely continued in this manner, especially since the increasing interest of the agricultural population is steadily increasing the strain, both upon the means of the department, and upon the physical endurance of those engaged in the work. I therefore desire to elicit an expression of opinion upon the subject, so that, if acceptable, the experiment station work may hereafter—whether by legislative appropriation or private endowment—be placed upon a footing more adequately commensurate with its magnitude and intrinsic importance.

Very respectfully,

E. W. HILGARD,

Prof. of Agriculture University of California.

The Governor's Response.

In response to the foregoing, Governor Perkins wrote as follows:

E. W. Hilgard, Prof. of Agriculture, University of California.—DEAR SIR: I have the honor to acknowledge receipt of your exceedingly valuable and interesting communication relative to increasing the usefulness of the Department of Agriculture of our University. Prominent among your many suggestions, and in which, to my mind, lies the formation of the future success of the Agricultural interests of California, as stated by you, "The need of a detailed knowledge of the agricultural features and special adaptations of the State and its several agricultural subdivisions, the experimental investigation of the numerous practical problems that meet the farmer at every turn, and upon the solution of which so often depends the question of profit or loss, success or failure."

To make your department successful, and enable it to carry out the intentions of its promoters and the desires of the cultivators of our soil, it is also necessary that it should have a substantial and lasting character should be given it. The struggle to render this department of such utility, I am sorry to say, has, in a great measure, rested in the lack of proper legislative action, and an apparent apathy on the part of those who were most to be benefited. It will afford me pleasure in my closing message to the Legislature to bring this subject before the Legislature, and in the mean time, if I can in any manner be of assistance in aiding your endeavors in promoting the usefulness of your department, my services are at your command. Yours, respectfully,

GEORGE C. PERKINS, Governor.

The Petition.

In order to allow the friends of the College of Agriculture to express, in a formal way, their desires for the continuance of the practical and experimental work of the institution, the following is submitted as the form of a memorial, to be signed and forwarded to the Legislature when it shall assemble in January, 1883.

To the Honorable, the Senate and Assembly of the State of California:—Your petitioners would respectfully direct the attention of your honorable bodies to the following facts, to wit: That the College of Agriculture, under the direction of the Professor of Agriculture, E. W. Hilgard, has, in addition to its educational work, rendered a valuable service to the agricultural interests of the State by the investigation of agricultural materials and methods, and the conditions affecting them, thus discharging the functions of an agricultural experiment station. In pursuit of this work, with appropriations of money made by previous Legislatures, much experimental work was undertaken, yielding most valuable results, as evidenced by the annual reports of the Professor of Agriculture, and many important investigations are now in an unfinished state, because of a lack of funds for their continuance and completion. Now, therefore, that the great agricultural industry in which we are engaged may be advanced, by the aid of scientific investigation and practical tests, which the institution is fitted to conduct and set forth for the public benefit, your petitioners earnestly pray that your honorable bodies will set apart from the funds of the State the sum of not less than \$15,000 for the prosecution of the experimental and practical work of the College of Agriculture during the years 1883-84 and 1884-85, and your petitioners will ever pray, etc.

The Application.

The above presents a practical way in which agriculturists who desire the continuation of the valuable experimental work of Prof. Hilgard's department may enforce their wishes upon the attention of the law makers. The letter of Prof. Hilgard shows clearly the situation and the needs. If one friend of the college in each farming neighborhood would prepare a petition and ask the signatures of his neighbors there would be an expression of agricultural opinion which the most perverse Legislature would not dare to disregard. We bespeak for the movement the active co-operation of our readers.

Harvest Hands Wanted.

There is a scarcity of harvest help on the east side of the San Joaquin valley. Letters of inquiry have been sent to this city calling for men for Stanislaus county. The Modesto Herald of last week describes the labor market there as follows: We met Dr. Tyman on the street last Saturday, and he told us that he wanted eight harvest hands. He said that, for some reason or other, there was a dearth of laborers in Stanislaus county this season, and several of his neighbors were in need of help for harvest. The probabilities are that the story of a failure of the crop in this county had warned laborers to steer clear of this valley. It is true that there are portions of Stanislaus county where the failure is complete, but there are other portions in which good crops will be gathered. There seems to be a notion abroad that the west side is about all of Stanislaus county, from the fact that when they do have a crop they have a tremendous one; but taken as a general thing, the eastern portion of the county averages the best. This year nearly all the farmers east of the San Joaquin will have grain to cut, and those midway between the line of the railroad and foothills will have what may be termed an average crop. The farmers are paying good prices for labor, and there is no doubt but that 100 laborers could find employment now for two or three months in this county.

It seems that the scarcity of harvest labor is not confined to the San Joaquin valley. The Yolo Democrat says: "The scarcity of harvest hands here is becoming a matter of considerable complaint. Farmers are in town daily in search of hands, but are unable to secure the necessary number. Such a state of affairs has rarely been experienced in this vicinity, and it is a matter of no little speculation. If there is a surplus of hands in any other part of the State, they would do well to emigrate to Yolo."

The Marysville Appeal says that harvest hands are in demand at two dollars per day and found. The Chico Record says: "Harvesting has begun at Gridley. The largest crop for

many years will be garnered. Hands are scarce. One hundred could get work at two dollars per diem and board. The same can be said of this vicinity."

QUERIES AND REPLIES.

On the Occurrence of Smut.

EDITORS FARMER:—We have some smut in our neighborhood this season, and, as I find one point which I think has not been fully discussed, I thought I would have my say. I send you by mail specimens of wheat, smut and a "mixed" article, containing both wheat and smut in the same head. If bluestone kills the germ of smut and prevents its growth or appearance in the succeeding crop, where do these heads containing both wheat and smut come from? One straw is not produced by two germs. Consequently, it must be either produced by the germ of wheat or smut. "And, as like produces like," if the germ was smut and grew under favorable conditions, the result must be smut; but if the germ was wheat and grew under like favorable conditions, the product must be wheat.

But, laying aside the theory of smut reproducing itself, and calling it wheat grown under unfavorable conditions, which cause it wholly, or in part, to blight, then we can account for grains of wheat in one side and grains of smut in the other side of a head—as is the case in the specimens sent.

Two years ago last seeding time I sowed two rounds around a field containing about 40 acres, with my Stockton plow making a strip eight ft. wide. I found the ground so wet I concluded to wait a few days before sowing any more. The balance of the field was sown as soon as the land was sufficiently dry to work well. Result: The first strip sown was so smutty that I did not cut it at all; balance, good wheat, with here and there a head of smut. The field from which the samples were taken was put in early, in good condition, and is a good crop, except the smut, and will be ready to harvest in about two weeks. Hoping to get some light on this dark question from your numerous readers and correspondents, I will drop it for this time. The weather for the past two weeks has been very favorable, and crops are about an average.—G. W. LEWIS, Ballard, Santa Barbara County.

The specimens sent by our correspondent are, as he describes them, clear smut, clear wheat and mixed smut and wheat. The trouble he apparently has in understanding the manifestations must arise from the fact that he overlooks the nature of the plant called smut. Smut is a fungus; it is a parasite; it has no independent existence of its own; it only reaches its perfection when some other suitable plant is at hand to prey upon. The fungus, when it gets lodgement in some way, in the kernels of the growing wheat, reproduces itself with incomprehensible rapidity, and draws its sustenance from the juices and structure of the plant it lives upon. Therefore, instead of starch in the smutty kernel of wheat, we find nothing but millions of spores or germs of the smut fungus. The parasite has thus completely destroyed the grain to which it gained access.

As the smut has no independent existence, but is parasitic, there is no contradiction at all in finding a head of wheat partly healthy and partly diseased. That some of the kernels have escaped the destroyer is analogous to the escape of many people who are exposed to the cholera and other infectious diseases. Wheat seed produces wheat unless the parasite appears; and smut spores produce smut whenever they can get lodgement in the cells of the wheat plant, and other conditions are favorable.

How the spores of the smut fungus gain access to the wheat plant is not known, nor is it fully known what conditions are necessary for its life and growth. The various methods of treating seed wheat to free the coming crop from smut, all rely upon killing the spores of the smut, which adhere to the wheat grains. That they are not all killed, or that the spores lie in the ground, or may be blown upon the growing grain from some other source of infection, may account for the fact that dipping the seed does not always save the product, but there is abundant evidence that the dip is invaluable, as it shows that the invasions of the fungus are less on a field grown from dipped seed than from smutty seed. No one can tell accurately the conditions most favorable to the growth of smut, and consequently there are hundreds of observations like that described by our correspondent in his last paragraph, which no one can explain.

RAILROAD COMMISSIONERS.—The Railroad Commissioners met yesterday afternoon, with Messrs. Beerstecher and Stoneman present, and Cone absent. Resolution 30, providing that the price of second class tickets shall not exceed 60 per cent of first-class rates, and resolution 32, guaranteeing stop-over rights to the holders of second-class tickets, were taken up, but, on motion of Beerstecher, action was deferred thereon until Mr. Cone, who was said to be detained from attendance at the meeting by reason of ill-health, should be present. No further business appearing, the Board then adjourned until July 26th. The resolutions above referred to were introduced January 12th, five and a half months ago, and are now no nearer adoption than the day they were introduced, as it appears impossible to get the three members of the Board together.

THE FRUIT BOX CASE.—The case of A. Lusk & Co., arrested for disregard of the quarantine rules by the shipment of return fruit boxes without disinfection, was brought up before Judge Rix, in this city, Friday, June 23d. The defendant demurred to the complaint in that it did not sufficiently set forth an offense. Judge Rix sustained the demurrer, but by agreement of both sides, postponed the issue until Friday, July 30th, to allow for the preparation of an amended complaint.

PROHIBITION is an accomplished fact in 42 counties in Georgia.

Columbia.

Columbia, Columbia, to glory arise,
The queen of the world, and child of the skies!
Thy genius commands thee; with rapture behold,
While ages on ages thy splendors unfold.
Thy reign is the last and the noblest of time,
Most fruitful thy soil, most inviting thy clime;
Let the crimes of the East ne'er encrimson thy name,
Be freedom and science and virtue thy fame.

To conquest and slaughter let Europe aspire;
Whelm nations in blood, and wrap cities in fire;
Thy heroes the rights of mankind shall defend,
And triumph pursue them, and glory attend.
A world is thy realm; for a world be thy laws,
Enlarged as thine empire, and just as thy cause;
On Freedom's broad basis that empire shall rise,
Extend with the main, and dissolve with the skies.

Fair science her gates to thy sons shall unbar,
And the east see thy morn hide the beams of her star,
New bards and new songs unrivalled shall soar,
To fame unextinguished when time is no more;
To thee, the last refuge of virtue designed,
Shall fly from all nations the best of mankind;
Here grateful to heaven, with transport shall bring
Their incense, more fragrant than odors of spring.

Nor less shall thy fair ones to glory ascend,
And genius and beauty in harmony blend;
The graces of form shall awake pure desire,
And the charms of the soul ever cherish the fire;
Their sweetness unmingled, their manners refined,
And virtue's bright image, enstamped on the mind,
With peace and soft rapture shall teach life to glow,
And light up a smile on the aspect of woe.

Thy fleets to all regions thy power shall display,
The nations admire and the oceans obey;
Each shore to thy glory its tribute unfold,
And the east and the south yield their spices and gold.
As the day-spring unbounded thy splendor shall flow,
And earth's little kingdom before thee shall bow,
While the ensigns of union, in triumph unfurled,
Hush the tumult of war, and give peace to the world.

Thus, as down a lone valley, with cedars o'erspread,
From war's dread confusion I pensively strayed,
The gloom from the face of fair heaven retired;
The winds ceased to murmur, the thunders expired;
Perfumes, as of Eden, flowed sweet y along,
And a voice, as of angels, enchantingly sung:
"Columbia, Columbia, to glory arise,
The queen of the world, and the child of the skies."
—Timothy Dwight.

Life and Worth of Washington.*

On the 22d of February, 1732, or, as it was then designated, the 11th of February, in a small but comfortable farm house on the shore of the Potomac, in the county of Westmoreland, Virginia, was born the oldest child of Mary and Augustine Washington.

Little did the parents imagine that the name which they should select for this boy would become celebrated in history, oratory and poetry, and be a household word in many lands and in many languages. There was nothing in the outward appearance to indicate such a glory. The Washingtons were, indeed, a respectable family of the English aristocracy. The great grandfather of the little boy was an English knight, who, however, made no use of his title after coming to the wilds of Virginia. They possessed large estates and a plenty of servants, and commanded all the comforts that could well be secured in the new province so far away from the centers of civilized life. But there was no prospect that this little American infant would inherit a title of nobility, and the prophecy of his achieving a distinction that should leap over national boundaries, and command the eulogies of the best minds in all countries, would have been regarded as the foolish fancying of a necromancer, unworthy of a moment's hearing.

At this time, from 1732, Washington's birth-year, to 1776, the great American republic's birth-year, there was no great republic on the soil of Europe, or nation, in which the whole people governed themselves.

Switzerland had a population of about 1,000,000 mountaineers, like the North American Indians, divided into about 20 tribes, partially confederated, often at war with each other, consisting of nobles and peasantry, the people not voters—and only a republic in the sense that it was not a monarchy. It is now a republic, and some historians falsely say it was then a republic.

The little republic of Andorra, now so called, was about equal to an average American township, and was really an aristocracy; while San Marino was another little township, governed by a self-elected council, who held office for life.

All the rest of the continent of Europe—practically all of Europe—was divided into hostile nations, over each of which presided a monarch. The nobles had some privileges; the people were practically slaves. The great business of the men of Europe was to fight. They fought, and then rested long enough to take breath, and to let a new crop of boys grow up to be soldiers, and then fought again. Well might Hobbes, the eccentric English philosopher, picture human society as a huge leviathan, and promulgate the theory that the natural state of man is war. The monarchs were contending with the nobles, and every nation with every other nation. Treaties broke like rotten withes. The promises of a prince were empty air. Diplomacy was synonymous with deception. Talleyrand's maxim was but an embodiment of actual practice: "The great object of speech is to conceal thought." Machiavelli was the most popular political authority, whose book, entitled "The Prince," is such an awful embodiment of diabolism that men of the 19th century are inclined to regard

it as ironical; but in that age princes subscribed to it as true. One of his maxims was: "Providence is always favorable to the powerful, who possess neither shame nor conscience, and withhold its protection from the weak." "Might makes right," was the law of European monarchs. Especially in the 18th century, despotism touched bottom in Europe. It was equally with base ancient Roman and later Oriental tyranny.

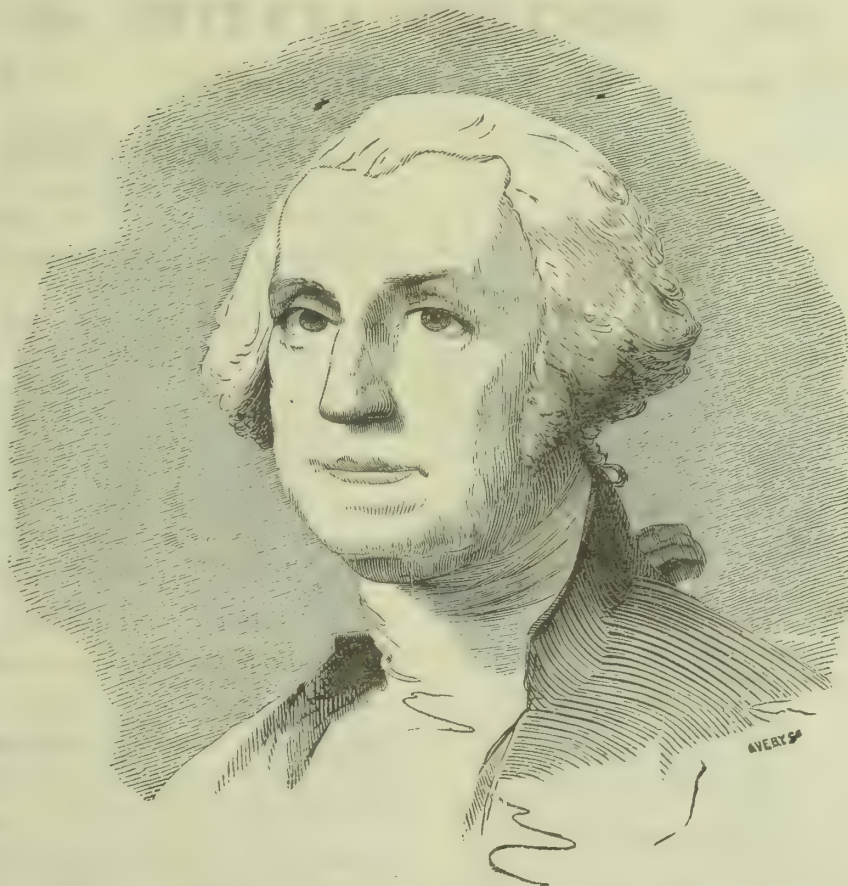
To this dark picture England formed the greatest exception. Though corruption prevailed in her politics, though she was then uselessly laying the foundation of her great national debt, though her Parliament was but an imperfect representation of the public opinion, yet speech was more free, law was more impartial, religion was less restrained and the government was more sensitive to the wishes of all classes of the people, than in any other great nation. She was then, as always, the freest nation in Europe—but very far behind what she is to-day. Now, how many centuries will roll away before right shall triumph over wrong, the divine right of tyrants shall be denied, the serfs of Russia shall be emancipated, the monarchies shall be shaken, written constitutions shall be wrested from the monarchs, and some of the largest nations of Europe shall be republics? But for America, this could not have been accomplished in 500 years, perhaps never; but, under the leadership of America, it was to be accomplished in 100 years, and the greatest

Oxford, and he gives evidence of having studied the English language carefully, and so much of mathematics as to make him an accomplished practical surveyor.

At the early age of 13 he had written out a series of rules on the conduct and character of a gentleman, and to this day it is not known whether they were original or compiled. In either case they show remarkable accuracy and forethought. Indeed, his system and adherence to strict propriety amounted to genius in that respect; in that respect it was evidently super-normal. Three of the years that he might have spent in college, he spent under equally severe discipline in the fields as a surveyor, keeping accurate notes of his works, and writing a journal of his proceedings. As soon as he arrived at manhood, he had some severe discipline as a military officer against the Indians and the French, all of which we pass by, supposing that Americans are familiar with the story.

Who has not heard of the Indian chief who met him after he had become famous, but before he was President, and exclaiming: "The Great Spirit must have saved you! Three times I and my men aimed directly at your heart and fired, but the balls were turned aside."

Washington, after attaining his majority, was elected, and several times re-elected, to the Legislature of Virginia, till the American revolution broke out, and thus enjoyed the advantages of legislative education, than which we know of no better calculated to drill and



name in all this stupendous revolution was to be the name given to that infant born in a Virginia farm house, in 1732—George Washington. Once more, then, let us return to him, and see how wonderfully Providence prepared a man for so stupendous a work. Of the childhood and youth of Washington little is known. Every American boy has heard the story of the hatchet and the cherry tree, which, by some, is supposed to be a lie, told in the interest of truth.

Washington was, however, truthful, bold, modest, chaste, temperate. His whole life, after he became a conspicuous object to the people, was never stained by a known immorality. It has been said of him, traditionally, that in two instances he swore vigorously, both times on the battle-field, and Wendell Phillips expresses his gratification that Washington showed the common frailty of human nature in this way. Edward Everett, however, examines all the evidences and circumstances of the traditions, and pronounces the traditions unreasonable and untrue. It would seem strange that a man not accustomed to profanity should begin to practice it under such difficult circumstances, but, even if he had cursed some, we agree with Phillips in excusing him, but do not regard it as a wrong. It would not detract from our estimation of the man, for if ever a man could ever use properly strong, Scriptural language, in the full sense of the words, it would be when a battle was about to be lost by the cowardice or imbecility of an under officer. Still, we doubt if Washington, even in such a temptation, swore. He was undoubtedly a man capable of wrath, and would have been a feeble man without it. But in a time of wrath he probably spoke as he was accustomed at other times to do. His education was accurate, but not extensive. He did not go to William and Mary, the only college in the colony, probably because his father not living, he was needed at home, and he had good private tutors fully equal to the faculty of that young college. He had the advantage of the society of his uncle, a graduate of

develop a man's mental powers, especially if he be studious and industrious. In this way Washington obtained a thorough education.

The great story of the American Revolution cannot be condensed into a paragraph. How all the colonies demurred at being required to give up their ancient privileges; how they remonstrated at paying taxes to the mother country, without being represented in her councils; how calmly they protested; how they insisted upon it that they desired only their ancient liberties, nothing additional, nothing new, and not separation from the old country; how, finally, they were driven to arms by the rebellion of England, not by their own rebellion; how, then, hired soldiers from other lands were sent to drive them into submission; how they called upon Washington to be their commander, and how reluctantly he accepted the post, but how wonderfully he persevered for seven long years—the very embodiment of cool and unflinching energy; and how, finally, the British arms being humbled, and the greater part of their forces being annihilated, the wishes of the most liberal minority of her people were regarded, and America was declared independent, we shall not further describe.

America had by this time nearly 3,000,000 of people, but at the close of the war their movable property was nearly all destroyed, nearly every family had lost a member in battle, in many families all the men had perished, the different colonies were loaded with debts that it seemed they could never pay; the soldiers went home half clad, and with only paper money in their pockets, which was soon not worth five cents on a dollar; and to complete their sorrows, not yet consolidated into a nation, but dissevered, and perhaps soon to be discordant States, without even a common dependence or a common government to hold them together. When the noble 56 signed the Declaration of Independence, one of them, who sat next to Franklin, turned to him and said: "Mr. Franklin, we must hang together

now." "Yes," said Franklin, "we must hang together, or we will hang separately!" It seemed, after the revolutionary war, that the States, which had so nobly hung together during the war, were doomed to hang separately in the time of peace. We doubt whether an eminent statesman in Europe then thought it possible that these struggling States, notwithstanding England had withdrawn its forces, would ever crystallize into a nation; or, if so, it would be a monarchy. Indeed, Washington was besought to declare himself a dictator, and assume the place of a king. The army was ready to obey him. The offer was deliberately and formally made.

Here was exhibited that trait of character in Washington which has most astonished the world, and which has seemed to some almost supernatural, and has placed the name of Washington highest on the roll of fame. Washington refused to be a monarch! Not from fear of trouble, not from a want of the appreciation of the luxury of power, but from pure principle. In this he was the highest and noblest embodiment of the true American idea.

In perfect keeping with this same principle, he was reluctant to be President when the Constitution was adopted, and such an officer was required. He was more reluctant to serve the second four years, and no amount of solicitation could induce him to serve a third term. This example is ten fold more sacred than any words in the written Constitution! He was American enough to perceive that the nation that can select only one man for its chief officer is not a true republic, and he gracefully retired to private life. So let it be forever with all our Presidents. At this time he was the most honored man in the world. But had he been President for life, his name would have sunk to a level with ordinary successful chiefs. His name is now known not only in America and Europe, but throughout the vast empires of the Orient and in the wilderness of Africa. The public opinion of the world has been well summed up by one of England's most eloquent orators, Lord Brougham, in these words:

"This is the consummate glory of Washington; a triumphant warrior, where the most sanguine had a right to despair; a successful ruler in all the difficulties of a course wholly untried; but a warrior whose sword only left its sheath when the first law of our nature commanded it to be drawn; and a ruler who, having tested of supreme power, gently and unostentatiously desired that the cup might pass from him, nor would suffer more to wet his lips than the most solemn and sacred duty to his country and his God required." "It will be the duty of the historian and the sage in all ages to let no occasion pass of commemorating this illustrious man; and until time shall be no more, a test of the progress our race has made in wisdom and virtue will be derived from the veneration paid to the immortal name of Washington."

What a tribute is this for one of England's most celebrated statesmen to pay to the leader of the nation that won its independence of England by arms!

If now it be asked what renders Washington so great, much discrimination is needed to frame a reply.

Intellectually, he was not pre-eminent. He was careful, methodical, accurate in his observation of men and things, and familiarized himself with the sources of power in the kinds of employment to which he was called. He was a skillful farmer, perhaps the best, at that time, in America. He was a shrewd legislator, especially in the committee-room. He was decided in his convictions, but courteous in their enforcement. His letters and state papers show a correctness of expression characteristic of an acute thinker.

As a military officer, though sometimes defeated, and seldom winning decisive victories, he confessedly displayed wonderful power in organizing his forces, small or large, and in baffling the purposes of the enemy.

But his chief excellences were rather moral than intellectual. His transparent integrity, his self-sacrifice, his unyielding firmness, his conciliatory manner, his power to select good advisers and to repel the turbulent and ambitious, showed him fitted by Providence to fulfill the demands of America in the most momentous hour of her destiny. He stands alone, the most conspicuous and the most honored leader of the 18th century, and unsurpassed in any century or any nation of the world.

Julius Cæsar, at the head of conquering hosts, carried the Roman eagle to far-off lands, writing a glowing history of his own exploits, and, returning, crossed the Rubicon, planted his victorious standards on their native soil, and debauched his country's liberty, and when the crown was offered him by his foolish flatterers, would not decidedly resist the temptation, and justly fell, stabbed by the desperate defenders of their country's rights. Cromwell relieved his country of despotism, but dispersed a Parliament, made himself a perpetual protector or despot, and sought to transmit his power to an imbecile son. Napoleon, in spite of the example of Washington, having astonished the world by supernatural military and executive genius, vainly endeavored to resist the envious combination of able despots against his new empire, and justly fell, and ended his days in exile. But Washington alone resisted the seductive temptation of absolutism, appreciating the rights of a people, carried out the teachings of the highest authority: "He that loseth his life for my sake," for the sake of truth and right, shall find it.

He has found it. Highest on the pyramid of fame his name is chiselled by his grateful countrymen, and confirmed by universal applause; and a century hence, yes, a thousand centuries hence, no name will be found above the name of Washington.

* From "The National Hand, Book of American Progress," by the late E. O. Haven, D. D., published by E. B. Treat, New York, 1880.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

Summer Resorts.

Highland Springs SANITARIUM.

This popular and beautiful summer and winter resort for families, invalids and invalids, is situated in Lake County, 25 Miles from Cloverdale.

Seven miles south of Lakeport, four miles of Kelseyville, and in sight of Clear Lake, at an altitude of 1700 feet, and is sheltered from the cooling coast winds and fogs by mountains 1000 feet in height, which for

Grandeur and Beauty of Scenery are unsurpassed on the Pacific Coast.

While the Beneficial Effects of its Mineral Waters are equal to any in the United States or Europe.

MAGIC SPRING.

Assigned by Prof. W. B. Dilling, University of California.

TEMPERATURE	Grains per U. S. Gallon.
Chloride of Sodium.....	1.200
Bicarbonate of Potash.....	0.44
Bicarbonate of Soda.....	21.763
Bicarbonate of Lime.....	50.411
Bicarbonate of Magnesia.....	70.243
Bicarbonate of Iron.....	0.973
Bicarbonate of Manganese.....	trace
Silica.....	7.398
Alumina.....	0.169
Organic Matter.....	trace
Free Carbonic Acid.....	74.462
Total.....	247.262

W. B. DILLING, Berkeley, April 3, 1882.

DR. C. M. BATES (formerly of San Francisco), having become sole proprietor, by purchase and lease, of these justly celebrated Springs, will devote all necessary time and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations. Carriages, Buggies and Saddle Horses Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily. Post Office and Telephone connected with hotel. Direct Route via San Rafael and Cloverdale 7:10 A. M., will arrive at Springs 1 P. M.

By steamer "DONALDUE," via Donahue Landing, 2:30 P. M., will remain over night in Cloverdale; and via Napa and Calistoga 8:30 A. M.

On Tuesdays, Thursdays and Saturdays will be met at Kelseyville with private conveyance, if notified.

For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, - - Proprietors.

These Springs are particularly beneficial in purifying the blood, and are used by many in the State for the cure of rheumatism, neuralgia, and other diseases. They are also used for the cure of skin diseases, such as eczema, and for the cure of various other ailments. The Adams Springs are situated in the Pine Mountain range of Lake County, California, about eight miles south of Clear Lake, two miles from the town of Adams, and are only six miles (by a good trail) from the Harbin Hot Sulphur Springs, and two miles from the town of Adams. The Adams Springs are situated in a beautiful valley, and are surrounded by mountains. The water is pure and clear, and is of great value for medicinal purposes. The Adams Springs are open daily, and are visited by many people. The Adams Springs are situated in a beautiful valley, and are surrounded by mountains. The water is pure and clear, and is of great value for medicinal purposes. The Adams Springs are open daily, and are visited by many people.

HARBIN HOT SULPHUR SPRINGS,
LAKE COUNTY, CAL.

The Springs are now open for the reception of guests. Stages leave Calistoga daily on arrival of morning trains for San Francisco and Sacramento. Stage Fare Reduced to 50 cents. RICHARD WILLIAMS, Proprietor.

SODA BAY HOTEL, A NEW AND BEAUTIFUL SUMMER RESORT.

SODA BAY, on Clear Lake, Lake County, Cal., the favorite lacustrine resort, is justly regarded as combining greater advantages and affording more attractive and interesting natural features than any other watering place in the State. The climate, as a relief from the severe winds of the coast, is invaluable for the health of children and delicate persons. Indeed, for all requiring the change demanded annually by the residents of San Francisco. While entirely free from the fog, the wind and the chill of the sea coast, the climate is greatly modified from the heat of the interior by the proximity of the beautiful lake, upon the margin of which, for a distance of two miles the grounds are extended. A splendid grove of live oaks, pine and manzanita trees, of great age and gigantic growth, affords the most delightful shade. A beautiful bathing beach offers the choicest facilities for aquatic pastime, far from the danger of the sea surf or chill. The Great Spring, Indian name, OMARACH-HAH-BEE, emitting not less than a million gallons daily, of delicious effervescent soda water, is one of the most interesting natural curiosities of California, and the bath in its exhilarating fountain has an electrical effect that is as delightful as it is beneficial. Extraordinary solatary action on around the shore of the bay, due to the presence of innumerable mineral springs and chemical action upon a vasty extended scale, has given the place the name by which it is known—Soda Bay.

Many excursions are made to Borax Lake, Sulphur Banks, and other points of interest. A new trail leads to the summit of Uncle Sam, 4,400 ft., above the sea. Ample provisions are made for the entertainment of the patrons of this popular resort. The Hotel and the cottages are furnished with comfort and taste. Among the diversions of the place are boating and sailing—yacht and steamer, bowling, billiards, croquet, equestrian exercise, fishing and hunting, and a beautiful pavilion for music and dancing. In short, nothing is lacking for the enjoyment of those who seek rest and recuperation or interesting and healthful recreation beneath the shady oaks and by the ever beautiful lake, in a climate which, for health and for comfort, is acknowledged to be unsurpassed, if, indeed, equaled in the world. Billiards, croquet, ten pins, and baths, free. To reach Soda Bay from San Francisco, go by train to Calistoga or Cloverdale, thence by stage to Kelseyville, at which place a carriage from the hotel will meet passengers. Through time, 11 hours. For further information address, A. K. GREGG, Uncle Sam P. O., Lake Co., Cal.

MAMMOTH GROVE HOTEL, Calaveras Big Trees,

CALAVERAS COUNTY, CAL.

J. L. SPERRY, - - Proprietor.

Tourists can find at the Calaveras Group larger, taller and a greater number of Big Trees than can be found in all other groves of California combined. THE MAMMOTH GROVE HOTEL is situated right in the Calaveras Grove. This grove contains 93 of these giants of the forest.

THE SOUTH PARK GROVE

Is six miles distant, and contains 1,380 Big Trees of immense size. This grove has been inaccessible to visitors until quite recently. A good horseback road now connects the two groves. There is the finest trout fishing and hunting in the immediate vicinity.

Those seeking health or pleasure can find the very best climate in California, and first-class hotel accommodations. Fare from San Francisco, \$11; from Stockton, \$8. Leave Stockton at 8 o'clock A. M.; by rail to Milton. Thence by stage coach to Trees—same day.

Stage to and from Yosemite leaves and arrives daily. No. 3 Montgomery St., S. F.

Lane's Mineral Springs, CALAVERAS COUNTY, CAL.

Pine and Hemlock Chemical-Vapor and Electro-Thermal Baths.

Connected with these Springs are Hot and Cold Baths. The Water of these Springs is Cold, Clear and Palatable, having been used 25 years for medicinal purposes.

These Fountains of Health are located 35 miles east of Stockton, in the foothills of the Sierras; at an altitude of 1,000 feet above the level of the sea. Always ready, Winter and Summer, for the reception of patients, on account of the even temperature of this most genial climate.

The accommodations consist of a Hotel, Cottages, Camp Grounds and Stables. Stage leaves Commercial Hotel, Stockton, at 7 A. M., Tuesdays and Saturdays.

P. O. Address, Knight's Ferry, Stanislaus Co., Cal. JAMES HUTCHINS, Proprietor.

SIEGLER SPRINGS HOTEL, LAKE COUNTY, CALIFORNIA.

JOHN SPAULDING, - - - Proprietor.

GOOD HUNTING AND FISHING

Right at hand for the accommodation of invalids. Baths of any desired temperature.

The SIEGLER SPRINGS STAGE will connect with the stage from CALISTOGA at LOWER LAKE on MONDAY, WEDNESDAY and FRIDAY, at GLENBROOK on TUESDAY, THURSDAY and SATURDAY. Time from San Francisco, TWELVE HOURS. These Springs have no equal in the State for speedily and permanently curing Rheumatism, Gout, Stiff Joints, Dropsy, Scrofula, Skin Diseases, Gravel, Discharges, Female Diseases, Dyspepsia, Catarrh, Chronic Dysentery, Chills and Fever, Lead Poisoning, Parotitis, Constipation of the Bowels, and all diseases of the Stomach and Liver. Bright's Disease of the Kidneys and impurities of the Blood. The Hotel will be kept open summer and winter, the water proving equally efficacious the year round. Important improvements have lately been added, including new

Bath House and a Fine Swimming Bath.

Address all communications to "SIEGLER SPRINGS," Lake County, Cal. W. T. GARRATT, Manager.

BARTLETT SPRINGS.

Situated 16 Miles Northeast of Clear Lake, in Lake County.

Forty miles West of Williams, Colusa county, on the main traveled road from Colusa to Mendocino.

Three Different Routes to the Springs, One via WILLIAMS, one via CLOVERDALE, LAKEPORT and UPPER LAKE, one via CALISTOGA and LOWER LAKE, and all connecting with the train

LEAVING SAN FRANCISCO AT 8 A. M.

Fare will not exceed TWELVE Dollars either way. Daily Mail via LAKEPORT, Semi-weekly mail via WILLIAMS. Post Office, Express Office and Telegraph Office here all the year through.

C. E. CLARKE, Proprietors.
J. C. CHICKLER.

Pacific Congress Springs.

This Celebrated Resort for PLEASURE and HEALTH will be opened for the reception of guests On and after April 15th.

Stage connections made at LOS GATOS with MORNING and AFTERNOON trains of the Narrow-gauge Railroad.

THROUGH TICKETS

Can be purchased at FERRY LANDING, foot of Market street, San Francisco, PRICE, \$2.75

ROOMS CAN BE SECURED

And arrangements made at any time by addressing LEWIS A. SAGE, Saratoga, Cal. Proprietor.

Eureka! Found At Last!

A. W. LOCKHART'S

SEPARATOR ATTACHMENT.

To Threshers.

It is light, can be attached to any thrasher; \$5.00 per year will keep it in repair. By its use 500 bushels more per day can be threshed and cleaned, saving to the farmer enough to pay his threshing bills, also putting the grain into merchantable condition, saving time lost in reaping sacks and cleaning over. Farmers and Threshers will please call and see for themselves, at No. 123, 15th street, between C and D streets, Sacramento. Also, my Feder and Elevator Attachment, so well and favorably known as to need no comment. A. W. LOCKHART.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Mens' Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12. I pay the express charges. I sell nothing but my own manufacture.

GILLES H. GRAY, JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

30 California St., SAN FRANCISCO

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR YOUNG LADIES.

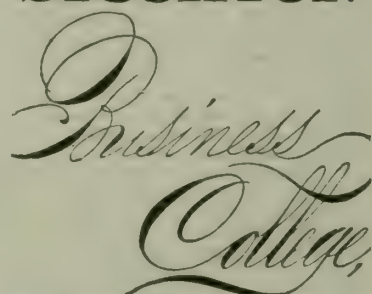
Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882. For prospectus and other information, address S. S. HARMON, Berkeley, Cal., Or. E. J. WICKSON, 414 Clay St., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study: Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers' Course, Preparatory Course, Telegraphy, Languages. The College Journal, containing full information, will be sent post paid to any address. F. E. CLARKE, Principal.

HOPKINS ACADEMY, Oakland, Cal.

REV. H. E. JEWETT, Principal.

This Institution, heretofore known as Golden Gate Academy, will open Tuesday A. M., July 18, 1882. The building and grounds are undergoing extensive improvements. Classical, Literary and English courses. Telegraphy taught. Boys and young men received. Send for prospectus to H. E. JEWETT, Principal.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

J. ALEXANDER, Stockton, Cal. Breeder of first-class Dairy Stock and Berkshire Swine. Half and three-quarters Jersey cows and heifers for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

HENRY PIERCE, 728 Montgomery Street, S. F. Breeder of Jersey, Guernsey and Ayrshire Cattle.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

HORSES.

E. A. SACKRIDER, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, BROWN and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

L. G. BYOE, Petaluma, Cal. Breeder of Thoroughbred Poultry. Illustrated circular free.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

JOHN BERGSTROM,
ORGAN BUILDER.

29th. and Mission Sts.



CHURCH'S
Hay Elevator & Carrier.

BEST in use for Mowing Away Hay in barns or stacking, being adapted for either purpose. Has no equal for Simplicity, Durability and good work. The track is self adjusting and is easily put up. Send for descriptive circular and special terms for introduction to F. L. CHURCH, Manufacturer, Harvard, McHenry County, Illinois.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - Proprietors

Office—818 California Street, Room 2.

CAUTION!!

THE MOST PALPABLE FRAUD!!!

Unscrupulous Persons Envious of the Fame and World-wide Reputation Fairly Won by

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very Trade Mark of the Imperial, endeavoring to put upon the market

WORTHLESS STUFF OF NO VALUE WHATEVER TO FOWLS,

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud until the law has time to take the perpetrators into its own keeping.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. Numerous preparations have from time to time appeared called "Egg Foods," but as they did not conflict in name or trademark, were perfectly allowable, and, after due time, failing in their purpose, passed out of the market, while the Imperial continued to gain favor everywhere. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and Testimonials.

RETAIL PRICES OF IMPERIAL EGG FOOD:

1 Pound Package, 50 Cents.

2 1/2 " " " \$1.00,

6 Pound Box, \$2.00,

25 " " " 6.24

Sold by the trade generally, or address,

G. G. WICKSON, 319 Market St., S. F.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & SON

PETER SAXE & SON

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$90.

No. 2, " 250 " " 65.

No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 3,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to

GEO. B. BAYLEY,

Box 1771, San Francisco.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUSENBERG & CO Sole Agents, 314 Sacramento St., San Francisco.

REMOVED.

MARK SHELTON,

General Agent for the

DAVIS, "HOWE," "HOUSEHOLD," "QUEEN," "SINGER," "SPRING-FIELD," and "STEWART"

Sewing Machines,

And Wholesale Dealer in Needles, Oils, Parts and Attachments for all Machines, removed from 130 Post to

9 & 11 FIRST ST., Near Corner Market, S. F.



Calvert's Carbolic

SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON S. F., Sole Agent for Pacific Coast

JOHN JENNINGS.

Hooper's South End Grain Warehouses,

Cor. Japan and Townsend Sts., S. F.

First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the O. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

IMPROVED
EGG FOOD

It Cures all Diseases of Poultry, Keeps Hens Healthy and Makes them Lay.

1-lb. Boxes, 40 Cts. 3-lb. Boxes, \$1.

10-lb. Boxes, \$2.50. 25-lb. Boxes, \$5.

B. F. WELLINGTON, Prop'r.

Also, Importer and Dealer in Seeds. 425 Washington St., San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHBRED



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

LAUREL RANCH.

Thoroughbred

Spanish Merino

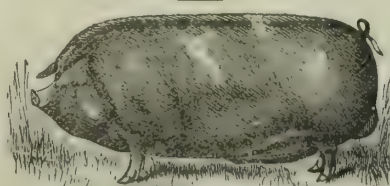
SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

JONESA POLAND CHINA FARM.

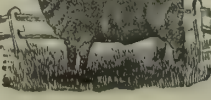


ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Bess, Bamark, and other noted families. Imported boars King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.



Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to FALKNER, BELL & CO., San Francisco

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,175.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.



For sale in large or small tracts, on easy terms, in the best parts of the State.

McAFEE BROTHERS,

328 Montgomery Street, S. F.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER.

Vacaville, Solano Co., Cal.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County, near station, all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,

410 Montgomery St.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place,

WM. C. PRINCE.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

S Los Reservoirs, Head Gates,

ARTIFICIAL STONE AND CONCRETE.

RANSOME, 462 Montgomery St., S. F. Send for circular.

GEO. W. MEADE & CO.,

Office and Warehouse, Nos. 416 and 418 Front Street, San Francisco, Cal.

WHOLESALE DEALERS IN

California and Oregon Sun Dried and Evaporated Fruits,

CALIFORNIA RAISINS AND FRENCH PRUNES.

CALIFORNIA COMB AND EXTRACTED HONEY, ALMONDS, WALNUTS, Etc., Etc.

As the LEADING HOUSE and HEADQUARTERS in all these products, we are ready to correspond with the producers with the view of purchase or contract for the coming crops. REMEMBER, that we purchase outright either at points of production, paying freights, etc., ourselves, or delivered in S. F., freight paid. Remember, also, that in dealing with us you are operating through strictly FIRST HANDS. NO COMMISSIONS charged. NO DELAYS in settlements.

PACIFIC BRANCH.



GEO. D. DORNIN.....Manager.
WM. SEXTON.....Asst. Manager.

INSURES ON GROWING CROPS under a plain and easily understood Contract, also on Grain in Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

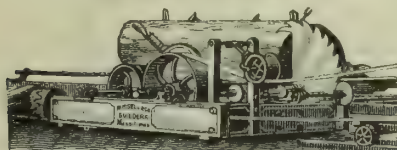
RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

RUSSELL & CO., Massillon, O.
BERRY & PLACE MACHINE CO.,
Agents for the Pacific Coast.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the best.

Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-Iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALABAMA CO., CAL.
San Francisco Agency, LINFORTH, RICE
& CO., 323 & 325 Market St., S. F.



FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.
SAN FRANCISCO, Cal.
OFFICE 5, Up-Stairs.

REMOVAL.

WM. F. SMITH, M. D.,
OCULIST.

Formerly at 313 Bush street, has removed to Phelan's Building, Rooms 300 to 304. Hours for consultation, 12 m. to 3 p. m. Take the Elevator.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES-HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

FLAGS.

5 to 9 California and
108 to 112 Market St.

San Francisco,
California.

THE OSBORNE MACHINES,

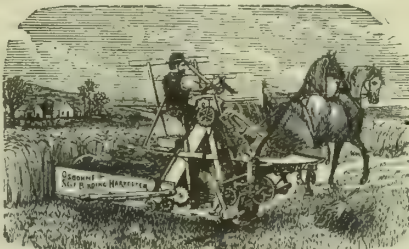
COMPRISING

SELF BINDING

HARVESTERS,

Front Cut & Rear Cut

Single Mowers,



AND

SINGLE REAPERS,

COMBINED

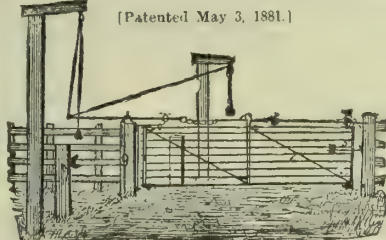
MOWERS & DROPPERS

Agent for STUDEBAKER Farm and Spring Wagons.

HEADER TRUCKS with wide and narrow tires, RAKES, DERRICKS, BELTING, CORDAGE, OILS, FORKS, HARDWARE, Etc. Steam Engines, and general repairing, with large assortment of extras for Agricultural Implements, and the STOCKTON GANG PLOWS, REVERSIBLE MOLDS and LAND SIDES. Address, P. O. Box, 95 JOHN CAINE, Globe Iron Works, Stockton, Cal.

CAMPTON'S Self-Opening Iron Farm Gate.

[Patented May 3, 1881.]



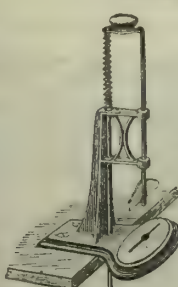
It is the Champion Gate of the World for its Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co., June 3, 1882. A. P. CAMPTON, Esq., Dear Sir: The two Automatic Iron Gates of your patent (one 12 and the other 10 ft. in width) erected by you on my farm, two miles west of Davisville, have given me entire satisfaction. They are all you represent them to be, the most substantial, the neatest and the most easily operated of any gate that I know of. They are just the gate that every farmer should have; in fact, they cannot afford to do without them. Respectfully yours, H. M. LARUE.

A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee; John Aylward, manufacturer, P. O. Box, 88, Livermore, Alameda Co., Cal., and Jas. Stanley, Mission San Jose, Cal., agents.

Excelsior Fruit Pitter.

Invented by A. Donatella.



This machine recommends itself by the following good qualities: Rapidity of work, one operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the ridicle for the Drier. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Prunes, Apricots or Nectarines pitted with this machine - dry more evenly and look nicer than when chipped off with a knife. The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address, A. DONATELLA, Healdsburg, Cal.

ONE HUNDRED SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

Cornwall Station, Contra Costa County.

50 All New Style Chromo Cards no two alike, name on 10 cents. Clinton Bros., Clintonville, Conn.

S. P. BAILEY. O. E. BADGLEY. JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Sts., Stockton, Cal.

Importers and Jobbers in

Agricultural Implements, Hardware, Etc.

Agents for the

J. I. Case and Woods Headers, McCormick Harvesting Machine Co.'s Binders, Reapers and Mowers, the LaBelle Freight, Farm and Header Wagons, Althouse Vaneless Windmills, Minnesota Chief Thrashers, Engines and Horse Powers, San Leandro, Buford and Stockton Gang and Sulky Plows.

Also, State Agents for the Celebrated AMERICAN HAY CARRIER and ELEVATOR.

Large Stock of Builders' Hardware and Carpenters' Tools. Orders Promptly Filled, and Goods sold at Brooked Prices.

FOR SALE.

Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

STOCK RANCH FOR SALE.

About 28,000 acres of the San Cristobal grant, located in Santa Fe county, New Mexico. Is one of the finest stock ranches in the Territory. It is well watered, and is only about six miles from a railroad station. It contains a large tract of irrigable land, a large house, thrifty orchard, etc. Price \$35,000, on easy terms. Title, U. S. Patent. For further information call upon or address, S. N. LAUGHLIN, Castroville, Monterey County, Cal.

BADEN FARM HERD.

R ASHBURNER.

Baden Station, - - San Mateo Co.

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

THRESHING ENGINE.

A No. 3, 7x10 Ames Engine, in use only one season, in thorough repair, will be sold cheap.

H. P. GREGORY & CO.,
2 & 4 California St., S. F.

MUSIC BOOKS BY

AMERICAN COMPOSERS.

Ditson & Co publish a large number of books that are purely American in design and composition.

Zenobia (\$2.) is a new Grand Opera, just out. It is by S. O. PRATT. The subject is a noble and heroic one, and the scenes are capable of being made most attractive. Will soon be given, Miss Annie Gary taking the principal role.

Don Munio (\$1.50) by DUDLEY BUCK, is a legend of the Crusades.

46th Psalm (80 cts) by DUDLEY BUCK, is a favor ite.

Joseph's Bondage (\$1) By CHADWICK.

Belshazzar (\$1) By BUTTERFIELD.

Are two sacred Cantatas introducing, the one Egyptian and the other Babylonian scenes, which, with proper costuming, may be made magnificent. The music is good, and either is well worth giving.

New Flower Queen (75 cents) By GEO. F. ROOT.

Picnic By THOMAS.

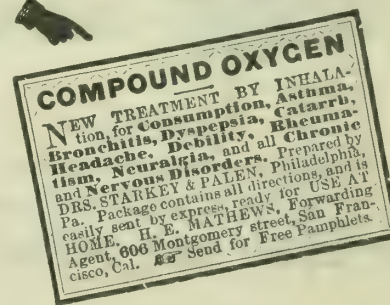
Two Cantatas which are most appropriate to the flower and excursion season.

Redemption Hymn (30 cts) By J. C. D. PARKER, will be most acceptable to choirs and choruses.

OLIVER DITSON & CO., BOSTON.

Established 1834.

C. H. Ditson & Co., 843 Broadway, N. Y.



CLEAR LAKE

AND

CALISTOGA STAGE LINE.

San Francisco

-TO-

LAKEPORT

In Eleven Hours.



Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays stages leave Calistoga for Lakeport via Middletown, Glenbrook, Kelseyville and Soda Bay; returning alternate days.

This is the Most Direct Line from San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegel, Howard Springs and Soda Bay. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middletown, Guenoc, Lower Lake, and Sulphur Banks; returning alternate days. This line connects at Lower Lake with stages for Siegel, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!

Driven by the most skillful drivers on the coast. For full information and tickets apply to SAM. MILLER, Tourist and Ticket Agent, 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50. Lakeport office at W. W. Green's Hotel. JOHN CLARK, Agent. W. F. FISHER, Proprietor.



Guaranteed to do better work and give better satisfaction than any in use. Sent ON TRIAL to responsible farmers. For circulars and terms to agents address G. T. BROWN, Stockton, Cal.

C. E. CASE, M. D., Consulting and Operating Physician,

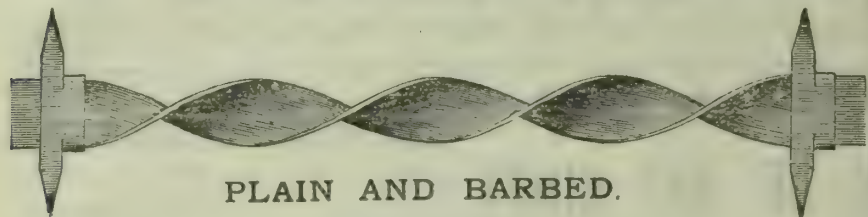
1116 Broadway Oakland, Will visit patients at instance for consultation or to perform operations.

SACRAMENTO.

SAN FRANCISCO.

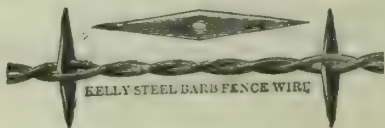
HUNTINGTON, HOPKINS & CO., Hardware Merchants.

AGENTS FOR BRINKERHOFF GALVANIZED FENCING,



PLAIN AND BARBED.

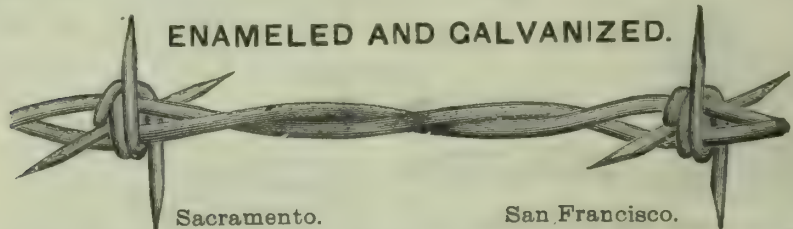
"Kelly" Barb Wire,



ENAMELED AND GALVANIZED.

"RED STAR" (4-Pointed) Barb Wire,

ENAMELED AND GALVANIZED.

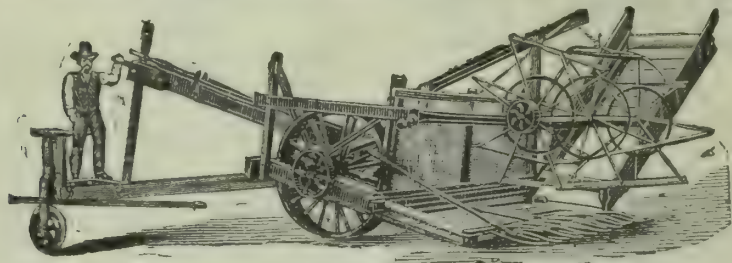


Sacramento.

San Francisco.

RICHARDS' IMPROVED HEADER,

"The Stockton Chief!"



These Machines all Have Forty Inch Drapers.

The Farmers call it the "BOSS HEADER OF CALIFORNIA." Built especially for California Trade
THE OPERATOR CAN STOP THE DRAPER AT WILL. CUT 10 FT. TO 16 FT.

IRON FOUNDERS AND MANUFACTURERS OF
FARMING IMPLEMENTS!
DERRICKS AND FORKS,

Plows, Harrows, Cultivators, Steel Road Scrapers, Etc.

Call at the old Stand or Send for Catalogue and Price List, Liberal Discounts to the trade.

Orders for the "STOCKTON CHIEF" HEADER

Should be forwarded early, as the demand is so great that it is difficult to fill late orders.

MATTESON & WILLIAMSON,

Corner of Main and California Sts., Stockton, California.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have
used it
INFALLIBLE SQUIRREL AND GOPHER
EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

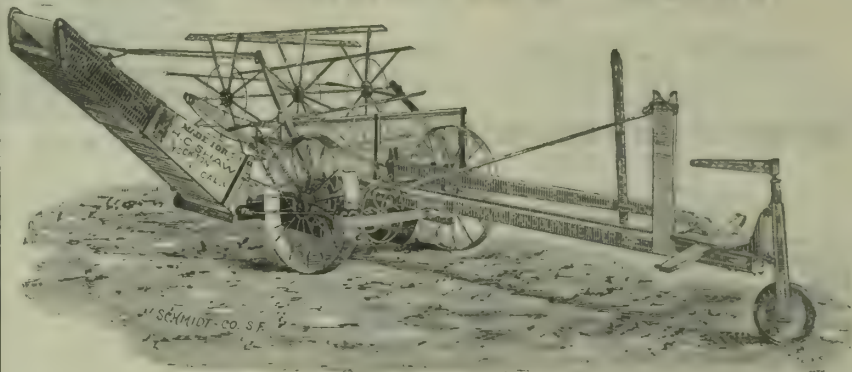
NOTICE!

To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-raiser, once having used our medicines will ever be without them in the house. For sale everywhere.

Trade { H. H. H. { Mark Trade { H. H. H. { Mark Trade { H. H. H. { Mark		
Hoof and Healing Ointment	Horse Liniment	Condition Powders.
For Brittle Hoofs, Fever in Feet, Founder, Contracted Hoofs, Sand Cracks, Quarter Cracks, Collar Galls, Harness Galls, Scratches, Mud Fever. Etc., Etc.	The most effectual liniment ever used for Ringbone, Spavin, Sweeney, Callous Lumps, Old Sores, Sprains, Stiff Joints, Bruises, Windgalls, Etc.	For Inward Strains, Hide Bound, Loss of Appetite, Yellow Water, Poll Evil, Scratches, Mange, Rheumatism, Epizootic, Coughs, Colds, Etc.
H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.

H. C. SHAW PLOW WORKS.



GENERAL AGENTS

IMPROVED RANDOLPH HEADERS,
LIGHTEST DRAFT!! BEST ELEVATION!!!

Three Hundred Sold in Two Years.

Chieftain Sulky Hay Rakes,

H. C. SHAW Stockton Gang Plow,

ALSO, AGENTS FOR

WALTER A. WOODS' IRON MOWERS,

FISH BROTHERS' FARM AND SPRING WAGONS.

FURST & BRADLEY SINGLE AND SULKY PLOWS,

Powell's Electric Hay and Grain Elevator.

HEADER EXTRAS! MOWER EXTRAS!! PLOW EXTRAS!!!

(Send for Illustrated Catalogue and Price list.)

201-3 El Dorado Street,

Stockton, Cal.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House,

O. F. BECKER, Proprietor

BAKER & HAMILTON,

SAN FRANCISCO, CALIFORNIA,

SEND FOR ILLUSTRATED CATALOGUE AND PRICE LIST.

BUFFALO PITTS' THRESHERS.

Another Year's Improvements the Greatest of Them All.

They are made especially to suit the peculiar wants of the Pacific Coast. In a word, we can safely say that the Buffalo Pitts for 1881 is Perfect. One needs to see the practical working effect of these changes to fully realize their great utility and benefit. Superior to all others in Capacity, Quality of Work and Durability.

Send for Descriptive Pamphlet and Price List.

New Hollingsworth Rakes,

With Wrought-Iron Axle Arms. A Great Improvement.

BAKER & HAMILTON, S. F.

J. I. CASE'S

Improved Single Gear Header,

With New Patent Adjustable Reel, having a pipe shaft. Patent wrought-iron wheels with adjustable spokes. Patent truss to brace the frame.

Long, Cast-steel Guards, set close, which answer the purpose of lifters in fallen and tangled grain. The sections are placed on top of the Sickle Bar. Cast-steel Shafts set in Babbit metal bearings run true and easy. The improved gears with adjustable device for the main bevel gear. Improved loose hub on the main bevel gear wheel.

And is the only header having a SELF-CORRECTING BALANCE which requires no weight upon the lever, or a man power to elevate or depress the point of the Header. The latter improvement is the most complete and important of all—we call your special attention to its merits. All our Headers have 48 inch drapers.

Send for Catalogue giving full Description.

CHAMPION REAPERS AND MOWERS.

These Celebrated Machines are made as combined Reapers and Mowers, Single Reapers and Single Mowers, and the Combined Machines may be used as self-rakers, as Droppers, or as Mowers, and are complete and perfect in every place. They are emphatically Wrought-iron Machines; and are made with wrought-iron main frames, firmly riveted together, to which the several parts are riveted or bolted, and all have wrought-iron connections of the cutter-bar to the main frame. The master-wheel shafts and the pitman fly-wheel shafts, and also the drag-bars are made of the best cold-rolled iron, and the shaft boxes are case-hardened.

Send for Descriptive Circular and Prices.

THE OLD RELIABLE AMES ENGINE,

With Patent Furnace Boilers.

BURNS STRAW, WOOD OR COAL.

Embodies all the essential points and improved principles which a long experience in the field could suggest, and is particularly adapted to the requirements of threshermen and farmers. Its design is perfection—complete, compact and effective, and manufactured of the very best material obtainable. All parts are duplicated, and in a case of breakage (which does not often happen), can be expressed to any part of the Pacific Coast on short notice. No machine shop necessary to keep the AMES ENGINE in repair, or loss of time and expense sustained in shipping to and from the repair shop.

Send for Descriptive Circular.

We Keep the Largest and Best Stock of

HARDWARE

AND

Agricultural Implements

On this Coast. Send for Catalogue.

THE TIGER

Self-Operating Horse Rake

Is the Best Hay Rake in the World, and Has Never Failed to Give Satisfaction.

Both for the superiority of its work, its unequalled construction and durability, and the variety of work to which it can be applied.

Each succeeding year extends the fields of its triumphs, and gives it a higher reputation, and it is now everywhere recognized as the LEADING RAKE, and is the ACCEPTED STANDARD by which the merits and defects of other Rakes are measured.

THE CELEBRATED BAIN WAGONS.

These Wagons are built expressly for this coast, from the best selected and thoroughly seasoned Second Growth timber. The Felloes are all (before setting the ties) run through boiling linseed oil, thereby counteracting any liability of shrinkage, or consequent loosening of ties. The gearings are ironed in a superior manner, with extra heavy

TIRES, BRACES AND STAY CHAINS, and mounted with the best California Roller Brakes, light or heavy. SEND FOR PRICES.

EXTRAS.

We keep the most complete stock of Extras for all the different kinds of Farming Machinery sold on this coast, namely:

Champion Reapers and Mowers, Buckeye, Etna, Wood's. Sections of all kinds. J. I. Case's Genuine Headers, Hodge's and Wood's Imitation Case Headers, San Leandro Header, Buffalo Pitts & Russell's, etc., etc.



THE "CALIFORNIA CHIEF."

The best Small Bale Hay Press made. Puts 10 tons of the Dryest Hay in a common box car. Capacity about one ton per hour.

Height 4 ft.; Width, 2 ft.; Length, 12 ft.; Weight, 2,500 lbs. Size of bale when out of press, 18x3 inches and 3 ft. 6 inches long. Average weight 175 lbs. One hundred and twenty-eight bales will go in a car. Bales as smooth and square as pieces of tobacco. Press strong and mounted. Can be moved anywhere, up any hill and over hills with two horses. Requires no backing down. Ready for business as soon as it arrives at work. Bales pressed against an end door which is opened after the bale is run. A door is pushed out easily by putting in more hay. Horse works on a lever, 16 ft. long, walking half way round and back, pressing a charge when going either way. Follows goes back it off. No side doors. Baled through sixteen 1/2 inch holes. Made of the toughest Eastern white oak. Iron work very heavy. MADE STRONGER THAN ANY PORTABLE PRESS WAS EVER MADE BEFORE. Warranted not to break for one year. Giving best satisfaction who ever used it. Price, \$750. Manufactured at the works of the San Leandro Hay Co., by

JACOB PRICE, San Leandro, Cal.

Inventor and manufacturer of the Price or Petaluma Press, the Improved Eagle Press, the Bell Press, and all other and manufacturers of the CHELSEA and FEDERICK PRESSES all styles. Send for illustrated catalogue and price list of the above named Presses.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process in 3 the big est of any. Fruit as good as fresh and full for descriptive catalogue with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: J. B. Niles, Los Angeles; J. S. Lee, M. A. Miller, T. J. Wal. Salem, Or.; T. W. Butler, The Lakes, Or.; H. M. Foster & Co., Wagon Walla, W. T.

J. H. WYTHE, M. D.

Residence: 955 West Street, Oakland. Office: 759 Market St., San Francisco. Before 10 A. M., after 5 P. M. From 11 A. M. to 3 P. M.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons.

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,000 ft. in length, and have a floor surface of 105,412 square feet, or nearly 24 acres. The walls are connected with the working rail, are over 60 ft. in length, and have a door surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties coming to suggest or assist in the construction of new works will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to make rapid work and prompt shipments, either by rail or water, thus making a great saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller
" Improved Granger Gang Plow
" Improved Single and Tule Plow.
Sweepstake Plows
Hill's Sweepstake Road and Breaking Hill's Improved Horse Power Cultivators
" Sole Hill Gang
" Double Deep Tiller
Fresno Ditching and Grading Plow.
Gang Seed Sowers
Hill's Improved Headers
Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, Agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of many articles embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with the latest Improved Implements, which are regularly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

EXCURSION TO ALASKA.

The August trip of the Steamship IDAHO to Alaska will be made a special feature of interest for tourists and pleasure seekers. In addition to her regular ports of call (Wrangell, Sitka, Harrisburg, etc.) it is intended she shall visit Glacier Bay and other points of special interest.

The trip from Puget Sound to Alaska, instead of being, as many imagine, rough and tempestuous, is made nearly the whole distance on inland waters, which are as smooth and unruffled as a mountain lake. The scenery is a magnificent panorama of wondrous grandeur. The noted and celebrated points of interest in California and other States dwarf into insignificance in comparison with the wonderful sights and towering mountains in this wonderland of glaciers, icebergs, Aurora Borealis and night less day. Only a limited number of passengers can be taken from San Francisco, as a large number of tourists have engaged to go from Portland, Victoria and other northern ports.

Those desiring to engage passage will please register their names at the Company's Ticket Office, 214 Montgomery street. No name accepted unless accompanied by a deposit of \$20 on account.

The fare for the round trip has been fixed at a low rate of \$115, which includes meals and a berth.

Passengers will take the DAKOTA, which leaves Broadway Wharf July 29th, at 2 P. M., and transfer to the IDAHO at Port Townsend about August 31, reaching San Francisco on the return about August 25th.

GOODALL, PERKINS & CO.

General Agents.

STEAM PLOWS.

For sale—Two sets 8 cam Plows, manufactured by the world-renowned firm of John Fowler & Co., of Leeds, England, with all latest improvements and duplicate accessories. These plows are capable of plowing from 15 to 50 acres per day per set, at a depth of from one inch to two feet, or more. The four powerful traction engines belonging to the outfit were expressly constructed for use on the Pacific Coast and colonies, with a view, not only to economy in fuel, but also for transportation purposes, and for all kinds of farm work where steam power is advantageous or requisite. Apply to

H. N. CHAUNCEY,

Room 10, No. 100 California St., S. F.

LAND Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.



Volume XXIV.]

SAN FRANCISCO, SATURDAY, JULY 8, 1882.

Number 2

The State Fair.

The State Agricultural Society (E. F. Smith, Secretary, Sacramento,) has just issued a neat pamphlet of 63 pages, giving the revised premium list for the fair of 1882, which will be held from September 11th to September 16th inclusive. We are aware that the directors have made a special effort this year to secure the views of producers concerning the arrangement of awards, and we trust that many improvements have been made in the list. We have not found opportunity to examine the classes carefully, but this work can be done by each intending exhibitor for himself, and we would advise all to send to Mr. Smith for a copy of the pamphlet at once, so that there may be plenty of time to get exhibits in good order, if the premiums offered are satisfactory. We shall draw from the pamphlet a few paragraphs relating to the exhibition of live stock:

As a special feature, the Board have decided upon having a grand walking match for draft stallions, and have offered therefor the sum of \$25, and have also been tendered by the Benicia Agricultural Works, of Benicia, California, a two-horse "Sweepstake" iron farm wagon complete, valued at \$200, to be known as the "Benicia Agricultural Works Prize," the test to be made under the following conditions: Horses entered to be draft stallions weighing 1,300 lbs. or over; the walk to be one mile to wagon selected by the committee, and to contain not less than one ton in weight; the stallion making the fastest time to receive the wagon, the one making the second best time, the coin; entries to close September 11, 1882, at six o'clock P. M. In entering, please give name, pedigree, color and weight.

A premium of \$40 is offered for the best milch cow of any age or breed, under the following conditions: The cows contesting shall be openly exhibited from Tuesday morning until allowed to be removed. They shall be milked in presence of a Trustee on the morning and evening of Wednesday. The milk of each cow shall be measured, weighed and tested with lactometer upon being drawn. The milkings skimmed respectively on Thursday evening and Friday morning, and churned on Friday, at 9 A. M. The butter shall be well worked and weighed without salt. The whole shall be, including custody of milk, under the supervision of a Trustee, who, with the others, shall award the premium. The data upon which the award shall be made shall be, the weight of the cows, the quantity and weight of the milk.

In judging swine it is announced that in the Berkshire class swine shall not be recognized as eligible to entry unless they trace to animals recorded in the American Berkshire record, or the exhibitor furnish in writing, at the time of entry, equally satisfactory evidence as to purity of breeding. We notice that a special class has been made for Darcos or Jersey reds, this year, the premiums being the same as for Berkshires.

Under the head of agricultural products, the following specialties are noted: Best exhibition of the silk business, from the mulberry tree to the silk cocoon, including the feeding of the worms, their eggs, etc., \$25. Best bale of California cotton, not less than 400 pounds, by the producer, \$20. Display of California manufactured tobacco, \$10 and diploma.

A commendable arrangement has been made, by which premiums for agricultural products, excepting table collections of various vegetables, are to be made to growers only. This gives the growers a chance to compete with each other without competition from the tradesmen, except on miscellaneous collections. These collections being for display only, and not to test the value of different varieties, may well be left aside for the tradesmen.

The Wood River News says: "Stay away. We hear of thousands on the road to Wood River packing their blankets and begging their way. Better keep out. You won't have wind enough to ease the country with by fall."

Elemental Disturbances.

The elements took an active part in Fourth of July observances this year, and in the northern part of the State asserted their superiority in the pyrotechnic art. At Yreka, Siskiyou county, on the afternoon of the Fourth, there was a terrific thunderstorm, accompanied with heavy hail and rain. The showers amounted to at least three-quarters of an inch. Hailstones fell of a very large size and of a color similar to pieces of ice, flat and entirely different from the usual round, milky-white hailstones. They cut off leaves and fruit from the trees to a great extent, also seriously damaging other crops. Flags flying were blown from the

wright place, adjoining the Parrot grant, it struck and set fire to the stubble, but was observed by James Hegan, who was riding past in his buggy, who gave the alarm to the thrashers on the grant, and with a buggy robe kept it from spreading to the standing grain until the men arrived and put it out. Lightning in grain fields of Butte was never heard of before.

The unusual character of these occurrences in California makes their record a matter of general interest.

A Memory of Harvest Time.

Many of our older readers will need but to indulge in a retrospect to recall a harvest scene like that shown in the engraving. It is



THE HARVEST IN THE OLD TIME.

poles and the streets were flooded with water, making deep streams at several points. The excessive heat for a week past undoubtedly brought on this extraordinary storm, which extended over most of the county and seemed like a cloudburst by its fury.

At Truckee on Sunday evening, during a heavy thunder shower, Mr. H. W. Roberts, a prominent citizen of Truckee, and a small boy, son of Mrs. Madden, of this place, had a very narrow escape from being killed by lightning. Mr. Roberts, accompanied by the boy, was driving a two-horse team attached to a buggy over his ranch, near Verdi, Nevada, when the team was struck by a bolt of lightning, killing both horses, completely demolishing the carriage and knocking both the occupants insensible. Mr. Roberts and the boy remained unconscious for sometime, but they are out of danger now.

On Monday, about noon, two most unheard-of grain-field fires took place from lightning, in the field of John Thomson, near Nord. The lightning struck about 100 yards from the thrashing machine, and set fire to the grain, but it was soon discovered and put out; also, on the Cart-

harvesting in the old times and in the old places. The little field cornering into the woods, the grain gathered by hand, the dead heat of summer, the shrill cry of the insects, and, just a step away, the solitude and cool shade of the woods, so grateful after the labor of the burning field. While our California harvesting is going on in the great expanses of the grain counties, with herds of animals, crowds of men and a maze of machinery, it is interesting to return in memory to the old "back-field," and recall its great toil and little triumphs. One can hardly believe such changes possible within a single lifetime. This picture of the past will call up many others to bear witness to the wonderful industrial progress which the present generation has achieved.

A SPECIAL from Washington says: Letters from Mexico say the government has accepted Captain Fad's plan for the improvement and enlargement of the harbor of Vera Cruz, estimated to cost \$7,500,000. The Federal and State governments are making arrangements for providing the funds, materials, etc., and actual work will be commenced immediately.

Ensilage of Dry Fodder.

And now an inventive genius has turned the silo to account in freshening up dry cornstalks, thus enabling the corn grower to harvest his crop of ears and then moisten up and make succulent the dry stalks by packing in a silo. It is claimed at the East that this process is patented. The method consists in moistening, wetting or saturating the dry or partly dried stalks and plants—such as cornstalks—before or after they are placed in the silo, and they are then packed and compressed in the silo in this moistened state. In carrying out this invention, the dry or partially dried cornstalks from which the corn has been husked are cut into pieces of about three-eighths of an inch in length, or longer or shorter, as may be desired; but the stalks should always be cut as finely as possible. In place of cutting the stalks, they may be mashed or broken by rollers or other suitable devices, or may be reduced to small pieces in any other suitable manner. These finely cut or reduced cornstalks are to be packed in a silo. Before or after cutting the stalks, or before or after being packed in the silo, these finely reduced cornstalks are sprinkled, moistened, wetted, or saturated with water or steam, or each layer is wetted or moistened in the silo. The cornstalks are packed and compressed in the silo in this wet or moistened state. It is desirable to get all the water into the stalks that they will absorb and retain after compression by the usual methods of compression of ensilage in silos. The object to be obtained by moistening or saturating the cornstalks with water is to restore to them about the amount of water the stalk, leaves and husks have lost in maturing or by drying before or after being cut. The water absorbed by the cornstalks renders them soft and succulent, and adapted to be used as forage and packed in a silo.

It is claimed that the results obtained with this forage have been highly satisfactory in every respect. The dry cornstalk forage can be stored in the same silo with the green ensilage, for the green corn (ensilage) is packed into the silo early in the season, and settles one-fourth to one-third of the entire depth. The dry cornstalks are taken from the fields after husking—that is, later in the season—and the silo is refilled with the forage prepared from the cornstalks after husking the corn.

The Resort to the Beet.

We have received a glowing circular, in the French tongue, announcing that inasmuch as the phylloxera has destroyed the French grape vines and as America is now bombarding France with casks of grape wine, the French must fly to the beet to beat the American and the insect. We translate a paragraph:

More than half the French vineyards have disappeared, and no one can foresee the end of the depredations. These losses are so great that, to speak only of alcohol, France, which for long years was as the reservoir of the entire world, becomes to-day the tributary of foreign countries. In the presence of such disaster, a scientific and practical farmer bent his energies to the discovery of a substitute. It is our red beet, without a rival in the whole world for its incomparable qualities, that is called upon to supersede the vine. America, industrious America, is invading us on all sides. Let us resist the encroachments of importation with the pacific weapons of progress and civilization. The French press, the European press, cannot refuse their co-operation in this work of national defense. In our own country, the impulse has been given. Our red beet has begun to penetrate everywhere, and the news which we receive of its culture is most reassuring. The vegetable grows well and gives promise of a large return. With the object of extending the propagation of this vegetable and developing the manufacture of beet wine and alcohol, the discoverer of the new industry offers to furnish, gratuitously, all agriculturists whatever seeds they may require.

The circular from which we quote is ornamented with a picture of a beet, but it makes a sorry portrait if compared with a picture of a grape culture. So it may be with the product. It is, of course, easy enough to make alcohol from beet juice, but alcohol is not wine. The recourse to the beet seems a desperate movement. It would be better to move to America and grow grapes.

FORESTRY.

"Kellogg's Forest Trees of California."

Since the days of John Evelyn, I doubt if there has been such a lover of trees as the now venerable botanist of the Pacific coast—Dr. Albert Kellogg. For over 30 years the periodical literature of California has been constantly enriched by his rarely felicitous descriptions of her plants; and the existence of the Academy of Sciences, through years of struggle and poverty, is largely due to his constancy and unselfish zeal.

Two great scientific losses have been sustained by California, of which little has been said in the newspapers. One was the Newcomb collection of shells, purchased by Cornell University, and the other, Harry Edwards' entomological collection, which has also gone East. The recent purchase and gift to the Academy of the Ward collection was a kind of reprisal; and now we hope that Dr. Kellogg's more valuable collections and illustrations may attract the attention of our wealthy men, and be secured for the perpetual benefit of our students of natural science. But this is a digression.

The State Mining Bureau has just issued a small edition of a part only of Dr. Kellogg's unpublished work upon the forest trees of California, a foretaste, one may say, of the book, which is in every sense the scripture of the trees.

It is characteristic of all scriptures that they are intensely practical as well as grandly poetical, and this is even so; they carry the mind onward from form to substance, from Nature's types and shadows to the sublimest spiritual realities.

Ruskin said, "No one can be far wrong in his temper and way of life who loves the trees enough, and every one is assuredly wrong in both who does not love them if his life has brought them in his way. If human life be cast among trees at all, the love borne to them is a sure test of its purity."

The historian of the future will relate how, upon discovery of the mammoth trees, branches and cones were sent to Dr. Kellogg, who gave it the name *Washingtonia gigantea*. Mr. William Lobb, a botanical collector for the great horticultural firm of Veitch & Sons, in England, who was then in California, obtained specimens and sent them to his employees, whereupon the English named it *Wellingtonia*, and as such its portraits and seeds were distributed throughout the horticultural world. After much contention between the two hemispheres over the name, that of Sequoia, a Cherokee chief, was adopted by the botanists on this side of the Atlantic.

The description of this Sequoia in Dr. Kellogg's pamphlet opens significantly with these words from the New Testament: "If I will that he tarry till I come, what is that to thee?" a fitting preface to the life story, from birth to death, of the noblest tree from "which the Great Artist has graven upon the blue tablet of the skies."

It is not uncommon to hear the age of these trees questioned; it is often said that the race is perishing from the face of the earth. But one author says: "The Sequoian ditches dug at a blow by their fall, and the tree tumuli, always turned up beside the deep-root bowls, remain, but not a vestige of one outside the present forests has yet presented itself, hence the area has not been diminished during the last 8,000 or 10,000 years, and probably not at all in post glacial times; the notion, therefore, that this species tends to extinction more than others, or than the planet itself, seems absurd, for its vital vigor is assured in ages past and present, and, so far as mundane things can be, to come."

Again, he takes the utilitarian side of the subject as a standard of comparison with other serviceable sons of the forest: "No known trees of the world compare with these and their kin, the redwoods, for the focussed proximity of such a marvelous amount of timber within limited areas, as it were, the *ne plus ultra* standard of timber land capacity."

One who has kept company with the Sequoias until in some measure enabled to realize their grandeur, will utter a fervent "Amen!" to Dr. Kellogg's ending of the "Lesson of the Big Tree." "Finally, in all due homage do we accord to this great first born of the forest not only priority in time, but in degree of goodness as to quality, pre-eminence at nearly all points of view; and, as to state—past, present and to come—whether as to use, magnitude, dignity, elegance or beauty, yielding the palm of our forests to Sequoias; for they are indeed the great St. John cedars, that never grow old, are never decayed, nor ever diseased, and forever rallying in youthful vigor to repair their storm-lost crowns; never known to die a natural death, sylvan types of the immortals."

Readers of the "Living Way," a periodical that for several years redeemed our literature from the charge of materialism, will recognize the delicate touches of the teacher in the description of the Western Larch, which abides only in the cool northern counties: "Seen in spring, decked in pink tassels, like ripe strawberries thrown over the lofty pea-green cone of delicate foliage—if anything so gauzy and gossamery is entitled to the dignified appellation of foliage, there she stands before you, the veiled Venus of the grove. Later on, as the season

advances towards autumn, the foliage becomes yellowish green, and at length yellow when the year gathers her gold with the joy of harvest. Nor is the tree spiritless during the winter months, when it becomes the type of repose and rest—sleep; nay, the lowest reactive symbol of apparent death itself, before it bursts into renewed life with all its surprises."

To read chapter after chapter of our "Tree Bible" is not as profitable as a more leisurely absorption of its contents. One may profanely wonder what tree the author loves best—whether, "were the other dear charmer away," his praises would be less nicely measured to the subject. But in this work there is a song of songs—the song of the Madrono:

"Other trees may sleep as quiet, waiting the return of the wild song bird and the renewing health of spring, but love's highest emblems never sleep; ever on the alert, she is awake with the new year, bringing gifts to the dear ones and good to all living. Laden with shagreened orange and red berries, she sub-tropically overlaps the rolling year with ceaseless glory. Even the fading foliage falls unobtrusively down, as comes still evening on in twilight dew. Fading foliage, did I say? Nay, the beautiful leaves brighten like celestial hopes above into every shade of hallowed gold and royal purple, in exchange for the natural green of earth. With uncovered head and due reverence in the presence of orderly nature, we are prone to tarry beneath the beautiful boughs, and may we say it, always leave with the lingering regrets of a lover. Returning anon, behold the sky-green bark changed to deep orange, burning red or sober cinnamon brown, out of respect to autumn and the fashion of the season. How strange the view! What marvel of moods! Fascinating by every art that could please with ever varying beauty, could fancy portray a sylvan object more wonderful, more chaste or charming?"

I have ventured to quote thus liberally because this work ought to be read by thousands of our people. Only 250 copies were printed. It should be in our school libraries, that the teachers may learn how to impart to the children some reverence for sylvan use and beauty. And it is not too much to say that the results of Dr. Kellogg's life services in these pursuits should be given to the world while he is able to superintend their publication.

From the great Sequoia to the infinitely lowly and lovely plants which make our earth carpet so glorious to behold, for each he has had a word, even as the Master spoke "of trees, from the cedar of Lebanon to the hyssop on the wall." The names which Dr. Kellogg has given to many of our common plants have remarkable fitness and beauty. "Tidy-tips," once heard, is sure to suggest itself whenever the layia appears in spring. The "humming-bird trumpet" glows along our dry canyons at this moment.

But for the State Mineralogist, Mr. Hanks, the good beginning of this publication would probably not have been made. We hope the means of the State Mining Bureau may be sufficiently enlarged by the coming Legislature to permit the completion of a work of such importance to the science of forestry, and of such general usefulness. JEANNE C. CARR.

Pasadena, June 24, 1882.

Forest Trees of California—No. 3.*

Laurel Hawthorn, or Toyon Tree.

(*Heteromela* [Phytolacca] *Arbutifolia*.)

"Mark the fair blooming of the Hawthorn tree,
Finely clothed in a robe of white." Wm. Brauer.

Kindred to the renowned Rowan tree (*Pirus aucuparia*), and sacred to somewhat similar associations, few denizens of the wild woods possess a greater interest than the toyon tree, or laurel hawthorn. A shrub or small tree five to 25 feet high, from a few inches to a foot in diameter; leaves thick and leathery, oblong or elliptical, lance-like, sharp at the ends and sometimes at the base, two to four inches long, half an inch or more broad; leaf-stem stout and short, margins saw-toothed, the shallow teeth sharp, usually tipped with a gland, color sap-green above, and lighter yellowish green beneath. Seen abroad, along the sandy coast, it is more dusty and sombre; but massed or clumped on our hillside, bending over the brow of the cliff, or perched on the point of rocks looking seaward, this winter-green shrub glows in livelier, lighter hues than oaks, and a thousand other surrounding foliage; this becomes still more conspicuously manifest as it climbs the dry hills, and is again altogether a rounded shrub. The numerous little white flowers, hawthorn like, or less than half an inch across, are in large compound clusters of a span or so on the ends of sturdy twigs; petals or flower leaves are roundish and slightly scolloped, on short claws, five-toothed cup, short and thick, becoming still more thickened and imbedded on the end of the fruit, like partridge berries or tiny twin berry (*Michelia*), huckleberry, wintergreen, etc.; stamens, ten—two opposite each tooth; central styles two, more or less united; at length the bright scarlet berries, which all along late summer and autumn have been a little turbaned, or remotely pear-shaped, swell out nearly globular, and are less oblong. These are usually about the size and color of wintergreen berries (*Gaultheria procumbens*). In the recent state these beautiful berries have but little odor, but when

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

dry the piquant, spicy odor is exceedingly refreshing; and nothing is more lasting, abiding still fragrant, we know not how many years, but apparently increasing with age. The berries eaten from the tree have a pleasant, thorn-apple (*Crataegus*) flavor. They are parched by the Indians, and eaten so, or ground and used as a kind of coffee, or thickened into mush, or made into bread, cake, or the like, when it has a peculiar nutty flavor. It blooms chiefly from June to August; yet here and there fine clusters of flowers may be found at any season of the year. The thickly-set, laurel-like leaves extend close up to, and lesser ones in among the flowers. It fully ripens its great masses of bright red berries about merry Christmas, hence it is often called "Christmas tree," and the fruit "Christmas berries," in part from this coincidence, but mainly because of its universal devotion to those religious and rural adornments that will ever associate the concomitant Toyon tree with all the innocent social festivities of that season, and of the "happy New Year." Yet, withal, to the unbiased eye of art, and to the appreciative landscape gardener, the brilliant contrast, soothing warmth, and harmony of bright red on a background of green—ruby in emerald, and at such a season of the year, too—will always commend this Laurel Hawthorn as one of the chief ornamental charms of the coast. Even the faults of the formal and rigid become merits when they contribute to the winter scene an air of calm, serious stillness, in peaceful keeping with the general hush of the great mother, while her large family is sleeping. Nor is this equanimity ever disturbed at seasons claiming less attention—the constant gales that deform the sturdiest oaks and other hardy trees and shrubs, pass harmlessly by the Laurel Hawthorn and the Sattin-tassel trees, and but few besides, little, if at all, the worse for the fierce war waged on them during our wintry summer winds.

The bark has a cherry, or pleasant bitter-almond flavor, and possesses similar medicinal virtues, which, indeed, would well nigh fill a volume to delineate in detail. The wood, especially the root, is highly ornamental, but has hitherto attracted little attention.

HORTICULTURE.

The California Dried Fruit Interest.

The following essay was read by W. H. Jessup, of Haywards, at the last meeting of the State Horticultural Society:

The subject chosen for discussion to-day is one that I hesitate to open, because I doubt my ability to deal with a subject of such magnitude and importance. But as you have honored me by your choice, I will not shirk the task imposed upon me, and will use my best efforts to do justice to the subject, for I would rather be instrumental in building up the fruit industry of this coast than to be Governor of the State.

I shall divide my subject as follows:

1. Dried fruit—its importance as an article of commerce.
2. Its ease and cheapness of transportation, convenience of handling, etc.
3. Why it should be used in certain trades in preference to canned goods.
4. Properly packing and grading.
5. Honesty in packing and grading.
6. The best mode of drying, and best drier to use.

Those are all questions of the greatest importance, not only to the fruit raiser, but to the consumer and trader as well. But few fully appreciate the importance of the trade, the magnitude to which it is capable of being brought and the many advantages we possess, with a climate and soil the adaptability of which for fruit raising is unsurpassed by any section of the world—the wonderful yield of our orchards fully compensating for the difference in the price of labor prevailing in most fruit-raising countries. We are favored in the production of the plum, prune, apricot, peach, nectarine and cherry. We have enjoyed comparative freedom from disease and destroying insect pests, like the "black-knot," curculio and yellows, which have laid waste the once productive orchards of the Eastern States. These circumstances are greatly in our favor, and we would be short-sighted, indeed, if we did not avail ourselves of them.

Foreseeing, as I thought I did, the future of the fruit interest of California, through the excellence of our fruits, the reliable supply that we are guaranteed, and the wonderful impetus given to the trade by the canners, induced me to advocate the planting of orchards, with a view to making fruit raising the specialty of California. But it is plain to be seen that the increasing yield of orchards coming into bearing is already outstripping the capacity of the canners and the trade. Yet, I would still advocate the planting of orchards and vineyards until every acre of fruit land in the State yields its bountiful supply of health and wealth, to supply not only our own 50,000,000 of population, but millions on the other side, if they could but get our fruit, which they both need and desire, at prices that they could afford to pay. And why should we advocate the further planting, while the canneries and the trade is being strained to its utmost capacity to handle the present crop, and we see indications of lower ruling rates for fruits? Simply because we would advocate and urge the building up of

a trade of far more importance to the grower and the consumer than the fresh or canned fruits. The people need and desire our dried fruits, especially the varieties above named, if they can get them at prices they can afford to pay, otherwise they will be forced to substitute other food instead, as they always have done.

Mr. Hixson, in his able paper read at our March meeting, on California fruit in the East, states that of the 49,000,000 people in the States east of us, not more than one-fourth could afford to buy our fresh and canned fruits. Mr. Hixson evidently wanted to be on the safe side, and consequently put the proportion far too high. I doubt whether one in eight of our own people east of the mountains can, or does, use our canned or fresh fruit. On the other hand, if we will but dry our fine, well-ripened fruit, and put it on the market in merchantable condition and in constant, unfailing supply, to meet the growing demand, and at prices that the consumer can afford to pay, it will yield a handsome profit to the producer and a revenue to the State.

I have frequently been called a fool for advocating fruit raising to such an extent as to ruin the business and make fruit not worth the gathering and boxing, by overstocking the market, and I am asked almost every day if there is not danger of overdoing the market, and that, too, by men of good judgment in other matters, but evidently deficient in knowledge of the laws that govern trade in the matter of supply and demand. I uniformly answer them in the affirmative, that there are three ways, and only three, of overdoing the market: Continue to put such miserable, mixed lots of fruit on the market that we have been doing, and we already have too much planted; put good, well-sorted, and carefully and neatly-packed fruit on the market at too high prices, and we will have but a slowly increasing and limited trade; and lastly, if we set out a limited and uncertain supply, we will overdo the trade; or in other words, the best way to check or kill a trade, is to have a limited and uncertain supply. It is a well-understood principle of trade that buyers always look to, and congregate where, the most reliable and abundant supply of the article sought for is to be obtained, and I think that no one will question the fact that we can, if we will, furnish that supply.

Packing and Grading.

It is often asserted that our dried fruit do not sell well, and that they do not fetch remunerative prices. Is this to be wondered at? Let us look at the condition of our fruit market and see. Would we expect a leading merchant of London, Liverpool, New York or Philadelphia to take our dried fruit and work up a trade in them. How would our boasted fruit look in those markets, in the heterogeneous mass that it is to be found in here? How would it look in those fine establishments? Mixed lots packed in gunny sacks, nail kegs and cast-away egg boxes? I imagine that we would not feel flattered by the criticisms it would elicit. But our fruit is not to be found in distant markets, in that condition. And why? Simply because our merchant overhauls, assort and repack the fruit, to give it a more saleable and attractive appearance, which the fruit raisers say, will not pay, as labor is too high, and that there would be no profit in putting that labor on it, in the orchards. And yet it goes on to the market with the additional cost of new packages, re-sorting, grading and re-packing, and the total loss of the original packages. How much more would it cost at the dry house, and at the first handling, to put up your fruit in neat, clean and uniform boxes, properly grading and classifying it, than it does to put it up in the shiftless and slovenly manner, in which too much fruit is sent to this market from the orchards? Now the merchant will not do this work for nothing. He will add a good round profit to the price of the fruit, or buy it enough cheaper of the producer to pay for the trouble and expense, and add this also to the profits of his investment. And why should the fruit raiser, not make this profit himself, when the extra cost of properly drying, boxing and grading the fruit will not amount to more than one-half to three-fourths of a cent per pound, and it will bring in any market from five to ten cents more per pound, when the brands become known to be reliable and correct. This of itself would be a fair profit on the fruit.

Mr. Hixson shows conclusively in his paper the profits to be made by the properly drying and handling of fruit over that of carelessly handled fruit. But I presume that some of the advocates of the cheap-handling system will deny this, and refer you to Mr. So and So, who put up choice and elegant fruit, and that he had not received any more, as much, for it as some one else who had put up his fruit in a careless manner. This, in a measure, is, unfortunately, too true, as the fruit is often sold in large, mixed lots, to merchants and traders from the mining States and Territories, and the commission merchant, in order to effect a sale, is compelled to lower the price of the good to enable him to sell the poor; therefore the careful producer has to be sacrificed for the short-comings of his careless neighbor.

There is no possible reason why there should not be the choicest dried fruit made from our fruits, by the great improvements lately made in dryers, both in the economy of their working and the perfection of the fruit dried. So fine is some of this fruit when dried and packed with skill and neatness that it has greatly attracted and pleased some of the leading mer-

chants of Australia, England and the East, and they have frequently expressed a desire to handle our fruit; but when told that we could give them but a few boxes, and that a future supply was uncertain, they lost all their interest in it. Sample lots of choice fruit have been taken East, and shown to the leading merchants, who have expressed anxiety to take hold of it and work up a trade on it at remunerative prices. They would ask: "How much have you of it?" "Well, I have half a car-load." "How soon can you let us have more?" The reply has always been that we have no more, and that we are not sure that we can get any more; when the enterprising shipper would be told that he had better take it to Jones & Co., across the street, that they deal in those articles in a small way; that they, themselves, could not spend their valuable time in attempting to work up a trade on an article without a guaranteed supply, neither could we expect them to do so, when, at the same time, they would give thousands of dollars to have the exclusive handling of our fine dried fruits. This is one of the great disadvantages of a limited supply, and one that we must overcome, in order to utilize the increasing yield of our orchards.

Ease of Transportation.

The ease and cheapness of transportation of dried fruit over that of canned is a strong point in its favor. But few people realize the enormous amount of water transported hundreds and sometimes thousands of miles under heavy railway charges. When we consider the enormous proportion of water uselessly transported under a high railroad tariff, we cannot wonder that canned goods do not go more rapidly into use, or that the poor cannot afford to buy them. When we consider that from 66% to 92% of all fresh fruit is water, saying nothing about the liquid syrups in the cans, we cannot but wonder why dried fruits do not go more rapidly into use, and they will if we will but prepare them properly and put them on the market in sufficient quantity. The people want them, and we can, if we will, supply them.

The great expanse of territory north, south and east of us unfitted for fruit or vegetable raising, and far removed from places where such luxuries can be obtained, where, if they get them at all, it must be by paying high railroad freight and higher charges by freight teams, and still higher by pack-mules, and when the purchaser has finally got it at his camp, what has he got? Ninety per cent. of water, which every miner or herder has at hand. Every miner, prospector or herder can carry as much dried fruit in his knapsack or coat pocket as would load a Government mule if put up fresh and canned. Then, again, it is not so liable to damage, getting wet without destroying it. He can use as much or as little as he likes and the rest will not sour or spoil.

Superior Healthfulness of Dried Fruit.

I think that all will agree with me that fruit perfectly ripened on the tree is far healthier than that picked hard and unripe, as most of the canned fruits are. As a rule, fruits are allowed to ripen perfectly on the tree, and this is of the greatest importance where drying is contemplated, as it gives the dried fruit a beautiful waxy appearance, and makes it more saleable and healthy, rich and palatable, where, on the other hand, if dried green or partially ripe, it is tasteless, or, at the best, insipid and unattractive to the eye. To get the best results from fruit for drying, let it thoroughly ripen on the tree.

Methods of Packing

The packing and grading of dried fruit is only second in importance to the proper and careful drying. As a matter of fact, perfection in drying is of the first importance, but without careful, neat and honest packing and grading, all the advantage gained by perfect drying is lost. I question whether the fruit perfectly dried and carelessly or slovenly packed would sell as readily in the market as poorly dried but neatly boxed and dressed. In fact I think the latter would sell the quicker and for the better price. The importance of neat, uniform packages cannot be too highly estimated. It is poor economy for us to quibble about the cost of a neat box for our fine and well-dried fruit, costing possibly 15 cts., the price of one pound of fruit, and paying, at the least, one hundred per cent. better profit. The French perfectly understand this. Neat, elaborate and expensive packages with them have become one of the fine arts. In many instances the packages cost more than the contents.

It is of the highest importance that each box should have a top dressing of fine and perfect fruit. The buyer expects this, and is loth to buy if it is not so dressed; but he expects more than this, and justly, too. He expects to find in the middle and bottom of the box some of as choice fruit as he finds on top; or, in other words, he expects to find throughout the box a fair average, and if he does not find it, he considers himself swindled, and I think all honest men will agree with him. The practice of dishonest packing in the placing of an inferior or worthless article in the middle or bottom of a package is a pernicious one, and cannot be too severely condemned, and a mistaken policy on the part of a man who practices it, not only injuring himself, but innocent parties who have not been in the business long enough or extensively enough to establish a reputation for correct and honest packing. As an incident of loss to a man of the above stamp, or, at least, one who departed a little from a strictly honest practice, I would mention a man who sent a choice lot of pitted plums to a commission

house in this city. They were put up in a neat manner in neat clean boxes, and offered for sale at 16 cents. They attracted the attention of an up-country merchant, who, after examining them, closed a trade, but before paying the bill, he requested the commission man to open another box. This was done, and found to contain unpitted plums of an inferior article. "Why," he said, "what is this? I thought they were all pitted fruit." The commissioner assured him that he supposed them to be as good as the sample. He then requested another box to be opened on the bottom, and, worse, still, the box was found to be half full of trash, the cleanings of the table, put under the neat and skillfully-arranged top dressing. The man was indignant at the attempted deception, and declined to take the fruit, stating that he did not want trash. The commission man protested his innocence, and asked the man what he would give for the lot. He replied that he didn't want it at any price; but, after some little bantering, a sale was consummated at 12 cents per lb. There were about 50 boxes of 25 lbs., or about 1,250 lbs., making a loss to the packer of about \$500—all caused by trying to shove off about 25 or 30 lbs. of inferior and worthless trash, by which, if he had succeeded in doing, he could have made but a few bits at the most. Now, the question is, who was the loser? Had he succeeded in the deception, he would have gained a few cents and lost his reputation for honest dealings. As it was, he lost his money and reputation together. This is but one amongst hundreds of just such and worse cases. They are of every-day occurrence. Men are "cinching" themselves every day, and do not know it. They imagine that they are escaping scot free, while they are getting away with the fruits of their little tricks, but they are the losers in the end, in the lower prices their goods bring in the market. These men are nearly all known by the regular buyers, especially in the fruit and potato market, and their products are never taken without a thorough overhauling, and if the first buyer does not take it, he leaves it in a disturbed and disarranged condition, when, if it sells at all, it sells for less, instead of more, than it was worth. These men never get top prices for their products. The commission men all understand this, but fear to tell them the cause, fearing to lose their trade; but they cannot recommend their goods. If a man has acquired a reputation for honest packing, his goods are taken without opening; or, if opened, it is merely to ascertain its condition or variety, and they always get regular top prices and make money. So, if we ever hope to build up a trade in dried fruit in this State, to use up the enormous surplus of fruit that we will assuredly have in the near future, we must see to it that our fruit is put up in a proper and honest manner, that we may be justly entitled to the reputation that we claim for the superiority of it.

Grading.

Another important item in the putting up of our dried fruits is the proper grading and marking on the box the grade, No. 1, 2, 3, etc. It is also essential to keep the different varieties separate, especially in plums. Those of marked character should always be put in different boxes or put with those of kindred characters. The Washington and Jefferson might be mixed, as they are very similar in their nature and flavor. The Columbia and Coe's Goldendrops should be boxed separately, they being of a mild, rich and sugary flavor, and sweet skin. The Gages, a very sweet sugary plum, but with a very acidulous skin (which, when cooked, seems to predominate), might be boxed together as well as the red and blue varieties might also be mixed, as they are all, more or less, acid. As we have varied tastes to suit, it would be well to separate, as far as possible, the fruit of marked characteristics.

The Best Drier to Use.

I am requested to give my opinion as to the best drier to use. This is a question that has agitated those interested in the drying of fruits and vegetables, etc., for the last 40 years, and there have been thousands of dollars spent in experiments and numerous patents taken out, covering almost every principle of heat, air, draft and evaporation, and many of them would require the united efforts of three engineers, five Chinamen and a patent medicine man to operate one. There are many more of very little practical use, but they nearly all make good fruit, if carefully managed and properly handled; but that is no recommendation for them if they cannot be operated with profit. The object sought after in evaporators (or, more properly, desiccators) is economy in labor and fuel—or the cheapest dryer that will turn out the greatest amount of dried fruit for the least money. The best drier is the one that can furnish the greatest volume of rapidly-moving hot air for the least money, with some shield or protection over the discharge to deflect the direct rays of heat from the lower trays of fruit, to avoid burning or scorching. Abundance of hot air and a powerful draft are the two great essentials of a drier, and, in whatever drier those can be obtained, I will guarantee success. The excellence of the Alden drier fruit is well known, but all of them that I have seen have objections. The liability of scorching or burning the fruit, the cumbersome construction, requiring skilled labor to operate it. The trays of fruit have to be elevated by the aid of an endless chain by the turning of a crank; and, if a tray of large fruit is sent up with trays of small on, thinly sliced, the light fruit will come out too dry or the heavy too

green, and the latter carried down to the lower story and sent through again. The difficulty of getting at and removing or changing a tray when necessary is a serious objection. I have examined all the driers that I have seen, and in none of them could I find what I thought enough to warrant successful and profitable drying until last year. I saw the Plummer drier and examined it carefully, and although not perfect by any means, but coming nearer perfection than any that I had seen, I concluded to try it, and had a small family drier of 15 trays, three feet square, put up late in the season, when I had sold nearly all my fruit, plums and prunes. With this small drier I dried nearly \$500 worth of plums and prunes, of fruit that was too ripe for the canners or the market, and which would otherwise have been a total loss, and this, too, from not more than four acres of orchard. I never saw finer dried fruit. Every article of it took the first premium at the State fair.

When at the State fair I came across the Burns' fruit drier, which, in my judgment, covers all the objections of the Plummer and other driers, the lower tray and fruit being shielded from the direct rays of heat from the furnace by deflectors, which also catch all the drippings from the fruit, which in other dryers fall on the furnace and heaters, and which after drying takes fire and burns, injuring and smoking the fruit. Also, by the arrangement of Burns' trays the hot air passes around and over the fruit, which gives free passage to the vapor-laden air, which precludes the possibility of choking up the draft, which often occurs with the Plummer under its present construction. Mr. Burns, also, has complete control of his furnace heat, having a simple arrangement by which he can shut off the heat from as many or as few chambers as he may desire and hold it in store for future use, and he utilizes all his heat by conducting the furnace heat and smoke as well as the hot vapors from the fruit chambers, through hollow tables, on which he puts the fruit from the trays, as a finishing and sweating process. For perfect working, economy and simplicity, in my judgment, the Burns drier leads the van. I was so perfectly satisfied of this that I bought the county right, with a view to running it and not selling.

These driers are also so constructed that chamber after chamber can be added to the drier without any alteration whatever, and made of any desired size.

The time is now at hand when the owner of every orchard should have a drier of sufficient capacity to dry his surplus and over-ripe fruit, and there is not a three-acre orchard in the State of good plums and prunes that could not pay for a \$200 drier in one year with the clear profits of it. We must have driers to stand between us and the canners. Already there are indications of their getting more fruit than they can handle. And there is indications of a downward tendency in the price of fruit. If the canners do not increase their capacity next year, and we should have a proportionally large crop, fruit will drop below a paying basis, and in that case, driers must go up or orchards must go down.

Discussion.

W. B. West, of Stockton: I have had some experience in fruit drying; and it has not been a good one. I have always had a desire to dry fruit. A long time ago, I bought the county right of a little fruit drier. I found it too small and there was no profit. I find, as a general thing, that they are laid up after a short time. They are a very good thing, but people don't run them very long. Last year, Mr. Plummer came round, and, by the way, I am always unfortunate in those things. I bought one of those. I have had driers enough. It is a good thing in a large orchard, where the drier uses his refuse fruit. Most of those present bought them this year, and they believe in what Mr. Burns and Mr. Plummer have told them. The proper way is to run it a few years, and then see how your cash stands. In the first place, they tell you, you can get 20 lbs. of apricots to the hundred. Now, you get about 14. I have nothing to say against the fruit that I dried. It sold very well. I got first-rate prices, but it didn't pay expenses of running a year. I got 25 cents for the best apricots, and 22 cents for the poorest. For unpitted peaches, I got 18 cents, remarkably good prices. They looked nicely and were packed nicely. I didn't find any profit. I hope some of these folks that have dried fruit and put it on the market will give us their experience. I bought a good deal of my fruit; some of it, however, grew on my ranch. I dried our Sultana raisins. I found they were nicer, and really better than any dried out doors. I found apricots were worth, sundried, 12 and 14 cents. When dried in a drier, 22 and 24 cents. The prune can be dried equal to the French, even in driers, by shutting up the draft and keeping them in their own steam. The French dry their prunes in ovens, take them out to cool and turn over and put them in again, using heat about 112° to 200°.

W. H. Jessup: In drying prunes last year, they yielded from 30 lbs. to 33 lbs. to the 100. But it makes a great difference in the average yield, where they are green; whether they are large or small, the pits in small fruit being equally as large as in large fruit. If a greater portion of the weight is in the pit, that dries out but very little and greatly increases the average yield from the green fruit. Now, in the large, the weight being in the flesh, the

moisture would be evaporated and give us a less yield of dried fruit. But I can't see why there is no profit in drying fruit in the orchard. In most of the large orchards we have fuel enough to run a drier from the prunings. It requires but little fuel.

We are frequently asked, "How long will it take to dry fruit?" One fruit has more moisture than another. The latter will dry in half the time of the former. If the skin of the fruit is so tough that it will not burst readily, the vapors cannot be dried out until they do burst. You may take some varieties and they will dry, under the same degree of heat, quicker than others. You might answer that question by getting the result from each of the varieties you are drying.

J. M. Hixson: So far as the different kinds of driers, I shall not say anything about that. Any of them are an improvement on sun drying. As regards the quantity that can be made, I may remark that Dr. Jarvis, of Riverside, has dried large amounts of apricots. He told me that he had experimented in three different stages of ripeness. It took four pounds and four ounces to make a pound of the dried fruit. John A. Day, of San Bernardino, sets it down at four pounds of the green to one of the dried. Mr. Hatch says five pounds to the pound. If it takes as many as Mr. West says, it is a very different thing.

I have this to say: We have got to dry our fruit by some mode of evaporation in order to go into the Eastern markets. I got a letter yesterday from one of the largest houses in Chicago, and they wanted to know if we could furnish 500 boxes, of 25 lbs. each, of peeled peaches at the same price as last year. Last year they paid 25 cents a pound. They also wanted 500 boxes, 25 and 50 lbs. each, of prunes. A house in St. Louis wants plums, pitted and unpitted, and pears cut lengthwise, evaporated. If we want to get our fruit into Chicago, Cincinnati, Baltimore, and all those cities, we must have "evaporated" fruit. We can do but little in New York. We cannot compete with the French fruit. The consequences are, trade in New York is very limited, except for peeled peaches, apricots and nectarines. But in all the West, South and Middle States they want our fruit, if put up properly, and at prices which are very remunerative to the farmer.

In regard to peaches, I would certainly advise our people this year to peel the peaches. The crop in the southwest is very heavy, and that includes Kentucky, Tennessee, North Carolina and Georgia. They don't raise them in large enough quantities to make it worth while to peel them. But every housewife dries whatever peaches she may have. We must peel our peaches. We had an order for 4,000 pounds of peeled peaches, for 30 cents a pound, in Chicago. We found about 700 pounds of peeled, but enough unpeeled to fill this room. While peeled peaches went out of market at 35 cents a pound, peaches with peelings on were worth 4¢ to 5¢ cents, which was a vast difference.

There is another matter, and that is our pears. Large amounts of them are not fit for shipping green; canners do not use them; they are almost worthless to send to our market here. If you dry those pears, cut as an apple, peeled and ringed, they are worth about 7 cents, a pretty fair price. Take them and peel them, and cut them lengthwise, and they are worth 15 cents. Why is this? The reason is this: They take those pears and put them in a vessel, add a little sugar, make a little syrup, and dish them out as dessert, in place of canned fruit. If they are ringed, they are dried pears, and nothing more.

There is another item, that grows very abundantly in our country. That is the blackberry. To sun-dry a blackberry it don't amount to anything. If you take them and dry them in an evaporator, you have a fruit two-thirds as big as the green fruit. They also are used in place of canned fruit.

In regard to boxing, Mr. Hatch, Mr. Jessup and myself were a committee on boxes, and did not agree. I think the time will come when we must have a uniform box to have it profitable to store in cars, etc. Another important item is the weight of that box. We have them from Marysville that hold 60 lbs. which weigh less than 6 lbs. They usually weigh from 9 to 12 lbs. In shipping at two cents a pound, freight, that is quite an item.

In reply to the question as to whether there was any disposition on the part of the railroad company to reduce the rates, Mr. Hixson said: I told Mr. Huntington about a man who wanted to engage 25 carloads of potatoes, but at present rates of freight there was no profit. He said: "We must get you lower rates." Our amount of fruit has been so small that there is no object to the railroad company, but let them know that we have enough to ship and we can get better rates.

I saw the other day an account of sales of cherries in Chicago. They sold at \$4.20 and \$4.30 per 10 lb. boxes.

I don't know that the railway will give us better rates on dried fruit. On canned fruit we have a uniform rate. It makes no difference whether we send 20 cases or 10 carloads. On anything else the increase is very considerable, except raisins. These are \$1.50 per hundred pounds by the carload, and \$1.75 by small lots.

Mr. James Shinn: Did you investigate the subject of canned goods as well as dried goods?

Mr. Hixson: I had an occasion to do that. I had samples of home-made canned goods. I

(CONTINUED ON PAGE 25.)

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

How to Remedy Existing Evils.

The only hope for relief rests with the Patrons of Husbandry. They are quiet, peaceful, law-abiding citizens, having no sympathy with socialistic, communistic or monopolistic elements, but desire equal and exact justice to be distributed upon merit and right to all mankind. Nowhere are the fundamental principles of just government, the rights of the people, the true relationship of our varied interests in the Nation, the duty we owe to each other, the importance of protecting every legitimate interest in its rights, political economy and its advantages, yes, even the science of government to a free people, so well taught as in the Grange, not even in the best schools and colleges of the land. The Order is founded upon the principle of justice to all men, giving to all a fair and equal chance in the race of life, waging no warfare against any legitimate interest or useful purpose, antagonizing only error and corruption, seeking to remove errors and evils that now exist, and to prevent like occurrences in the future.

Let every farmer identify himself with the Grange nearest his residence, and then attend these Grange or farmer's schools, and educate himself upon the principles and questions there considered; you will then exert an influence for good with your associates in the political party with which you act, and in every department of life. More than one-half of our population are farmers, and when thus educated for good, will produce satisfactory results.

But bear in mind that our influence is in proportion to our intelligence; hence it is absolutely necessary that we understand the evils of which we complain, their causes and effect, where they exist and how to remove them. And nowhere except in the Grange can the farmer learn to fully understand his interest and true condition as a farmer and a citizen, and the methods of co-operation with his brother farmer for relief, for it is not taught anywhere else.

I therefore appeal to every farmer to give a candid and prayerful thought to this subject. Consider your condition for the present and that of your family for the future, your duty to yourself and to them, and then decide and act wisely your part as a farmer, as a parent, as an American citizen. You may be advised to keep out of the Grange. A Gould, a Vanderbilt, or a demagogue would advise you to do that; and the advice, though made by another, it is their advice.

Farmers, we must make our choice, either to unite and make our own organization what it promises to do, to educate and elevate us as a class and free us from injustice and error, or clearly demonstrate to the world by our isolation from our Order that we are not capable of self-government, and are dependent on our masters to govern us. I now leave the subject with you for you to make your own selection. Which will you choose? H. ESCHBAUGH, Lecturer National Grange.

The Grange in Oregon.

From the *Willamette Farmer* we learn that the Grange in our sister commonwealth is progressing steadily and surely. There is an account of a union meeting in Washington county, from which we quote:

Present at this meeting were some visiting members from other Granges in Washington county, and there seemed to be perfect harmony and union in all their plans. The intention is to soon organize a Business Council, composed of five delegates from each Grange, who shall meet and arrange to establish a co-operative business agency to attend to purchasing machinery and supplies, and sale of all products. The success of the Business Council of the Linn County Granges stimulates other counties to do likewise. No doubt a considerable sum can be saved by similar good management. Though the Grange is not nearly as numerous in Washington county as it should be, it numbers many influential farmers in its ranks who appreciate what the Order can do to elevate the social standard, and give information on farming matters by exchange of ideas. They also understand that to make the Order popular and acceptable it must accomplish results and yield pecuniary advantages. So they propose to see what union and co-operation can effect in the way of business. The Grange in Oregon has learned not to attempt too much, as that has already proved disastrous, but with experience for a guide, there is no reason why the Order should not increase and become a decided means of good.

GRANGE REUNION.—Washington Grange, in San Joaquin county, had a reunion meeting June 17th, at which delegations were present from Stockton, Elliott, Lodi, Plymouth and other Granges. There was a splendid harvest feast, addresses on various subjects and a pleasant time generally.

Subjects for July Meetings.

Question 12—What has the Order of Patrons of Husbandry accomplished as an organization?

Suggestions.—It has collected tens of thousands of farmers and their families, from every section of our country, into a fraternal organization for social and intellectual improvement, for moral elevation and financial advancement. It is leading its members from the accustomed isolation of farm life into social culture, and it educates them in the science of agriculture, in business, trade, political economy and the affairs of Government. This enables us to deal justly with all interests, and to better protect our own rights from the greed of selfish monopolies, and thereby secure the just rewards of our own labor and the legitimate profits of our own investments.

Question 13—What are the duties of officers and members in the subordinate Grange?

Suggestions.—It is the duty of all to attend the meetings of the Grange. It is by a full attendance that the most good is accomplished; there is no co-operation where the many are absent. It is the duty of the Lecturer to be prepared at every meeting, where time will admit, to introduce the subject to be considered at that meeting, whether of local or national importance, give his views and invite discussion. It is the duty of the Master to see that this is done. It is the duty of every member to aid in the discussion, speak upon the question, or read essays or selections upon the subject under consideration. Wherever this is the practice, there do we find prosperous Granges, and Grange principles appreciated.

"Clear Lake and Calistoga"

The Clear Lake and Calistoga Stage route has become a very popular one for health and pleasure seekers going to the many springs and other resorts in Lake county, and lately the stages to Lakeport have been well filled. Anderson, Harbin, Adams, Howard, Siegler, Gordon, Bartlett, Highland and Pierson springs, Soda Bay, Blue Lakes, Middletown, Lower Lake, Sulphur Banks, Kelseyville, Lakeport, Great Western and Oak Hill and other quicksilver mines are all reached by the popular stage line under the veteran management of W. F. Fisher, whose headquarters are at his Lodi stables, Calistoga. The route from San Francisco to Calistoga is a delightful one, taking the Central Pacific Railroad ferry to Oakland, along the eastern shore of the bay, passing Berkeley, San Pablo, to the Vallejo landing; across the Straits of Carquinez, with fine marine and distant mountain views; passing Vallejo, with Mare Island and its Government works in view; up the valley to Napa; thence pass the thrifty towns of Napa valley and through its rich fields of grain, vines and orchards, bordered on the east side by hills clothed in rich verdure, with a top fringe of evergreen trees, picturesque in the extreme as they face the traveler in bold relief in front of their skyward home. The stage from Calistoga passes a mile or two across the valley and immediately begins the ascent of Mt. St. Helena, and for five miles up to the summit of the ridge, and down the mountain pass a like distance, the scenery is grand and picturesque in qualities rarely equaled or excelled elsewhere. Still farther and higher over Cobb mountain to Clear Lake and Lakeport—and, in fact, throughout most parts of Lake county—the roads abound with grand scenery and delightful views of charming brooks, lakes or meadows.

There will be good inducements in the way of transportation facilities at the State fair.

The Central Pacific railroad company will carry all articles and animals exhibited at the fair over its respective routes, free of charge, under the following rules: Charges will be collected for the transportation to the fair. After exhibition, the articles, if consigned direct to original shipping point, and the ownership has not changed, will be returned free; and the charges paid for transportation to the fair will be refunded by the railroad agent at destination, upon presentation of the Secretary's certificate of exhibition and surrender of the expense bill for freight charges paid at Sacramento. Charges for green fruits and vegetables consigned to the fair for exhibition will be refunded, whether the articles are returned to the original shipping point or not. Such freight will be sent to Sacramento, and charges collected upon delivery at that point. If the freight is returned to the original shipping point, it will be treated precisely the same as other freight. If not returned, the expense bills for charges paid going to the fair, together with a certificate from the Secretary of the Board showing the goods to have been exhibited at the fair, should be presented to the agent of the Central Pacific railroad company at Sacramento, who will refund the charges collected. The same company will issue excursion tickets to all parties going to the fair and returning, at about half price.

At ANDERSON SPRINGS, Lake county, the season so far has been a very lively one. Several new cottages, added to the place since last season, have been substantially filled with genial and home-like guests. The hotel and its surroundings have also been decidedly improved, making the place more than ever desirable to those who appreciate good home living, unadulterated with worse than useless fictions and fashions. Dr. Anderson, his mother, and several sisters, proprietors of the Springs, give their personal attention to the place. They contemplate further important improvements another season.

WHITELAW REID and family are coming to California.

AGRICULTURAL NOTES.

CALIFORNIA.

LASSEN.

EDITORS PRESS:—I will, according to promise, give you a few jottings from this part of the country. The past winter was of unusual severity—in fact, it was one of the hardest within the memory of the "oldest inhabitant." The winter held on until very late, so much so that the season for putting in grain was shortened up to two or three weeks. The grass crop looks first-rate all over the country, and the prospects for good hay crops have never been better. The grain in Sierra valley looks well, although very late. The dreaded "hoppers" are threatening serious damage about Beckworth, having hatched out in countless millions. About the "Adam's Neck," which is near the Beckworth pass, they are very bad, so much so that they will take all the grain, and a good part of the hay crop. The balance of the valley is comparatively free from the curse, and it is to be hoped that the farmers will be permitted to get one more harvest. The dairymen are doing very well, considering the lateness of the season, as butter has an upward tendency, being a little stiffer in the market than is usual at this time of the year. Cattle are scarce and high this spring, beef being 8 cents per pound on foot, and all kinds of stock cattle and cows are high. The outlook for fruit in this valley (Honey Lake) is only moderate, as the early frosts did serious damage to the plums and peaches; but the apples and pears promise a good crop. The grain crop here is only medium. The season being so late and wet has caused the weeds to grow up very badly, and choke the grain out. The farmers here are all getting ready to go to haying, and things will be going in full blast shortly after the "Fourth." I will give you some further jottings in the future.—GEO. W. FREEMAN, Jaynesville, July 3.

LOS ANGELES.

NIETOS NOTES.—EDITORS PRESS: From the appearance of the correspondents' page in the *RURAL*, I think that it is time some one contributed a line. The *RURAL* has for a long time so well written up those parts that I thought it useless for my pen to "dip in." One of my neighbors says that it is because I can't find anything to grow about, that I don't write. Very well. If the fact be told, news already printed, and no one aiming to steal a little cheap advertisement through the correspondents' page, what have I to do? Only to say nothing—same as I have been saying. This year is a benefit to the small farms of Nietos. About half of our irrigable land was sown to barley in January, and has already turned off a heavy crop. Now, said land is being planted to corn. This tries the land, to be sure, but Nietos is destined in the near future to be an orchard and vineyard; so here goes this year to get all the grain out of the soil that is in it for one year, and then for a long rest. Real estate in Nietos is steadily on the advance. A few acres set to trees and vines, and an acre or two to alfalfa, and the bulls and bears of the outside markets bring no trouble to the breakfast table. Dairying, on a small scale, is much on the increase here of late. For the cheese interest, the Holstein cattle are being brought to the front. For butter, Baretto's "pocket cattle," as we call them here (Jersey), are worrying well to the front. Mr. Baretto is said to have taken some of them to some of our fairs in his overcoat pocket. However this may be, they make the butter all the same. Dr. Wolf, of Downey City, put a three-quarter bred Jersey—three years old—to the test not long since, resulting in 17 lbs. of butter for one week. So trot out your sizable cattle against the pocket pieces. Our bees are in splendid condition, as a general thing; but our little "Wisdoms" seem to act as though the honey flow is yet to come, as they persist in making brood yet, entering the upper or honey apartment with their reproduction plans, more than to try to store honey. Our bee men have learned to put the honey into the can (not on paper), and then sell it. So with their creditors, too. Honey in prospect used to sell readily, but now it brings most money in packages ready for table use. However, the prospect for a good yield of honey this year is now on us, but the honey is not in cans much, up to date. Hay and barley dealers tried to get out the impression that we were very short in Los Angeles county for home demand even, but we now conclude that we have plenty and to spare. Our neighbors, San Bernardino and San Diego counties, have quite a surplus this year, and this tends to quiet us as to the Arizona market. Our dry season has starved out several of our "real estate" hawks, as times are now enabling most of our people to get along without creditors, bankers and real-estate hawks, seeking whom they may deceive, and then devour.—GEO. KAY MILLER, Fulton Wells (our new P. O.).

RAISINS.—Santa Ana Cor. *Mirror*: We understand Meade & Co., of San Francisco, want to contract to buy all the raisins of this section in the sweat boxes and pack, and brand them in San Francisco. Our raisin manufacturers will not, of course, consent to any such proposition. They are putting up fine raisins, and they should have all the credit for the same.

VALUES.—We visited a 20-acre orchard a few days since, which is held at a valuation of \$16,000, or \$800 per acre, and is cheap at that. And it is but five years since the place was but

a sheep range, not worth for the purposes for which it was utilized, five dollars per acre. From this circumstance one may get a little idea of the rapid advance in country property in this county. In this individual case the appreciation is probably above the average, but the average is astonishingly large. And the future advance above the present average will be as conspicuous above the present as has been the change in the past.

NEVADA.

CODLIN MOTH TRAP.—*Grass Valley Tidings*: The arrangement is very simple, and consists of tin cans baited with vinegar or very hard cider that has been sweetened with sugar or molasses. These traps so baited are distributed (the more the better) throughout the orchard. In the night time the codlin moth and other moths go to the trap and get caught in the sweetened cider. He tells us that he has already captured many of the codlin variety of moths. He made the discovery that moths would go to such a bait last summer, when he left a lot of apple pomace out over night without pressing. Next morning the moths had gathered thick upon the pomace. Try this trap; there is no patent on it and it is cheap.

SANTA CLARA.

CANNED CHERRIES.—*Herald*: At the San Jose fruit packing factory 175 hands are employed canning cherries, of which nearly 100,000 cans have been put up there during the season. At the Golden Gate factory nearly 300 hands are employed on the same fruit. Over 60,000 cans of cherries have been put up at the latter place during the year. Currants also are now being canned there. At both places cherries will give place next week to apricots, and the factories will continue running till October. The crop of cherries this year has been larger than that of last season. Prices at the factories range from 4 to 5½ cents per pound.

SHASTA.

TALL OATS.—*Democrat*: We have a sample of oats in our office that was grown on W. R. Stewart's farm on Stillwater, known as the "Gray Rock ranch," that beats anything in the growth of grain we have seen in many a day. The bunch left here as a sample measures nearly eight feet in length, and the straw is fine and will make excellent hay. Mr. Stewart's whole field of oats will average with the sample. The heads are plump and well filled. He calculates to cut three and a half tons of hay to an acre from this field. Undoubtedly this is the best field of oats in the country, but we are told that all the grain on Stillwater this year will make a very large crop. The north winds don't seem to have any effect at all on the crops in this part of the country.

SIERRA.

GRASSHOPPERS.—*Greenville Bulletin*: All doubt about the grasshopper plague in Sierra valley this season is now at an end so far as there appearance is concerned; the only question now is, will any part of the valley escape their ravages? At present what is known as Adams' neck and the island are suffering the most. The farms of Steiner Lathrop, Turner Dyson, Wherrity and Huntly are covered by vast swarms that may at any moment spread to others. The people are now doing all in their power to destroy these pests by burning them with straw, dragging planks over the ground, plowing and all else that can be thought of. Against the vast multitudes of these insects all such efforts are nearly vain; their number is not perceptibly diminished by all that human beings can do. Until the conditions favorable to their reproduction are changed, or they are assailed by some enemy more numerous than themselves, no relief need be expected.

TULARE.

EARLY FRUITS.—*Delta*, June 24: Samples of apricots and peaches from the many orchards of the Mussel Slough district have given a good opportunity to judge of the dates of the ripening in this valley of these early fruits and of their good qualities. Among those who have promising young orchards are Messrs. Greenwood, Bradley & Sullivan, Blowers, Thoustup, Reeves, Fowler, Sczaghini, Sanborn and Yeakum, near Grangeville; Messrs. Docker, Shore and Moore, near Lemoore; and Messrs. J. H. Hopkins, Troxler, Butler, Horace Johnson, Hicks and C. W. Talbot, near Hanford. The very first ripe fruit from these orchards brought into Hanford this summer were the small but well-flavored apricot known as the Breda, and Wood's Early, from J. Thoustup's handsomely improved place near Grangeville. The first of these were pulled June 4th, just before the first shipment of the same varieties arrived from San Francisco. From Mr. Thoustup we learn that the following larger kinds of apricots ripen this season about the following dates. The Shipley or Blenheim is now ripening about the third week in June; the Royal will ripen about the fourth week in June, and the Moorpark, or large yellow apricot, will ripen about the first week in July. Some seasons all of these varieties ripen earlier. The present season has been very backward, almost a month behind, not only for grain, but for vegetation generally. Of peaches, the first of Briggs' Early May ripened from June 12th to 20th, in the orchards of Mr. Thoustup, Dr. Bradley and others, near Grangeville, and of J. H. Hopkins and C. W. Talbot, near Hanford, and the first Waterloo peaches on Geo. Reeves' place, near Grangeville, about the same time. The Governor Garland, a handsome red cling from the Southern States, began to ripen in Mr. Blower's

orchard about the fourth week in June. In this connection we may also mention of other fruits, that Red June apples began to ripen at Mr. Thousstrup's the third week in June, and black raspberries at Dr. Bradley's about the same time. Mr. Thousstrup also had Chicasaw plums ripe the middle of June. All raspberry and blackberry bushes, which grow here with the greatest luxuriance, are loaded down with fruit; indeed, they cannot yield better anywhere in quantity and quality.

YUBA.

FIRST FRUIT FROM THE EAST.—Sacramento Bee, June 21: The first carload of California fruit for this season left for the East at noon today, from Marysville. It will connect with the overland express at Roseville to-night, and will go on through by express to Chicago. It is consigned to one of the largest fruit houses in the United States—Messrs. W. H. Peacock & Co.—by their Western representative, Mr. Edwin T. Earl, and consists of plums, pears, peaches and apricots from the Briggs and Miller orchards. The fruit was all packed in boxes holding 20 lbs. each. It consists of apricots, Bartlett pears, peaches and plums. Each fruit was wrapped in a piece of paper, and the boxes were made so as to admit the air freely. The car contained about 800 boxes. They were packed in tiers, and each box was nailed to a strip of wood extending across the car. The packing was done in such a way that an air space surrounded each box.

STACKING GRAIN.—A system of stacking grain by means of derricks and nets is coming into use on large ranches in this section. There was noticed on the Berg Bros. ranch, in Sutter county, yesterday, a stack 45 ft. square and 25 ft. high, which had been made by this method.

THOROUGHbred STOCK.—A special train of four cars containing thoroughbred horses belonging to Leland Stanford passed through this city on Tuesday night, going north. The destination of the stock was Stanford's ranch, in Tehama county.

Notice to Respect the Rivers' Purity.

MARYSVILLE, June 26.—The following is furnished the press for publication:

To the persons and corporations engaged in hydraulic mining upon the Yuba and Bear rivers: As the duly authorized representatives of the citizens of Marysville and of the Sacramento Valley Anti-Debris Association, we respectfully call your attention to the fact that your assumed right to use the beds of said rivers as a place for the deposit of your mining debris has been denied after a long and patient trial before a judge of your own choice, in the test case against the Gold Run Mining Co. In view of this, it becomes our clear right and duty to demand, and we hereby demand, of you that within 15 days from this date you cease to deposit your mining debris in said rivers or their tributary streams, and we hereby notify you that a refusal to comply with this reasonable and lawful demand will oblige the parties injured by you to resort to the Courts for appropriate redress.

A. C. BINGHAM,
Mayor of the city of Marysville.
C. S. SEXTON,
President of Sacramento Valley Anti-Debris Association.
Marysville, June 26, 1882.

THE RAILROADS MUST PAY LICENSE.—Department 1 of the Supreme Court rendered an opinion Wednesday, affirming the judgment of the court below in the case of Los Angeles vs. the Southern Pacific Railroad company. The action was brought to recover \$420 for license tax for the months of January to July, 1881, inclusive, under Section 5, Article II, of the charter of Los Angeles, empowering the Mayor and Council to license the carrying on of certain businesses. Among the licenses established by ordinance is the following: "For every steam railroad company having a depot in said city, \$60." The opinion concludes as follows: "It (the defendant railroad) is interested in many police expenditures, and may as reasonably be charged a local license as may those engaged in other businesses."

THE MENDOCINO WOOL GROWERS.—The Ukiah Dispatch says that at a meeting of the stockholders of the Mendocino Wool Growers' Association held on Saturday last, the Directors were instructed to arrange for grading the wool now in the warehouse. In accordance therewith, the Directors met on Tuesday of this week and instructed the Secretary to procure a grader at once. The association has arranged with the bank of Ukiah to make liberal advances upon warehouse receipts, at 10% interest, and we have no doubt many will avail themselves of the offer and ship their wool to the East.

A NEW SOUNDING APPARATUS.—A Russian naval officer has invented an ingenious apparatus for ascertaining the depth of the sea without the use of a costly and heavy line. Indeed, no line at all is used. The instrument consists of a piece of lead, a small wheel with a contrivance for registering the number of revolutions, and a float. While the apparatus sinks the wheel revolves, and the registered revolutions indicate the depth. When the bottom is reached, the lead becomes detached, the float begins to act, and the machine shoots up to the surface, where it can easily be fished up by a net and the register read off.

ADVICES from Marseilles say the French Mediterranean squadron, consisting of ironclads, has been ordered to be in readiness to proceed to Egypt in the event of necessity. Transports capable of carrying 175,000 men are lying ready equipped at Toulon.

The Wool Trade of the Half Year.

The wool report of George Abbott (late E. Grisar & Co.), gives the following review of the California wool trade for the six months ending June 30, 1882: The course of this market as usual has not fulfilled the expectations of the trade. From the slow sale of California wools in 1881, and their high cost, compared with that of competing wools, it was supposed that prices must rule lower than those of the preceding year. Dealers have acted on this belief and have been very conservative in their action. Eastern manufacturers, however, opened the market at rates from 5% to 10% higher than those of 1881, and purchased enough to keep rates fully maintained. Their support was withdrawn early in May, and since that time sales have been very small, and prices have gradually declined. Generally May and June are the most active months, but owing to the high prices asked, most of the Eastern buyers left here earlier than usual, and as regards dealers with small purchases, the market has never been controlled to such an extent by manufacturers.

The clip will be less than last year, as the southern portion of the State suffered severely from drouth. Many sheep have died, or have been driven from the State, and the increase will be very small. The decrease in the clip will be more apparent in the fall production than in the spring. No wool from the extreme north has yet been marketed, as growers are not ready to accept buyers' views. For this reason the deficiency in receipts is greater than it would otherwise be.

The condition of the wools has been better than expected. A comparatively small amount was dusty, and even from the sections where the rainfall was smallest, wools were well grown and showed few signs of sheep having suffered. Although apparently lighter, the shrinkage is not different from preceding years. Cockleburrs were more prevalent. The first arrivals were from the San Joaquin, about April 10th. They were taken quickly at 21 cents for long stapled wools, and 20 cents for average stapled of good color and comparatively free. Prices varied but little, but as better wools were received, higher rates were obtained. Middle county wools were sold at 25 to 26 cents for good staple or light conditioned lots. Light San Joaquin 22 to 23 cents. Southern coast parcels were taken at 20 to 23 cents, according to condition. Good Northern realized 27 to 28 cents. Stocks of all kinds are very large.

Oregon wools have come forward slowly, and, owing to their high cost, are hard to sell. Choice Eastern opened at 27 cents, but has declined to 25 cents. Good lots are worth 23 to 24 cents. No Valley has been received.

Wool Production.

Receipts at San Francisco:	
January.....	3,727 Bags.
February.....	1,406 "
March.....	506 "
April.....	10,629 "
May.....	33,075 "
June.....	7,608 "

Total.....56,951 "

51,312 bags spring weighing.....16,419,840 lbs.
Shipped from interior.....1,480,510 "

Spring fleece.....17,900,350 "
5,639 bags fall weighing.....1,871,870 "
Shipped from interior.....1,094,049 "
On hand, January 1st, about.....5,000,000 "

Total.....25,863,269 "
Oregon, 6,880 bags.....1,929,400 "
Foreign, 259 bags.....77,700 "

Grand total.....27,870,369 "

Comparison of Monthly Receipts.

	1882.	1881.	1880.	1879.	1878.	1877.
January.....	3,727	702	243	360	1,084	540
February.....	1,406	305	211	181	787	338
March.....	506	3,347	1,838	1,678	788	8,948
April.....	10,629	23,540	16,400	18,588	15,631	34,386
May.....	33,075	26,152	24,828	29,796	24,057	30,523
June.....	7,608	12,189	18,081	10,307	12,526	11,924
Total.....	56,951	66,235	61,601	60,910	58,873	86,659

Comparison of Exports.

January 1st to June 30th, 1877.....	29,855,198 lbs.
January 1st to June 30th, 1878.....	19,120,316 "
January 1st to June 30th, 1879.....	23,291,472 "
January 1st to June 30th, 1880.....	12,234,332 "
January 1st to June 30th, 1881.....	21,124,230 "
January 1st to June 30th, 1882.....	17,184,346 "

Exports.

DURING THE SIX MONTHS ENDING JUNE 30, 1882.	
January 31. Railroad from San Francisco.....	2,892,240 lbs.
February 28. Railroad from San Francisco.....	1,250,870 "
March 31. Ship Young America.....	230,625 "
April 30. Railroad from San Francisco.....	1,043,960 "
May 27. Ship Gen. McClellan.....	953,196 "
June 30. Railroad from San Francisco.....	3,304,310 "
June 29. Ship Seminole.....	1,576,346 "
June 30. Railroad from San Francisco.....	2,239,700 "

Total.....14,610,287 "

Shipped from outside of San Francisco by rail.....2,574,550 "

Total.....17,184,836 "

Included in exports there were 187,700 lbs. pulled wool, 2,990,020 lbs. scoured wool.

The weights of receipts and exports are gross. The usual tare of bags received is about three pounds each; on pressed bales shipped, 14 to 16 lbs. each.

Comparison With Former Years.

1882, California fleece.....	17,900,350 lbs.
1881 " ".....	22,471,429 "
1880 " ".....	20,349,015 "
1879 " ".....	20,651,039 "
1878 " ".....	18,842,920 "
1877 " ".....	28,289,640 "
1876 " ".....	27,895,314 "
1875 " ".....	23,642,880 "
1874 " ".....	19,355,682 "
1873 " ".....	14,658,497 "
1872 " ".....	12,607,280 "
1871 " ".....	13,381,390 "

Arizona Agriculture.

EDITORS PRESS:—Possibly some readers may like to hear of agricultural interests in these parts. I have the privilege of reporting an extraordinarily fine season. Really, it does seem that the railroad has had something to do with our climate. Last year abundant rains made the whole country a mass of vegetation, so that many by-roads were obliterated for months, and fruit trees, as well as crops, grew wonderfully. Last winter there was more rain than usual, and this spring also, so that wheat and barley here were raised with two irrigations, whereas it often takes five or six. Three years ago, at Phoenix, I was told by a farmer, with some apparent satisfaction, that he could raise wheat nicely by irrigating every 18 days. (I forgot to ask him if it wouldn't do every 20 days.) I have seen times when it would seem that one or two such days would ruin anything, unless watered. But this year has been wonderfully different—not like anything I have seen or heard of; so cool all season, up to a week ago. People still slept indoors, expecting to be obliged soon to get out on oats, because of intense heat in the houses. But the cool nights and moderate days held on, and blankets were used nearly all the time. The so-called Tucson blanket, which is so thin that the stars shine right through it to the bare skin, was not in demand at all. Meanwhile, work went on everywhere, and the iron pump-handle could be grasped and used at midday. Everybody thought it strange, but were well pleased. Many that left last year thought they would try to stand the heat this year, and, as yet, have not found it burdensome.

As the heat had always caused corn-tassel to die before it emerged, hence produced no pollen, and hence no ears, there was no attempt to have early corn. However, some Chinese gardeners, so foolish as not to know they could not raise roasting ears, planted a lot, in ignorance, and, owing to the cool season, it has come on and tasseled out all right, like corn other places, so that soon they will have wagon-loads of green corn, at 50 cents a dozen.

Now it may be another year or two before they will learn. They did not know about potatoes either, and planted a lot of them, and now they are in bloom and look as though they would produce.

In fact, the weather has been so propitious that everything seems far ahead. Tomatoes seem two months earlier; melons are also forward. They are beginning to appear on the streets. A 15-lb. watermelon brings *un peso*—that is, 90 cents. Peaches and apricots are quite abundant and getting ripe. I do not see other fruit raised here, except grapes, quinces and pomegranates. All this has reference particularly to this immediate region. I hear that the fine fruit orchards over on the San Pedro river have had their fruit killed this spring.

Now, as I was going on to say, just as the hot weather began, and before the houses got heated through, here came the glorious rain—so early—and cooled the atmosphere so that it is almost perfection. Some few drops had been falling for days, till yesterday a fine thunder-shower passed over, making mud out of the dust. Then to-day, again, were two quite heavy showers which have soaked the ground enough to plow. Now, all the corn will be planted there is room for.

The watermelon aphides have hardly put in an appearance, and now the rains will destroy the last one. Now, we will have fine melons of all kinds, and everybody, especially Mexicans, will be happy.

To sum up: We have raised the finest, plump wheat and barley, with little irrigation, and corn, tomatoes, melons, etc., away ahead of former years. Dust has been rather plenty, but otherwise the climate has been as delightful as any place in the United States, I suppose. If it shall continue so, as nice homes, where irrigation can be had, can be made here as anywhere. We do not have the hot drying winds of California; no very heavy winds; winters more pleasant than California, and never a flea to disturb one, night or day. I have sometimes thought we had our share of flies here, but this year very few, so far.

Fruit is coming plentifully from California, and so dear that I feel I missed it wonderfully that I did not plant an orchard three years ago. I hope to report soon that the large green beetle, which destroys so much fruit here, especially grapes, has also omitted to come this year. Drouth seems to favor insect life. Our early rains may stave them off this year. We have no codlin moth or such insect pests.

I receive regularly the RURAL PRESS with ever sustained interest. I am glad to hear all about California continually, though sorry there does not seem to be the large crops and wanted prosperity this year in some places. I feel that our dear old paper could not be spared from California. If it should cease, there would be, to many assuredly, a great gap in affairs that could not be filled, except by something just like it. Long live and thrive the RURAL PRESS!

H. H. MESSENGER.

Tucson, Arizona.

It is stated in Paris that if Turkey persists in abstaining from European accord, the Conference will be obliged to intrust intervention in Egypt to a mixed corps of English, Italian and Greek troops.

News in Brief.

A FRESH outbreak against the Jews has occurred at Balta.

The crop of oranges and lemons in the south country this year will be an immense one.

The State Immigration Association is receiving daily a great number of letters of inquiry.

ANOTHER fine flowing well is reported from Tulare county, water being struck at a depth of 326 feet.

THE Buenos Ayres insurgents, headed by General Perez, have been dispersed by Uruguyan troops.

THE majority in favor of the prohibition amendment to the Iowa Constitution is stated to be about 40,000.

THE British ship *Lammermoor*, from Sydney to San Francisco, is ashore on Bodega reef, and will prove a total loss.

THE manufacture of gold half and quarter dollars in San Francisco is to be suppressed by order of the Treasury Department.

ROEBLING, the engineer of the Brooklyn bridge, is hopelessly sick. He has a nervous disorder which baffles all medical skill.

THE vineyards in Gabriel valley, Los Angeles county, some of the vines of which are nearly 100 years old, are yet very prolific bearers.

A CALCUTTA dispatch says the government has suspended the order that oil which failed to stand the petroleum test be re-shipped in 12 hours.

ABOUT 20 female copyists at the Navy Department, Washington, have been dropped from the rolls on account of the failure of Congress to provide for their payment.

AUGUST 1st, Denver's great national mining and industrial exhibition opens. The structure for it is of iron and brick, is in the form of a cross, and is 500 by 310 ft. in size.

THERE is a rebellion in Muscat against the Imaum. The movement is headed by the Imaum's brother. A British man-of-war has gone to Muscat to protect British subjects.

A DISPATCH from New London says the Columbia crew went over the course in 24 minutes and 32 seconds. They were serenaded later, and when leaving town were loudly cheered, while Harvard was hissed.

A NUMBER of leading manufacturers met at Cologne and adopted resolutions declaring the bi-metallic agitation was most injuriously affecting the economic interests of Germany, and that the Government should express its determination to carry out the gold currency without undue haste.

FLOWING water has been struck at 250 ft. in an artesian well at White Plains, Nev. The water is slightly brackish, but the well is to be sent down much farther. The effort in this direction to secure irrigating waters and for manufacturing purposes is looked upon with much interest in Nevada.

A DISPATCH from Long Branch says: The jury, after an hour's deliberation, rendered a verdict that the railroad accident last Monday was caused by the spreading on the rails on the bridge at Parker's creek, and find the New York & Long Branch railroad company guilty of gross and culpable negligence.

THE Trustees of Nevada City have passed an ordinance which requires each laundry establishment in the place to pay a license of \$30 a quarter. All the laundries there were carried on by Chinamen. The result of the tax has been, we are told, to make the Mongolian cleaners of clothing quit the town.

A DISPATCH from Washington says that last Monday, Cassidy, of Nevada, introduced a bill authorizing the Legislatures of California and Nevada to provide for the annexation to Nevada of three counties in California. In a spirit of jocular reprisal, Berry, of California, yesterday introduced a bill authorizing the Legislatures of California and Nevada to make provision for the annexation of the State of Nevada to California and abolish the name and Government of the former State.

CEMENT FOR LEATHER.—Many recipes have been given for a cement for joining leather; but the following is that which seems to have given the best satisfaction, especially for the construction of leather belting: Equal parts of common glue and American isinglass are placed in a glue pot, water being added sufficient in quantity to cover the whole. After some 10 hours' soaking, the mixture is brought to a boiling heat, and pure tannin added, until the whole becomes of a rosy consistence, or like that of the white of eggs, and apply warm. The plan is to buff off the grain of the leather where it is to be cemented, rub the joint surfaces solidly together, let it dry for a few hours, and it is ready for use. If suitably put together no rivets are required, the cement being as strong as the leather.

IMITATION WOOD CARVINGS.—Ever since Blanchard invented the eccentric lathe, American mechanical ingenuity has been taxed to produce a wood carving machine that should be a sufficient substitute for hand labor, and although several carving lathes have been invented, for various reasons none of them have been an unqualified success, nor have proved of commercial value. More headway in substituting machine work for hand work has been made in other directions, and pressed wood ornaments, produced by dies and now largely used, supply an acceptable substitute for carvings on furniture of the cheaper grades.

TO TIN SMALL CASTINGS, clean and boil them with scraps of block tin in a strong solution of cream of tartar.



Peace.

Censeless the sea-waves throbbing leap
Against the dark rocks' tremendous steep;
Yet they have islands crowned with palm,
And there are calm,
There lie and sleep.

Though the hills plead for gift of rain
To save their blo-soms, oft in vain;
Yet they have springs whence rivers start
To find the heart
Of seas again.

Though friendship, at a man's earth-death,
Is poured in eulogizing breath;
It may be when he opens eyes
On angels wise
No word he saith.

—Charles H. Shuman, in *California*.

The New Cook.

"There is one thing you mustn't forget, Tom!"

"What's that, Emma?"

"Don't forget to go to the registry office and send me up a cook. The new girl is good for nothing, and the old one can't do everything. Young or old, man or woman, I don't care, only send me up a competent cook by 10 o'clock this morning."

"Don't look so desperate, sis; I'll remember it. I want things in pretty good style for Maxwell; he is used to it—is fond of good dinners; and I guess I'll send you a good, smart cook, Emma." Mr. Thomas Maye disappeared with a re-assuring nod. He had a proverbially bad memory; pretty Emma Maye knew it very well, yet in this desperate emergency she trusted him.

During the two years she had had charge of her widowed brother's family they had been blessed by the most skillful of cooks; but Joan had taken a fancy to get married, and her place was hastily supplied by one who soon proved incapable.

Just at this juncture Mr. Maye received tidings that his dead wife's favorite brother, Arthur Maxwell, just returned from abroad, would pay him a visit. From the first, Emma had been nervous over the responsibility of entertaining this elegant young man, whom she had never seen. She was lovely and accomplished; but she could not cook—in fact, she had never tried.

It was 7:30 o'clock when Mr. Maye went to town. He took nothing but a cup of coffee at 7 o'clock, and lunched at his favorite restaurant at 11 o'clock. At 3:30 o'clock the Mayes dined, and Mr. Maxwell was expected by the 3:10 o'clock train.

"There!" sighed Emma, when, two hours after her brother's departure, the house was in its usual exquisite order, and the viands and flowers sent up for dinner; "if Tom doesn't forget, and if he sends up a good cook, everything will be nice enough."

She did not dare think of the possibility of Tom's having forgotten, or that of the cook not coming for any other reason; but when, precisely at 10 o'clock, the door-bell rang, a secret weight was lifted from her heart. She ran herself to answer the summons. A medium-sized, well-dressed, modest-looking young man stood at the entrance, and she brightened at sight of him.

"I am very glad you are so punctual; I was afraid I should be disappointed," she said, leading the way to the kitchen without an instant's delay. "Let me see—10 o'clock. I shall have to set you at work at once to prepare a first-class dinner. We are expecting company from London, my cook has left me, and I do not myself know anything about cooking. What is your name?" literally bereaving the young man of his hat and hanging it as high out of reach as possible.

His reply was rather faint, but she thought she caught it.

"Mac? You do not look like an Irishman. But it doesn't make any difference. Are you a good cook?"

The smile of the young man was rather puzzling. "I'll do my best," he said, pleasantly.

"You see, there's nothing in the house but cold chicken," continued Emma, unconsciously wringing her little hands as she continued to address the new cook, who listened very attentively. "But my brother has sent up some pigeons—to be roasted, I suppose?"

"Yes'm."

"Can you make a celery salad?"

"I think I can."

"And Mayonnaise sauce for the cold chicken?"

"Yes'm."

"Can you make French soup?"

"I can."

"Oh, well, I think you will do" (beginning to look relieved).

"Be sure the vegetables are not overdone, and the coffee good—my brother is very particular about his coffee. And we will have a Florentine pudding," with an inquiring look.

"Yes'm," readily.

The new cook was already girding himself with one of the white towels that lay on the

dresser, and casting a scrutinizing glance at the range fire.

Quite reassured in spirit, Emma was turning away when she stopped to add:

"I will lay the table myself to-day, Mac, and fill the fruit dishes and vases; but if you give satisfaction, I will entrust you with the key of the china closet, and you will have the entire care of the table."

And with a gracious nod, the young lady withdrew from the kitchen.

She piled the fruit dishes with rosy pears, golden oranges and white grapes; filled the vases with roses, lilies and ferns; set clusters of dainty glasses filled with amber jelly among the silver and china, and then, with a sigh of satisfaction at the result, ran away to dress.

"I'll not go near the kitchen to even smell the dinner. I don't know anything about cooking it, and will trust to luck. I have an idea that Mac is really capable—is going to prove a treasure. His dress was so neat, and he was so quiet and respectful," concluded Emma, leisurely arranging her hair.

Her new dress, with its abundant lace and cardinal ribbons, was very becoming, and fitted the petite, round figure so perfectly that Emma felt at peace with all the world.

"I have heard that Mr. Arthur Maxwell is very fastidious in the matter of ladies' dress," mused Emma, twisting her head over her shoulder to see the effect of her sash. "I wonder what his first impression of me will be? I should like to have poor Ally's brother like me."

At length the last bracelet was clasped, the last touch given, and retiring backwards from the mirror with a radiant face, Emma turned and ran up to the nursery to see the children dressed for company, and also to speak with the boys—and it must be confessed, flirt a little with Mr. Vincent, the tutor, who was always at her service for this exercise.

There was a delightfully savory odor pervading the house when she came down and set out the wine and ice and made a few additions to the table.

She looked at her watch—3:5. Then she went softly to the end of the hall and listened to the lively clatter in the kitchen. She could hear Mac chatting pleasantly with the little housemaid, Nanny, and all seemed to be well in that direction.

At 3:10 she repaired to the drawing-room and took a seat overlooking the street.

Carriages came and carriages went, but none stopped at the entrance.

The little girls, brave in new ribbons, came down.

The boys and Mr. Vincent came down.

Mr. Maye's latch-key settled in the door; the dinner-bell rang.

"Not come?" asked Mr. Maye, at sight of Emma's disappointed face.

"No!" she pouted; "and such a nice dinner!"

"Very strange!" mused that gentleman, leading the way into the dining-room. "I hadn't the least doubt—Why, my dear fellow," seizing by the shoulders the new cook, who, acting also as butler, had just placed the soup-tureen upon the table—"my dear, dear fellow, why, how is this? Emma declared you hadn't come!"

That young lady grew as white as the tablecloth, and grasped a chair for support.

"That Mr. Arthur Maxwell! I—I thought it was the cook!"

"I came earlier than I expected, and in time to make myself useful to Miss Emma," laughed Mr. Maxwell, divesting himself of his white towel and bowing with grace to that young lady.

How could she have fallen into such an error?

"I was so terribly anxious—I didn't look at you twice. Mr. Maxwell, I hope you will forgive me!" stammered Emma, as red now as she had been pale.

"There is nothing to forgive, if my dinner turns out well," he added, laughing, evidently the sweetest-tempered man in the world. "I learned to cook when I was a student in Paris—a Frenchman taught me. I have been rather proud of my culinary skill, but I am a little out of practice now, and am not quite sure of the Florentine."

"Emma," cried Mr. Maye, "what does all this mean?"

"Why, John, you promised to send me up a man cook."

Mr. Maye clasped his hands tragically.

"Emma, I forgot it."

"Well, he came just at 10 o'clock. I thought he was the cook; I ushered him into the kitchen, among the pots and pans. I questioned him as to what he knew about cooking. I urged him to make all haste and serve the dinner; and—and I called him an Irishman!" sobbed Emma hysterically.

"No offense, Miss Emma. My grandfather, on my mother's side—Major Trelawny—was an Irishman," observed Mr. Maxwell, coolly. "And since I have done my best, won't you try the soup before it is cold?"

The others stared and Emma cried, but Mr. Maye laughed—laughed uproariously.

"The best joke of the season! Sit down, everybody! Emma, you foolish girl, don't cry. Arthur doesn't care. And as for your Florentine—Arthur, tell Nanny to bring it in. The proof of the pudding is in the eating, you know."

"Miss Emma won't cry when she tastes my soup," remarked Arthur, lading it out promptly with an air of pride.

And then they all fell to tasting and praising, and urging Emma to taste and praise, until she laughed and cried altogether.

But Mr. Arthur was so delightful, so winning, and so witty, so kind to his agitated young hostess, and he'd cooked such an excellent dinner—from the pigeons to the pudding, everything was perfect.

By-and-by Emma was herself again.

"This has taught me a lesson," she said. "I never will be so desperately situated again. I will learn to cook."

"Let me teach you," said Arthur.

He did.—*Argosy*.

Flirtation.

[Written for RURAL PRESS by JULIA M. GOODLETT.]

I have often been astonished by considering the number of young people—and I regret that sometimes those of middle age—who participate in this dishonorable practice. Much of it is the result of never having seriously examined the subject. I propose to give some thoughts upon flirtation, with the hope that they will lead some one to think of it in its true light.

Flirtation is trifling in love. In the first place, flirting is wrong because it necessarily involves deception and theft. The object of flirting is to gain the affections of another by leading him or her to believe that they have received our love in return, when such is not the case. In other words, it is an effort to gain, through false pretenses, that for which nothing is given in return. This involves falsehood, both by word and act. Is it right for a person to perjure him or herself for the sake of gaining property? Certainly not. Surely it is not less disgraceful for one to make false statements merely for the pleasure it affords a degraded mind to trample upon the most sacred feelings of the human heart. It is plainly taught in the "Book of Books," and admitted by every unprejudiced mind, that falsehood is always sinful and dishonorable. An eminent author has said: "Every brave man is a man of his word; to such base vices he cannot stoop, and shuns more than death the shame of lying."

It is assumed by Christianity that people are to live for character; that they are to maintain their truthfulness and nobility of mind at the expense of personal comfort, reputation, and even life itself. If a man may sacrifice his word for any cause, for the same reason he may sacrifice any other moral virtue at will. Perfect truthfulness is the first essential to a perfect character. As society is now conducted it is exceedingly difficult for people to always speak the truth, but it can be, and is done.

Love is the deepest, most sacred feeling, of the human heart, and should never be regarded lightly; for true love is a solemn, a holy thing. Love, and love alone, should lead to courtship, which candor and sincerity should ever characterize. If a person has the right to trample upon and insult the most sacred feelings of another, merely for the sake of his own selfish gratification, has he not on equal right to deceive, impose upon and insult him in any other way he may see fit? Is it not better to take from others worldly goods, which, by effort, may be regained, than by falsity to snatch from them that which, when once lost, returns no more forever—a happy, trusting heart—so to shock their confidence in their fellow-creatures as to cause them ever afterward to regard others with a degree of suspicion which is seldom overcome.

Flirtation always causes pain to the honest party; it adds greatly to the suffering of others, hence it is wrong. No noble, generous person will willingly and unnecessarily cause another pain.

The woman who would encourage the attentions of an honest suitor, for the purpose of glorying in the knowledge of his disappointment, is unworthy of the holy name of woman, and should be, as Pope has aptly said: "Alive, ridiculous; and dead, forgot."

Reverse the picture; a female flirt is bad enough, but a male flirt ought, in justice, to be banished from good society. Few reach the years of maturity without feeling the influence of love, and often this is the turning point in life. Few people realize how many lives have been wrecked, how many hearts rendered reckless and desperate from having been the victim of some innocent (?) flirtation. But who has not seen the light-hearted and beautiful maiden, who, in love and confidence, had bestowed her affections upon a suitor whom, in her own sincerity of soul, she believed to be all that is noble and honorable, changed to a pale, distrustful woman when he whom she deemed so noble is revealed to her as a villain by the knowledge that he was "only flirting?"

How many intelligent, noble men have been driven to the verge of desperation by the shock of knowing that she who was their ideal of all that is true and womanly, and whom they held dearer than life, is a fickle coquet? People may say that if they have courage they will overcome such feelings, and often, after long and painful strife between the deepest feelings of the heart and a strong, brave will, the feeling is conquered, but memory will revert to the anguish which the struggle cost them. Then, there are others who have not power or strength of will to thus overcome their feelings. The world may sneer at them, nevertheless the human heart is a thing incomprehensible, and that often will not yield to the will. So the

victim carries through life a saddened, disturbed heart.

Flirting is wrong, not only because it harms others, but because it destroys the goodness of mind of those who engage in it. To conscience, to nobility and purity of heart, it is a deadly poison. But, is it not right to trifle with a flirt for the sake of revenge? Because others do wrong is it any reason why one should sear and destroy one's own nobility of mind? Besides, God has said, "Vengeance is mine, I will repay."

As to a mutual flirtation, there is no such thing; it is a contradiction in terms. Flirtation is a trifling or deception in love; if there is no deception or love on the part of either party there can be no flirtation. In all cases of so-called mutual flirtation there is always a striving by each party to gain the affections of the other, and they usually result in hatred and pain to both parties.

San Bernardino, June 13, 1882.

Science Club.—No. 10.

[All communications for this department should be addressed "RURAL PRESS Science Club," Berkeley, Cal.]

Something About Collecting.

[Written for the RURAL PRESS "Science Club" by H. E. D.]

I do not propose, in the limited space allotted to me, to enter into the details of my subject; nor is it within the province of this article to tell what to collect or where to collect it, but upon some future occasion I may be tempted to say something under that caption. A few words regarding the benefits to be derived from collecting, however, may not come amiss.

To those who, perchance, have the opportunity of examining the result of a collector's labor, the old curiosity shop which Dickens tells about is too often made a comparison. They may, it is true, have an eye for all that is beautiful or curious; little exclamations of wonder may be heard as some new beauty of nature is shown them, but to the collector, who makes natural history a study, belongs the pleasure and fascination which adds such a charm to possession of a cabinet of specimens, be it shells, minerals, or other branches of the animal kingdom, that more than pays for the time, hardships and disappointments of gathering them. Most collectors are spoken of as having a mania or craze for this or that subject, and, if they are devoted to it, as they should be, people who know nothing about it too often ridicule them, yet a person can not become a good collector and succeed to any marked degree without study and research into nature itself.

A friend of mine, who teaches music, once remarked to me that one characteristic which he tried to instill into his pupils was stick-to-ativeness (a word of his own coining), and those who had the true stick-to-ativeness were bound to succeed. So it is with collecting, as, indeed, I might say, it should be in all the walks of life, and the person who is not accumulating in some way soon loses all interest. As the puerile man accumulates money, or the studious gathers his store of knowledge, so the collector accumulates his treasures.

As the school boy collects his postage stamps, which, by the way, are not confined to boys only, but to children of a larger growth, and the girl collects her buttons or advertising cards, so the student of nature collects his curios, and, as one by one, the specimens are procured, each must be properly classified and labeled before it takes its place in the cabinet, and some incident or experience connected with its possession usually adds to its worth or merit as a curiosity.

Each has its history, not only from the character and nature of its surroundings, but, as in the animal kingdom, are found the various changes and growth, habits and characteristics, so in geology are found traces of bygone races and their habits, as well as changes in the structure of the earth on which we live, through the various strata and formation of its surface. The botanist, too, finds much that is strange and instructive, and, indeed, nature furnishes abundant opportunity for study and reflection, and as the student views the works of the Almighty he should be thankful for the intellect with which he is endowed by which he is enabled to appreciate all these, the result of His handiwork.

Familiar Flowers.

[Written for the RURAL PRESS "Science Club" by CARL PURDY, Ukiah, Cal.]

If, toward the end of February, you were out in the woods anywhere along the Coast range, you would be apt to notice a very large leaf on a short stem close to the ground. It would be all by itself, about four or five inches long and ovate, or egg-shaped. If you should dig it up, you would find it came from a very curious little bulb about half an inch across, and shaped something like a turnip turned upside down. All around the edges you would find little white grains that look something like rice. The plant gets its common name of rice root from these little grains. Each one is a small bulb in itself, and will grow if it has a chance. A little later on, the flowering stalk springs out of the ground. It is from eight inches to two feet high. At the bottom of the stem there are generally a number of leaves in circles. The stem is as straight as an arrow, and along the upper part bears a number of

flowers shaped like little bells. They hang mouth down, and where the clapper should be they have a circle of six brown or greenish stamens around the ovary, as it is called, but which you will know better as the seed-pod. Ovary means place for the eggs, and I suppose the old Latins called it that because the seeds of some plants look so much like little eggs. But the seeds of our rice root are as little as possible like eggs. They are flat, thin and wedged into the seed pod like sardines in a box. The rice root belongs to the same family as the beautiful lilies—a very respectable family, you will say. The botanists call it *Fritillaria*. There are eight kinds of *Fritillarias* in our own State. The flowers vary in color from crimson to nearly green. In botany each plant has two names—just as you have a Christian name and a surname. The Christian name of the *Fritillaria* I have been telling about is *lanceolata*—so called because the leaves are lance-shaped. Its whole name is *Fritillaria lanceolata*. See how many of you have made its acquaintance.

More Heroes.

The two men, William Bennett and Dennis Callahan, who lost their lives in the attempt to reach and rescue those confined in the Alta mine, have enrolled their names upon the scroll of heroes who were not born to die. Facing the canon's mouth, or riding into the jaws of death, amid shouts and cheers, the trumpet's blare and crash of cymbals and drums, attended with all the pomp and circumstance of glorious war, is brave, but far braver is the man who faces the deadly gases and gurgling waters, and all the unknown choking fens of darkness, to save life, and not to take it. Let no man say that heroism has left this world, while such men live and die for men. Their bravery hallowed the world they have left, and ennobles the lives of all beholders. All men are proud to call such heroes brothers.

Is it ever too late to add our voices to the general chorus in praise of a worthy act of a noble fellow creature. Although many have spoken in fitting words of such a noble act as that of the two men, Wm. Bennett and Dennis Callahan, mentioned above, it is meet that it should again be brought before the public mind for it to think of and relate to the children of the rising generation. The rehearsal of such deeds inspires young readers to cultivate their powers of endurance and bravery. Bravery that will cause a man to enter the terrible gases of a mine, to undertake the almost hopeless task of saving a brother, should be extolled from the house-top, and his praises sung by every tongue and pen in the land. Those living in the same place should be proud to say they had breathed the same air as supported such noble souls.

C. D.

AN "INCHER."—"Yes, I went to church yesterday," said Job Shuttle, with a yawn. "Pretty good sermon, pretty fair; but what pleased me most was the antics of an inch worm that was roaming about the hat of a lady who sat in front of me. That little, pale green incher reminded me so much of the way we human worms get on in the world. You see, he was on the vane of the feather in the hat and he would get a good hold, and then reach up with his head and feel around and look the field over to see where he could make a good strike, just like a man looking for business; then he would throw himself soul and body on to a curl of the feather, which would bend and let him down with a thud, just like a man who has made a bad speculation; then he would wriggle and twist and feel around for a new hold, just like a man trying to 'fix things' with his creditors; then he would mount to the very topmost summit of the hat and stick his head up and swing all around, just like a newly-elected Congressman gazing over the heads of his constituents; finally he got along on the lower edge of the turned-up hat-brim, and then he made progress; he inched along, and inched along, making big strides right ahead, just like a man picking up money and making a fortune hand over fist; but the little incher wasn't satisfied. Just as he got as far as he could he 'broke all up' and tumbled, and we saw him no more; for all the world just like a man who has done his best for a little while and then 'funkt'."

THE OLD HOME.—A large proportion of our girls who read this will some day love and marry. It is well; it is right; but do not be in a hurry to be grown up and away from home. Life will never give you anything sweeter, better, happier than you have now—no love purer than your mother's, no care more kindly than father's, no companionship like that of your brothers and sisters. Even to the man who loves you, you will not be the little Lily who was a baby once—who learned to walk and prattle, and was prettier than any other baby ever was—nor the little girl who was so wonderful a genius when she played her first tune on the piano or worked her first book-mark. He who falls in love with you may have known twenty other pretty girls, and have been, perhaps, at some time, in love with half of them. In some things you will fall short of some one he has known. Your eyes will not be so fine as those of Miss Lavina, and you will never make cake as his mother does. Here at the old home you have been perfection; even if prudence kept your parents from saying so, they cannot believe anyone quite so nice as "our Lily." Then linger a little here—where some one else shoulders the burdens and shields you from life's worry, where the love is a love that does not change because of a new face, where the innocent days of childhood have been passed—your first and best home.—*Christian at Work.*

Young Folks' Column.

Our Puzzle Box.

Cross-Word Enigma.

In sole and shoe,
In bluish hue;
In all and part;
In sour and tart;
In kite and hawk;
In hore and sock;
My whole are found in the sea;
What are they? prithee tell me.

UNCLE CLAUDE.

Decapitations.

1. Behead to ramble and leave a relative.
2. Behead to unite and leave the eggs of an insect.
3. Behead a mechanical power and leave always.
4. Behead an article of food and leave a kind of wood.

MELANCHTHON.

Blanks.

[Fill the blanks with words alike in pronunciation, but unlike in spelling and meaning.]
1. He said the ——— would not ——— well.
2. Thomas poured the contents of the small ——— upon the ———.
3. The ——— rode all ——— without stopping for rest.
4. The driver said he would ——— certain legends of the place when they came in ——— of the ——— of the destroyed house.

JERRY.

Metagram.

First, I am an article of food; curtail me and I am a coin; curtail again and I am an adverb; next behead me and there is nothing left.

AUNT SARAIL.

Hidden Double-Word Square.

1. I have news for all, whether good or bad.
2. What a great ado men often make about the most trivial matters.
3. Come, Nellie, are you amenable to the law or not?
4. A barren tract was all the eye could see, with here and there a dwarfed bush or tree struggling for existence on the sterile soil.

Hidden in the above are words containing the following significations, in the form of a word square:

- Across.—1. Verbal. 2. A cupola. 3. A sign. 4. House-hire.
Downward.—1. A scent. 2. An ancient empire. 3. A devotional term. 4. A quadragesimal fast.

NETTIE.

Answers to Last Puzzles.

NUMERICAL ENIGMA.—The fourth of July.
SYNOPTICALS.—1. Axle, ale. 2. Warn, wan. 3. Main, man. 4. Pray, pay. 5. West, war. 6. Braid, brad.
WORD SQUARE.—
I O T A
O P E N
T E S T
A N T S
DECAPITATIONS.—1. Neat, eat. 2. Fire, ire. 3. Know, now.
TOWNS.—1. At-hens. 2. Or-o-no. 3. New-port. 4. Mad-i-son. 5. Act-on.

Jennie and Floy.

"Don't you want to read to me a little while, Jennie, my poor old head is so tired?"

"Oh dear! grandma, you're always wanting me to read or do something for you when I'm busy," and Jennie Colman impatiently threw down the tidy she was embroidering, and with a heavy frown took up the paper her poor old grandmother had laid down.

"Never mind, dear; I can wait till Floy gets home," said grandma, sadly. "I didn't notice you were doing anything in particular."

"Well, I was," Jennie snapped out. "There's that tidy must be done Thursday for the fair, and it isn't hardly begun yet. Well, there's no use talking. What do you want me to read?"

"I don't want you to read at all, Jennie," said grandma, in a trembling voice. "I wouldn't have asked you if I had known you had anything to do. Go right on with your work."

"Oh, well, if you don't want me to, very well. I'm not at all anxious," and Jennie returned to her work.

Grandma sat awhile with closed eyes, thinking of the happy past, when there were always willing hands and happy hearts at her service, when suddenly a click of the gate-latch roused her from her musings, and a glad smile lighted up her tired old face.

"There's Floy!" she exclaimed brightly.

"Oh, yes, there's Floy, of course. You think Foy is almost an angel, I do believe, grandma Colman."

"Well, who don't love Floy?" grandma responded. "No one can help it."

And, indeed, few could help loving the bright-faced young girl of 14 who came bounding into the room, seeming to bring with her a touch of the outside glow and brightness.

"Well, grandma, how do you feel? Is your head any better? Is there anything I can do for you?" And the rosy lips met grandma's, lovingly.

"No, dear, my head is no better, but you must sit down and get rested, and not be thinking what you can do for me the first thing."

"O, yes," said Jennie, impatiently, "of course Floy must not hurt herself. It don't make any difference about me."

"Jennie Colman!" burst forth Floy, indignantly: "I'd be ashamed to talk so to dear old grandmother. You know she thinks just as much of your comfort as she does of mine. But you think so much of yourself no one need worry about your getting along without any trouble."

"You look out for yourself, and I'll do the same," was Jennie's response.

Floy had hardly seated herself when she espied the paper grandma had been reading.

"Oh, shan't I read to you grandma, dear?" she asked. "I feel just like it."

"If you are not too tired," said the old lady,

wistfully, I should like you to read a little while. I was in the middle of that article," pointing to the one she had been reading.

"All right," said Floy, cheerfully, though the article in question was dull reading for a girl of her age. She read patiently on, while Jennie sat sulkily bending over her embroidery. And which, think you, enjoyed the afternoon more—Floy, who gave up her own wishes to minister to her grandmother's, or Jennie, in her utter disregard of all but her own selfish desires? Which are you like, reader, and which do you wish to be like?

GOOD HEALTH.

The Advantages of Two Eyes.

In response to the question, "What is the use of having two eyes?" the answer has been given, "To have one left if the other is hurt. Much as we may admire the sagacious foresight of this youthful physiologist, it will not be found sufficient to rest contented with his ultimatum. He had evidently not tried his skill to find how unexpectedly he would miss the inkstand while endeavoring to dip his pen into it at arm's length with one eye closed. He had not thought of holding his finger a few inches in front of his face to find what part of the wall it would hide from each eye in succession, or how differently it would look when regarded from those two points of view separately, how much thicker it would appear when both eyes were open, how readily he could examine three sides of it at once, how much more definitely he could judge its distance, in a word how much more comprehensive was the information given by two eyes if used at the same moment. Assuming that he knows exactly how to account for the inversion of the retinal image and the erect appearance of the object there pictured, how our visual perceptions are only signs of what we momentarily feel on the retina, signs that generally represent the realities with a fair degree of accuracy, but may sometimes represent almost anything else on demand, how, if the eyes be healthy, we have no consciousness of possessing any retina at all, but instantly and unconsciously refer every retinal sensation to some external body whose existence we are obliged to assume, unless there be special arguments to convince us to the contrary—granting all this, our young physiologist has not thought of inquiring how it is that, although two retinal images are produced, we see but a single object, and this despite the fact that, like photographs of the same body simultaneously taken from different standpoints, these two images are necessarily dissimilar.—*Popular Science Monthly.*

RECKLESS USE OF HYPODERMIC INJECTIONS.—A recent painful case of death caused by a hypodermic injection of morphia directs attention afresh to the dangers of resorting to this most perilous mode of administering drugs designed to relieve pain. The public should be warned against the practice of employing remedies hypodermically. So formidable a "remedy" should on no account be used except under medical advice, and when deemed necessary it ought to be given by practitioners. We have repeatedly urged the profession to discountenance the recourse to injections under the skin, which is becoming general. It is a practice of extreme hazard, and we are of opinion that surgical instrument makers should refuse to sell the requisite apparatus to lay persons, and that medical men should forbid their use.—*London Lancet.*

POISONOUS BULLETS.—A German journal refers to a discovery made by M. Gros, of Paris, which tends to throw some light on the complaints which were made, but not seriously inquired into, during the Franco-German war, as to the use of poisoned bullets by the combatants on both sides. M. Gros explains that the construction of the modern breech-loading arms causes the bullet to convey with it a portion of the hydrocyanic acid, which the explosion of powder has caused to be accumulated in the barrel. Even if poisoning to a mortal extent does not take place, it is remarked that the healing of wounds is materially retarded by the circumstance.

SOFT BEDS.—Why should soft beds be considered unwholesome? Certainly they afford more comfort than hard ones. Hard beds should never be given to little children, and parents who suppose that such beds contribute to health by hardening and developing the constitutions are surely in error. Eminent physicians, both here and in England, concur in this opinion, and state that hard beds have often proved injurious to the shape of infants. Birds and animals cover their offspring with the softest material they can obtain, and also make soft beds for them. Why not do the same with our own young?

FORCING THE INTELLECT OF CHILDREN.—The *Medical and Surgical Reporter*, in a recent able editorial on this subject, contends that much injury is done by sending children to school too early, and holds, very properly, we think, that the portion of life prior to puberty should be devoted mainly to physical developments.

HOT WATER FOR INFANTS.—Recent cases are noted in the medical journals of tetanus, or lock-jaw, having occurred in infants on account of being bathed in too hot water. A single nurse reports several cases of the kind.

DOMESTIC ECONOMY.

ORANGE MARMALADE.—Take 12 oranges of fair size, with smooth, highly-colored skins, score the peel off in quarters, taking with it as much of the white skin as you can without breaking the pulp. As you remove the peel put it in a basin of water. Put it all, when ready, into a stewpan, with water enough to cover the peel; change the water several times during the boiling process, and when the peel is quite soft and very tender, take it out of the pan and drain it in a hair sieve. Spread out the peel, when nearly dry, on a pasteboard and cut it into fine shreds. Squeeze the oranges and add the juice of three or four lemons to every dozen oranges. The peel and juice must be weighed, and to every pound add a pound and a half of loaf sugar. Allow to this amount of sugar a pint and a half of water, obtained by washing and straining the pulp of oranges. Boil and skim carefully for 15 or 20 minutes, then add the washed pulp and juice, and boil until it commences to thicken, then put in the pulp and boil for 20 or 30 minutes, or until it jellies properly.

EARTHENWARE IN COOKING.—The flavor of food baked or boiled in earthenware is said, by those who have made the experiment, to be far superior to that of vegetable or animal food cooked in the same way in iron vessels, for the reason that iron is a conductor of heat, while earthenware is a non-conductor; consequently, food cooked in the latter is rarely ever burned, the degree of heat not varying perceptibly during the process of cooking, thus preserving the flavor of what is cooked, as well as uniformity throughout the substance of the meat, vegetables or grains, until the process of cooking is completed. So earthenware takes the premium, as it deserves to, and those who have found out how much better they can do their cooking in these vessels than in ironware, give pots and kettles a cold shoulder often.

FOR CORNING BEEF.—Cut the beef in small pieces, leaving out the large bones, pack solid in a six-gallon crock with a weight on top. Pour over the beef boiling hot brine, made as follows: Two gallons of water, three pounds of salt, one ounce of saltpeter, a pound of sugar and two large spoonfuls of baking soda. After two weeks, heat and skim the brine, and repeat the process whenever you think necessary, but never put the brine on hot after the first time. If the weather is hot you can add a handful of salt and soda at any time, and, like all pickling, be sure the brine covers the beef. If packed in a barrel, a large cloth should be securely tied over it in summer, to secure its contents from flies. The nicest vessel to put it into is a half-barrel earthen jar.

SWEET POTATO ROLLS.—Boil, and mash through a colander, two large sweet potatoes, adding to them a tablespoonful of butter or lard. Sift two quarts of flour into a bowl, make a hole in the center of it, and with two beaten eggs, a cup of fresh yeast and some boiled milk, make a sort of sponge, stirring the potatoes into it. After this has stood for an hour, mix it into a stiff dough and knead it well. When the dough is quite light, roll out and cut it into small round cakes, and let them stand a while before baking. The milk must be cooled after it is boiled, before mixing the sponge. Add some salt to the flour.

JUBILEE PONE.—Take one pint of corn-meal, and add to it a small teaspoonful of salt, two eggs well beaten, and half a teaspoonful of baking powder. Mix it into a batter with sweet milk, stirring very hard. Have a round tin pan, or an earthen turk's head, on the top of a stove, and when it is very hot throw in a heaping tablespoonful of lard or butter, and when it boils pour the mixture into it. Stir around lightly, and bake in a quick oven. As soon as the loaf is browned and the fat nearly absorbed, it is done, and must be served immediately.

CORN FRITTERS.—Grate one dozen ears of corn upon a coarse grater, and with a spoon scrape the cob in order to obtain the milk that adheres to it. Add salt, a tablespoonful of flour, two tablespoonfuls of milk, and two beaten eggs. Drop the mixture from a spoon into boiling fat, and fry them a nice brown. Drain them, and serve very hot.

STRAWBERRY JAM.—Cap large, ripe, firm strawberries, and to every pound of fruit allow three quarters of a pound of pulverized sugar. Strew the sugar over the berries, and when it is dissolved put all in a porcelain-lined kettle, and cook slowly until the berries are clear and the whole begins to thicken. Seal up when cool in small glass jars.

NEW KETTLES.—The best way to prepare a new iron kettle for use is to fill it with clean potato peelings, boil them for an hour or more, then wash the kettle with hot water, wipe it dry, and rub it with a little lard; repeat the rubbing for half a dozen times after using. In this way you will prevent rust and all the annoyances liable to occur in the use of a new kettle.

OATMEAL PIE-CRUST.—Scald two parts of fine oatmeal with one part of hot water; mix well and roll thin. As this bakes very quickly, fruit which requires much cooking must be cooked first before making the pies. This crust is very tender, and possesses all the desirable qualities of shortened pie-crusts, without their injurious effects.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.

Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *Three months extra will be added to the above for each three months delay which may occur in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months. We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.				
Per line.....	.25	.80	\$2.20	\$ 5.00
Half inch (1 square).....	1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 8, 1882.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—The State Fair; Elemental Disturbances; A Memory of Harvest Time; Ensilage of Dry Fodder; The Resort to the Best, 17. **Passing Events;** Clover and the Soil; Notes on Hop Culture; 24. **State Horticultural Society;** Draining and Irrigating Machinery, 25. **ILLUSTRATIONS.**—The Harvest in the Old Time, 17. Front and Side View of Irrigating Pump, 25. **FORESTRY.**—"Kellogg's Forest Trees of California;" Forest Trees of California—No. 3, 18. **HORTICULTURE.**—The California Dried Fruit Interest, 18-25. **PATRONS OF HUSBANDRY.**—How to Remedy Existing Evils; The Grange in Oregon; Subjects for July Meetings, 20. **AGRICULTURAL NOTES,** from the various countries of California, 20-21. **HOME CIRCLE.**—Peace, (Poetry); The New Cook; Flirtation; Science Club—No. 10; More Heroes; An "Incher; The Old House, 23. **YOUNG FOLKS COLUMN.**—Our Puzzle Box; Jennie and Floy, 23. **GOOD HEALTH.**—The Advantage of Two Eyes; Rootless Use of Hypodermic Injections; Poisonous Bullets; Soft Beds; Forcing the Intellect of Children; Hot Water for Infants, 23. **DOMESTIC ECONOMY.**—Orange Marmalade; Earthenware in Cooking; For Corning Beef; Sweet Potato Rolls; Jubilee Pone; Corn Fritters; Strawberry Jam; New Kettles; Oatmeal Pie-crust, 23. **QUERIES AND REPLIES.**—Cuttings in Water; Acid Clover; Fine Apricots, 24. **NEWS IN BRIEF** on page 21 and other pages.

Business Announcements.

Sewing Machine Supplies, Mark Sheldon, S. F. Anderson's Springs, Anderson & Patriquin, Lake Co., Cal. Percheron Horses, M. W. Dunham, Wayne, Ill.

The Week.

The week has been given to recreation and amusement. The three holidays decreed by the trade functionaries of the city were all taken by the mass of citizens, and the diversion has been greater and more general than usual. The public demonstrations in honor of the day were about as successful as usual, and, so far as heard from, were fortunately attended by no great mishap or conflagration. People who have anything to burn generally breathe freer on the morning of July 5th, for the suspense is removed either by destruction or safety.

The news of the day in this country brings nothing especially alarming. The harvest is being gathered in, and there will be abundance, with its concomitants of quiet and content. Abroad the rumors of war continue. England is arming to meet possible need for war in Egypt, while turmoil still reigns in her emerald territory.

The fruit season is approaching its height, and picking, packing, drying and canning is being vigorously pushed. A vast amount of money will be brought in in exchange for our orchard products this year. The grain harvest progresses as rapidly as possible with the rather short supply of harvest hands this year. Some very good grain is being sacked, and the prospect for paying prices is promising. Rural improvements and investments are many, and the value of agricultural lands is maintained.

SECRETARY CHANDLER has appointed a Court of Inquiry to investigate the circumstances of the loss of the steamer *Rodgers* in St. Lawrence bay.

Clover and the Soil.

In California the clovers, indigenous and introduced, play a large part in farm economy. It is true that we do not practice green manuring to the extent it prevails in other regions, as, for example, the sowing of clover for plowing in, in preparation for other crops, and yet, much is gained by plowing in the natural growth, as is done in orchards and vineyards where the green growth is allowed to become quite large before plowing. It is of interest, too, that the clovers, when grown for hay and for seed, exert a marked effect upon soil fertility by the root growth for which they are famous. Alfalfa is, no doubt, adding millions to the accumulating fertility of our lands, and is doing much good below the surface, as well as above. The subject of the effects of clover-growing upon the soil has lately been investigated by the distinguished agricultural chemist, Dr. Voelcker, and he announces conclusions which are of prime importance to alfalfa growers.

A good crop of clover removes from the soil more potash, phosphoric acid, lime, and other mineral matters, which enter into the composition of the ashes of our cultivated crops, than any other crop usually grown in this country. There is fully three times as much nitrogen in a crop of clover as in the average produce of the grain and straw of wheat per acre. Clover is an excellent preparatory crop for wheat.

During the growth of clover, a large amount of nitrogenous matter accumulates in the soil. This accumulation, which is greatest in the surface soil, is due to decaying leaves dropped during the growth of clover, and to an abundance of roots, containing, when dry, from 13% to 2% of nitrogen. The clover roots are stronger and more numerous, and more leaves fall on the ground when clover is grown for seed than when it is mown for hay; in consequence, more nitrogen is left after clover seed than after hay. This crop causes a large accumulation of nitrogenous matters, which are gradually changed in the soil to nitrates.

Clover not only provides abundance of nitrogenous food, but delivers this food in a readily available form (as nitrates) more gradually and continuously, and with more certainty of good result than such food can be applied to the land in the shape of nitrogenous top dressings.

From these statements it appears that alfalfa or other clovers, when grown for pasture, there is a marked contribution to the fertility of the soil, for the manure from the pastured animals replaces the mineral matters which the plant takes from the soil, and, added to the root growth of the clover, greatly increases the organic or nitrogenous matter. Alfalfa hay removes large quantities of mineral matters, it is true, but it increases organic matter, which is the thing most needed by some soils. There is no doubt that the best agency to restore worn soils which will grow alfalfa is to put on that plant and then bring on the animals to feed it off, thus gaining the coin for clean wool, or beef, or pork, and giving the soil heart again for other crops, if the farmer choose to change afterward.

The way in which a mat of clover roots provides for a succeeding crop was described by Prof. Kedzie, in a recent lecture, in this forcible manner: In two and a half tons of clover hay, or in an acre of clover sod of corresponding quality, there will be, both for grain and straw, enough phosphoric acid for a crop of 34 bushels, of combined nitrogen for 71 bushels, of potash for 102 bushels, of magnesia for 120 bushels and of lime for 270 bushels. In other words, the clover hay or sod contains enough phosphoric acid for more than double an average crop, enough nitrogen for more than four average crops and potash for more than six average crops of wheat! With such figures before you, do you wonder that farmers are surprised at the large crops they can raise on a clover sod? You see, also, why lands in rotation with clover can endure the heavy tax of two crops of wheat in succession without complete exhaustion. But when a body of clover is plowed in with the sod, we reach results that round out that figure of oriental magnificence, "The pastures are clothed with flocks; the valleys also are covered over with corn; they shout for joy; they also sing."

THE RAISIN CROP.—The raisin crop is already engaging the attention of growers and the trade. San Francisco dealers have been trying to purchase the southern raisins in bulk, expecting to bring them to the city and sweat, pack and brand them here. This does not suit the growers, who very wisely believe in building up their own brands and the fame of their own locality. At Riverside there is what seems to us a very commendable movement to grade and pack all the raisins at the Riverside fruit cannery, and thus secure a uniform style, etc. This will do very well, for the fame of Riverside will confer local advantages. The men in charge of the Riverside cannery are well known and trusted, and their proposition may be found of much value to the whole colony.

HUMBOLDT POTATOES.—The *Ferndale Enterprise* says: The potato crop in this section will be larger than usual from present prospects. The acreage is quite large and the stand perfect.

Notes on Hop Culture.

[Written for the RURAL PRESS by DANIEL FLINT.]

When I wrote my first article on hop culture this spring, I supposed it would draw out some articles and lead to discussions from the hop growers, in relation to the best methods of preparing the soil, the best kind of soil, modes of planting, culture, picking, curing and baling. I have not seen a line on the subject, except my own, since I wrote the first article. I know, of my own experience, that many of the hop growers are among the most intelligent farmers of the State, and why they do not court discussion on such an important agricultural production, it is hard for me to say. I find with a good many, they are willing to discuss the various modes of culture with me, and tell me the full particulars of their method of management and freely criticize my articles, but there seems a dislike to put their thoughts on paper. If they will not accept the liberal offer of the PRESS and use its columns, I shall be deprived of their ideas, which may differ so much from mine, unless I go in person to their hop yards and see their ways of management.

I have not the last article before me for reference, but I believe I had got through the first tying, and where a vine was broken or bit off nature had provided at the next joint below to throw out two vines so that the original product of the vine shall not be diminished. After the vine is well up the pole, say four to six feet, take a long bladed knife and cut and keep out everything from the hill except the four vines trained to the poles.

I have worked my hops a little different this year than I ever did before, and from present appearances I shall get wonderful results. One of my yards threw up a great number of small vines, not much larger than knitting needles. I felt greatly disappointed, and supposed it indicated a light yield. I cut everything off close; in fact, under the ground, except those on the pole, and kept everything cut that made its appearance. In a week's time a wonderful change took place; and now, from these knitting needles, I have large, fine vines, and it is next to the best of my yards.

I have tried a number of kinds of implements to work my yards with, to see if there was not economy in time, but thus far I have found nothing that gives such satisfaction as the plow. When the vine gets above reach, a man should be sent through the yard every few days with a step ladder, to tie to the pole those vines that have lost their place, as they cannot get back without assistance. My rule is to plow my hops just as long as I can, and not do more damage by tearing off the arms by catching in the horse and driver, than I do good by turning over the soil. With us, I think July 1st is the latest we can plow, except some late yards.

Every few days a man must be sent through the yards with a hop bar, to put up the fallen poles. If near picking time, I take a rope, twine or hop vine and lift the fallen pole up, say five or six feet, and tie it to another pole. Sometimes I take old short poles and tie them together in the form of shears to support the fallen poles.

The cultivation of the yards being finished for this year, the next thing is to see that everything is ready for harvest, which will begin, with us, from the 10th to the 20th of August. The kiln, press, boxes, sacks, knives and other implements must be thoroughly examined. Water barrels and buckets must be on hand in case of fire. Wood cuts quite an important figure in the expense, as well as the success in hop drying, and whatever kind is used it should be well seasoned. A good many think nothing but hard wood will do. I prefer willow or cottonwood at the same price. Hard wood makes a stationary heat that is too hot about the stove, while willow wood will make a blaze that will go through the pipes and more evenly distribute the heat in the kiln.

On June 22d there was a meeting in Sacramento of the hop growers of Sacramento and vicinity. About three-fourths of the acreage was represented, and the meeting was harmonious and spirited. Two lady hop growers favored it with their presence and counsel. A number of resolutions were offered, discussed freely and passed unanimously.

The first resolution was that we do not deduct any tare on our bales for cloth or rope.

The second was that we pay our pickers 85 cts. per 100 for green hops, and our cook \$6 per week for 80 men, or in pro rata; that is, for 100 men \$7.50 per week, and 120 men \$9 per week; 160 men, \$12.

Third, that each man should put his hops up in the best possible manner, and should put his brand or stencil plate on them, marked "Sacramento Hops," so that hops grown at other localities cannot be palmed off on the Eastern buyers as Sacramento grown hops. Other resolutions passed are not essential to mention here. Pages could be written on construction of kiln, press, stove, size of pipe, amount of ventilation, cooling and baling, but I have already strung this out much more than I desired. I will watch and wait again to see if some one will not put in an appearance in the next stage of proceedings.

Sacramento City, Cal.

An earthquake occurred in the valley of the Rhine Sunday, which extended to the north of Sweden.

QUERIES AND REPLIES.

Cuttings in Water.

EDITORS PRESS:—The enclosed letter was written to me as agent of the PRESS, and contains some facts worthy of note. I have tried the plan of inserting the butts of grape cuttings in water before planting with good results. I have also known of several others who have tried it with success. My opinion is, that if cuttings cannot be planted as soon as they are taken from the vines that the butts should stand in water about six to eight inches deep, and sheltered from the sun until they are planted. I have observed that the brush trimmed from the vines and thrown into a creek of running water would sprout and grow for several months. Cuttings of roses and other plants will root and grow in water alone for a considerable time.—C. E. WETMORE, Oakland.

The experience to which our correspondent refers is as follows: Last winter Polly & Smith, of Concord, Contra Costa county, were getting grape cuttings, when B. Webb and C. McClellan asked them to get some for them also. McClellan wanted 2,000 and Webb 1,000. Mr. Webb prepared his ground splendidly by plowing deep and pulverizing thoroughly and took much pains in planting the cuttings. Mr. McClellan's ground was plowed shallow and very poorly prepared. Many said: "Grape cuttings cannot grow there." Well, some time after they were planted Webb thought his were slow in starting, and thought he would go over and see McClellan, where, to his surprise, he found all growing finely, and, although planted at the same time, they appeared some three weeks earlier. How could it be, with everything, apparently, in Mr. Webb's favor? He naturally asked McClellan how it was and what he had done to them, and learned that as soon as McClellan received his cuttings he put them into vessels in water and kept them there until planted (some three weeks), and when planted they commenced to grow at once, while Webb's had to absorb moisture from the ground, which he thinks made three weeks' difference; some not yet growing, when in McClellan's case they all started at once. Perhaps, this might be valuable information; if so, use it, if not, nothing lost. Further particulars could be had of either party, but the vines show for themselves.—J. BACON.

Acid Clover.

EDITORS PRESS:—I send you two fragments of a strange clover—an acid clover. It grows about 12 inches high, has lanceolate and serrated leaves, from one-half inch to one inch long, and both stipules and calyxes are markedly serrated. The flower is almost entirely white, with a faint purple tinge near the crown. On extracting a solitary blossom, and applying it to the tongue, as children do in tasting the honey of a clover head, you feel a sharp, but pleasant acid taste. The same is felt on placing a leaf in the mouth, but not on chewing it, giving the impression that the acid is on the surface, and not in the substance of the leaf. A magnifying glass shows small roundish white masses on the leaf surface, either singly or in groups of a dozen. I can neither find more of it in the fields, nor word of it in such books as are available. This specimen grew in a shady place near an old barn. So far as I can judge, it seems a true clover, trifoliate and flowers capitata. It might be a medick; the legumes are too immature to be certain. I am sorry the specimen is not better. Can you name it, or tell anything of the peculiar acid quality? Perhaps some correspondent can.—"TREFAIL," Santa Rosa.

The plant is identified by Dr. Kellogg as *trifolium tridentatum*. Its acid property was utilized by the miners in the early times in making a sort of "lemonade" or acidulated drink.

Fine Apricots.

EDITORS PRESS:—I see that many are writing about apricots. I will send you a sample of ours, which were raised one-half a mile from Modesto, without irrigation. We have a small orchard of about 600 trees of different kinds of fruit, about 80 of them apricots, which will pay us well this year. We have about one-half of them gathered. They will net us, I think, \$6 or \$7 to the tree. We sold the entire crop at 4 cents per pound. We prune in the winter, and very lightly; do not cut them back much. When we cut them back we do not have as good a crop.—G. D. B., Modesto.

The fruit is fine, large, and rich fleshed. We do not see any better.

HARVEST NOTES.—Hugh Jones gives the *Sutter County Farmer* some notes on harvesting arrangements. He says that farmers, in stacking their grain, should not build the stacks over 40 ft. square, and that from 30 to 35 ft. was better. In placing the stacks the passage way between them should always extend from north-east to southwest, then every machine can thrash conveniently no matter which way the wind blows. Mr. Jones insisted that this was a most important consideration, and added that most farmers leave the passage way due north and south, and are rewarded by copious growths from the machine men. The stacks should always be set quaterning, and the manner above stated is conceded to be the best. Mr. Jones thinks the farmers are to blame for the scarcity of hands, and not the thrashers, as men will always leave a job heading to go thrashing, and if the farmers would determine not to have any thrashing done until heading was well advanced, then there would always be plenty of help, but as long as farmers will employ thrashers, they will work, and every separator in operation during harvest time means that at least three heading crews must stop.

BERKELEY ORANGES.—The *Oakland Times* says: R. P. Thomas at his La Loma ranch, on the hills above North Berkeley, has oranges and lemons ripening in the open air. The trees appear to be growing well, and are green and thrifty. A fair-sized basketful was recently picked from the orange trees. One of the oranges was a much larger specimen than the average market orange, measuring 13 inches in circumference and 4½ inches in diameter.

State Horticultural Society.

(CONTINUED FROM PAGE 19).

went round and cut them open and took them from store to store. They acknowledged they were finer goods than any they had in market. The merchants said: "They are better goods than we get from any cannery, but the amount being small, we will have to use smaller fruit of a brand that is known, and of which we can get all we want."

A. T. Hatch: I have had but little experience in drying. I estimate the amount of green fruit necessary to make one pound of dry has always been, on the average, higher than what seemed to me the general idea on that subject. I have weighed some varieties of plums and dried them and found that of Green Gages and Columbias it takes seven pounds to make one pound of dried fruit. The Columbia about one-half pound less than the Gages. Apricots I have never tried. I should judge an average apricot would decline nearly as much as the Columbia plum. My estimate would run, on apricots, to about from five to six pounds, pitted. I have used an evaporator one year. My experience is worth nothing. I was a novice when I started in. We got on very well. We hope to do better this year from experience of last. There are a great many improvements to be made on the first dryings we put up.

The Quarantine Rules.

Mr. Dwinelle spoke as follows: You all know that there is an effort being made to do something to prevent the spread of insect pests by quarantine measures; and also that there is a difference of opinion as to the necessity of such action. Of course, it is not possible now to say how that matter will come out. I want to call your attention to certain facts which should interest you. The other day I met a certain gentleman who was opposed to these quarantine regulations, particularly to the scalding of emptied packages. The main reasons were that in his neighborhood they could sell fruit, worms and all, to parties in this city, knowing what they took, that their main income came from those kinds of fruit.

The next day I went to a fruit stand in Oakland, and bought two or three kinds of fruit, picking out the worst specimens. From a peach which I bought I discovered the existence of a larva, very closely related to the codlin moth. I came to town to give the alarm among the dealers. They found too many of the same sort. I was not welcomed as bringing good news. I don't announce this as something pleasant, but as an unwelcome fact. You have in peaches a pest that is closely related to the codlin moth. If it increases as the codlin moth has the danger cannot be estimated. It is white, with a smoky tinge. These pests are stealing a march upon us, and before the end of the season may do irreparable damage. I went to one of the packers and asked him what the effect would be. He said he did not like to think of it. But you have got to think about it, and I don't want to be told next year that I didn't warn you of it. There are one or two courses to be adopted: Disinfect your packages before allowing them to be shipped back to your ranch or adopt the free package. In the east all the fruits go to town in free packages except peaches. Peaches go sometimes in packages which are returned. But I know that the peach orchards in the east are afflicted with pests that you don't want to face.

My youth was passed in Monroe county, New York, where you have bought a great many of your trees. Apricots and plums are raised there, but it was at an expense of fighting the plum weevil or curculio. The reason that California fruit is better than eastern is not because we have a better climate, but because we have never had those pests. Are you going to give away your natural chances?

A peach grower in Wilmington, Del., had 3,000 bearing peach trees, and last year \$20,000 damage was done by the curculio. He wrote to me to learn what we had done in fighting insects.

As to whether the plum weevil exists in this State or not, I can't say. I will tell you that I haven't a cent's interest in a fruit orchard in this State, and at the present outlook I don't think I would take a fruit orchard as a gift. If it be true that boxes have got to be disinfected, we can't market our fruit this year. If I owned such an orchard, rather than allow one box to come back without disinfecting, I would send none to market. Men that have \$100,000 at stake yet insist upon hugging this source of filth.

To go on a little: If these laws are overthrown, what are you going to do? I would advise you, as a friend, to take immediate action to make neighborhood combinations to fight these pests in every known way. If you have a neighbor opposed to quarantine, I want you to put him in the same category as the small-pox patient, and I want you to tell him so. One gentleman put it right in that way to his neighbor. His neighbor said: "I have \$500 to test the constitutionality of these laws." This party said: "Suppose you had a horse worth \$2,000 in a pasture, and some one puts in a glandered horse." "Why," he said, "the man ought to be hanged." "What is the difference in principle?" "Why," he said, "I never thought of it in that way before." Go to San Lorenzo—they will be frank with you. Go to San Jose; go to Novato ranch in Marin county. You will find that the people have suffered, and

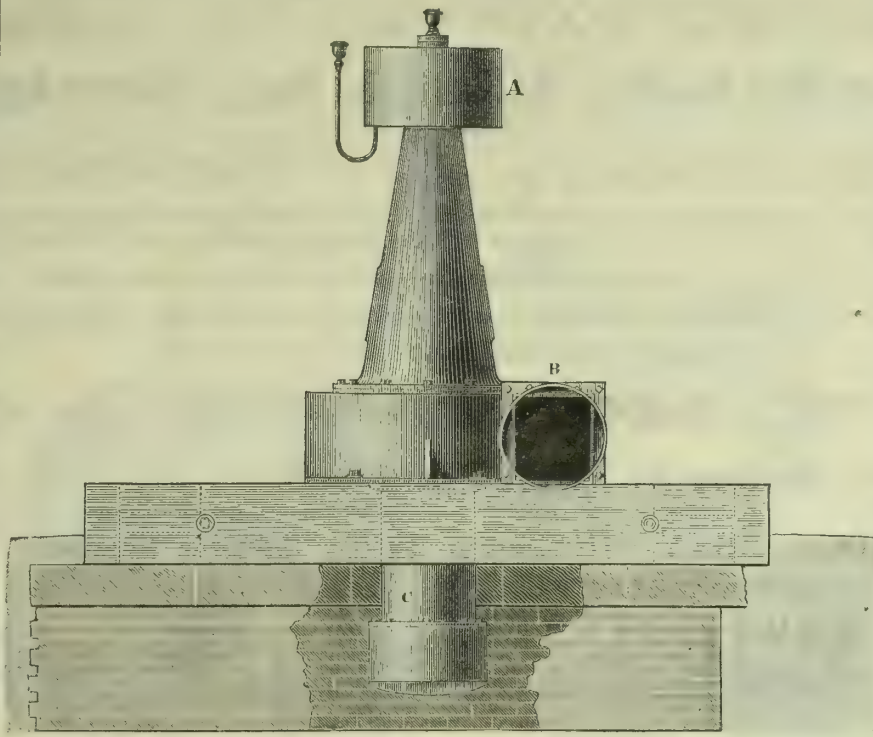
that the only hope lies in adopting all useful means in stamping out these insects.

The Issue Now Pending.

Matthew Cooke spoke as follows: The case of the fruit growers came up this morning, and the Police Judge pronounced the law unconstitutional. This is a fight of the fruit dealers of the city of San Francisco against the fruit growers of the State. We know what the codlin moth has done with the apples and pears. Now the peaches are infested with a similar pest, and apricots are also infested. At present the fruit-growing industry of this State, there is no doubt, is at stake. The law is questioned through the selfishness of a few men. During this year there has not been one word against the quar-

shouldn't forget. An election of members of the Legislature is not far ahead. Everything will depend on the next Legislature. Let it be seen to that farmers who have the right views on this subject are sent there. I believe the solution of the whole matter is in free packages. It will come to that. Let Mr. Cooke study how to make free boxes so cheap that the fruit men will be willing to adopt that remedy.

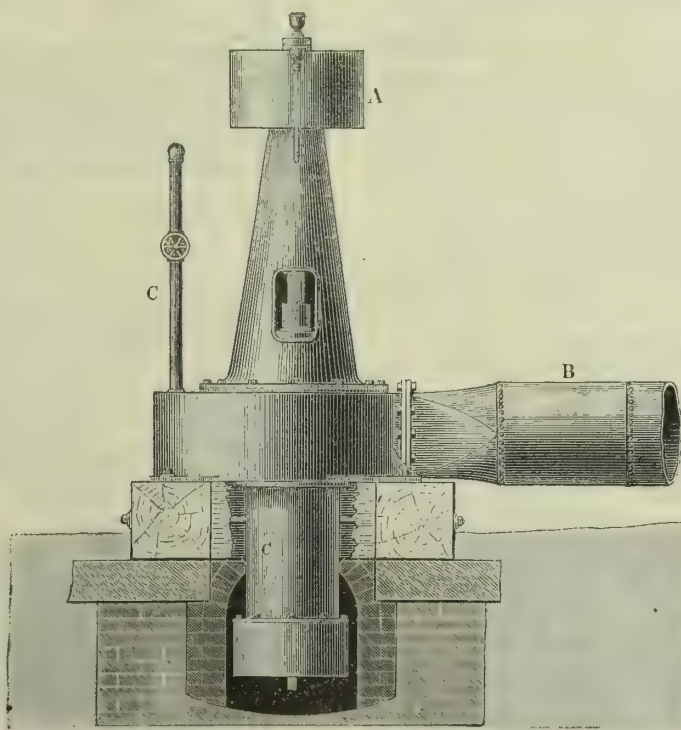
A. T. Hatch: As the decision of Judge Rix has put a stop to the disinfecting of boxes, I would suggest that the fruit growers ask that their commission merchants disinfect their boxes and the charges be added to their bill. The free box is the only true way to get rid of this nuisance.



FRONT VIEW OF TURBINE DRAINING AND IRRIGATING PUMP.

antine laws except by a few men, led by A. Lusk & Co. Throughout the State they are the only persons who have complained. Mr. Runyon, of Cortland, said, at a recent meeting, that he had read an article in the Sacramento Union, and then laid his paper down, and the first thing he did was to examine his old boxes, and he caught 13 larvae of the codlin moth, and then scalded all the boxes in hot water. At the same meeting he said: "Send me to the next Legislature and I will make it a felony

Dr. Chapin, of San Jose: The law has been working in Santa Clara county, and has accomplished a vast deal of good. Real estate has nearly doubled in value in the valley. Fully nine-tenths of our fruit growers are heartily in favor of enforcing these laws. They have found remedies in effectually destroying the scale bugs. I will say that the fruit growers this season are using free packages, and I venture to say that in another year we shall see great changes on this subject. Free packages will



SIDE VIEW OF 10,000,000 GALLON DRAINING PUMP.

for a man to return a box to a ranch. Judge Rix has taken it upon himself to say that the law is unconstitutional. In regard to future action, however, as far as I am concerned, it is going to depend upon the fruit growers themselves. I get \$1,800 salary and \$500 traveling expenses. Last year my traveling expenses alone amounted to \$1,200. I make no money out of my office. I am at work from five in the morning until midnight. In one day I answered 35 letters inquiring about fruit pests. I am not at liberty now to say what will be done in maintaining the law, but I can say that my work against fruit pests will not cease. I spent thousands of dollars in this work before the law was passed, and I shall not stop now, but how far my work shall prove of direct value to the fruit growers they must themselves determine."

The Next Legislature.

Mr. Jas. Shinn: There is one remedy that we

Mr. West thought Mr. Jessup was mistaken and held that redwood did affect the flavor of the fruit in some cases.

At the July meeting the subject of budding will be discussed. James Shinn was requested to open the discussion. Another subject will be fig growing. All members are requested to bring samples of figs, in order that the fruit may be compared and, if possible, proper names determined upon.

Upon motion, all members of the society who dry fruit this year were requested to keep account of the weightings of different varieties of fruit, green and dry, in order to determine what the yield from certain quantities of green fruit may be. All fruit growers who have experience on this point are requested to send the results to the society, so that a wide range of experience may be drawn upon.

Draining and Irrigating Machinery.

We illustrate herewith one of the San Francisco Tool Company's turbine pumps, such as was erected last summer for lifting the sewage and surface water at the city of Sacramento.

The engraving is in true elevation, giving front and side views of what the makers call a 200-inch pump. These pumps, as we have before explained, differ materially from those made in Europe for similar purposes. Instead of the runner filling or fitting the casing at the sides, a wide annular space is left so as to reduce water friction. The runner itself is constructed similarly to a turbine water-wheel, and being enclosed, as it is called, there is no friction in the interior, except that of the water passing from the center outward through the vents. These are curved to suit the conditions of the height to which the water is to be lifted and the rate of duty required. The pumps are set vertical for both draining and irrigating, so as not to be affected by variations of the head to be drawn from. The belts, engine and other details are placed two feet or more above the driving pulley at A, and eight feet or more above the base of the pump, and 10 to 12 ft. above the supply level. The pumps work equally well when submerged, so that the machinery is not likely to be flooded.

The bearings of the pump are of phosphor bronze, the spindles of steel, and the pumps being vertical, with all bearings above the water, there is none of that rapid wear so common with horizontal pumps. The weight and vertical thrust are taken up on two radial bearings, with steel collars between. There is no packing gland on the main spindle, the joint being formed by a thrust collar.

The priming pipe, C, is connected with a tank, and also with the boiler feed-pump, so the pump casing can be filled at starting. The suction pipe at C has an area of 200 inches, and is fitted with a double wing-valve at the bottom.

The efficiency attained by these pumps for lifts of 20 ft., or less, exceeds that of piston pumps, while their cost is not more than one-fourth as much. The motion being rotary, there is no vibration, and expensive foundations are avoided. The San Francisco Tool company is now preparing plans for a plant of machinery to be erected on Rough-and-Ready island, on the San Joaquin river. The pumps, three in number, will have an aggregate capacity of 25,000,000 gallons per diem, working under ordinary conditions and employing from 80 to 100-horse power. There will be two engines, either of which can be used to drive one, two or three pumps at will and as the head may require.

We have previously given some comments respecting the raising of water for draining and irrigating purposes in the United States. With a few trivial exceptions, this problem is one confined to the Pacific coast. The long drouth of our summers and the low level of river deltas demand irrigation and drainage.

The method of raising water applicable to mines, however well understood, is not at all adapted for draining and irrigating, except in cases when only a small quantity of water is to be dealt with, and we look with interest for further facts relating to the method we have just described.

The ordinary centrifugal pumps of commerce are not adapted to such duty. If one will take the trouble to compute the flow area and pressures pertaining to a common centrifugal pump, or rather to their rated performance, it will be seen in some cases that the pressure required to drive the water through the pipes without lifting it would equal a duty of raising it 50 ft. Here is where the English makers of centrifugal pumping machinery have made their principal improvements in enlarging all water ducts and making the course as straight and continuous as possible.

In respect to crooked courses and agitation, Mr. J. R. Maxwell, of the firm of Cope & Maxwell, the well-known hydraulic engineers, once made a remark that covers the whole ground. Mr. Maxwell was called to examine what is called Shaw's propeller pump. He looked at the pump, and then remarked in his peculiar, deliberate way, that, "so far as his experience went, it cost enough to lift water, without churning it into foam, especially as the latter operation consumed more power than the lifting."

In this matter lies another principle to be carefully considered—the agitation of water, either by the action of pump vanes or tortuous courses; applicable alike to pumps of all kinds, especially centrifugal pumps.

be substituted. Redwood apple boxes are now offered to us at about 6½ cts. each in the shuck, and small packages in proportion. I have never used a return box, even when paying 16 cts. for apple boxes. I will not have one of these returned to my orchard.

Mr. Shinn: Would not redwood boxes impart a taste or flavor to the fruit?

Dr. Chapin: I believe that to be the case with some fruits. Peaches, perhaps, would not be so well shipped in redwood. I believe Mr. Cook is preparing to furnish pine boxes at nearly the same rates as redwood boxes are now offered to us.

Mr. Jessup: I think there is a mistake about the redwood imparting any flavor. It departs no odors. The only damage is by staining. The lumber that does give out this odor is what is called the Pt. Orford cedar. One slat of that in a box will destroy the flavor of the fruit.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

Summer Resorts.

Highland Springs SANITARIUM.

This popular and healthful summer and winter resort for families, pleasure seekers and invalids, is situated in Lake County, 25 Miles from Cloverdale.

Seven miles south of Lakeport, four miles of Kelseyville, and in sight of Clear Lake, at an altitude of 1700 feet, and is sheltered from the cooling coast winds and fogs by mountains 1600 feet in height, which for

Grandeur and Beauty of Scenery are unsurpassed in the Pacific Coast.

While the Beneficial Effects of its Mineral Waters are equal to any in the United States or Europe.

MAGIC SPRING.

Analyzed by Prof. W. B. Beising, University of California.

TEMPERATURE.....	85
Grains per U. S. Gallon.	
Chloride of Sodium.....	1.290
Bicarbonate of Potash.....	0.544
Bicarbonate of Soda.....	21.763
Bicarbonate of Lime.....	50.411
Bicarbonate of Magnesia.....	70.243
Bicarbonate of Iron.....	0.973
Bicarbonate of Manganese.....	trace
Silica.....	7.298
Alumina.....	0.169
Organic Matter.....	trace
Free Carbonic Acid.....	74.462
Total.....	237.262
W. B. BEISING, Berkeley, April 3, 1882.	

DR. C. M. BATES (formerly of San Francisco), having become sole proprietor, by purchase and lease, of these justly celebrated Springs, will devote all necessary time and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations. Carriages, Buggies and Saddle Horses Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily. Post Office and Telephone connected with hotel. Direct Route via San Rafael and Cloverdale 7:10 A. M., will arrive at Springs 5:30 P. M.

By steamer "DONAHUE," via Donahue Landing 2:30 P. M., will remain over night in Cloverdale; and via Napa and Calistoga, 8:00 A. M.

On Tuesdays, Thursdays and Saturdays Will be met at Kelseyville with private conveyance, if notified.

For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, - - Proprietors.

These Springs are particularly beneficial in purifying the blood, and are recommended by the State for the cure of rheumatism, dropsy, scrofula, weak lungs, dyspepsia, constipation, neuralgia, and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good bathing and fishing. Board and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake, two and one-half miles from the Stage Springs, two and one-half miles from "Basset's" place, in Cobb Valley, only six miles (by a good trail) from the Harbin Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, \$7.50. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

HARBIN HOT SULPHUR SPRINGS,
LAKE COUNTY, CAL.

The Springs are now open for the reception of guests. Stages leave Calistoga daily, on arrival of morning trains from San Francisco and Sacramento. Stage Fare Reduced. RICHARD WILLIAMS, Proprietor.

SODA BAY HOTEL, A NEW AND BEAUTIFUL SUMMER RESORT.

SODA BAY, on Clear Lake, Lake County, Cal., the favorite lacustrine resort, is justly regarded as combining greater advantages and affording more attractive and interesting natural features than any other watering place in the State. The climate, as a relief from the severe winds of the coast, is invaluable for the health of children and delicate persons - indeed, for all requiring the change demanded annually by the residents of San Francisco. While entirely free from the fog, the wind and the chill of the sea coast, the climate is greatly modified from the heat of the interior by the proximity of the beautiful lake, upon the margin of which, for a distance of two miles the grounds are extended. A splendid grove of live oak, pine and manzanita trees, of great age and gigantic growth, affords the most delightful shade. A beautiful bathing beach offers the choicest facilities for aquatic pastime, far from the danger of the sea surf or chill. The Great Spring, Indian name, OMAR-ACH HAH-BEE, emitting not less than a million gallons daily, of delicious effervescent soda water, is one of the most interesting natural curiosities of California, and the bath in its exhilarating fountain has an electrical effect that is as delightful as it is beautiful. Extraordinary solfataric action all around the shore of the bay, due to the presence of innumerable mineral springs and chemical action upon a vasty extended scale, has given the place the name by which it is known - Soda Bay.

Daily excursions are made to Borax Lake, Sulphur Banks, and other points of interest. A new trail leads to the summit of Uncle Sam, 4,400 ft. above the sea.

Ample provisions are made for the entertainment of the patrons of this popular resort. The Hotel and the cottages are furnished with comfort and taste. Among the diversions of the place are boating and sailing - yacht and steamer, bowling, billiards, croquet, equestrian exercise, fishing and hunting, and a beautiful pavilion for music and dancing; in short, nothing is lacking for the enjoyment of those who seek rest and recuperation or interesting and healthful recreation beneath the shady oaks and by the ever beautiful lake, in a climate which, for health and for comfort, is acknowledged to be unsurpassed, if, indeed, equaled in the world. Billiards, croquet, ten-pins, and baths, free.

To reach Soda Bay from San Francisco, go by train to Calistoga or Cloverdale, thence by stage to Kelseyville, at which place a carriage from the hotel will meet passengers. Through time, 11 hours. For further information address, A. K. GREGG, Uncle Sam P. O., Lake Co., Cal.

MAMMOTH GROVE HOTEL, Calaveras Big Trees, CALAVERAS COUNTY, CAL.

J. L. SPERRY, - - Proprietor.

Tourists can find at the Calaveras Group, larger, taller and a greater number of Big Trees than can be found in all other groves of California combined.

THE MAMMOTH GROVE HOTEL is situated right in the Calaveras Grove. This grove contains 93 of these giants of the forest.

THE SOUTH PARK GROVE

Is six miles distant, and contains 1,380 Big Trees of immense size. This grove has been inaccessible to visitors until quite recently. A good horseback road now connects the two groves. There is the finest trout fishing and hunting in the immediate vicinity.

Those seeking health or pleasure can find the very best climate in California, and first-class hotel accommodations. Fare from San Francisco, \$11; from Stockton, \$8. Leave Stockton at 8 o'clock A. M.; by rail to Milton. Thence by stage coach to Trees - same day.

Stage to and from Yosemite leaves and arrives daily.

No. 3 Montgomery St., S. F.

BARTLETT SPRINGS.

Situated 16 Miles Northeast of Clear Lake, in Lake County.

Forty miles West of Williams, Colusa county, on the main traveled road from Colusa to Mendocino.

Three Different Routes to the Springs,

One via WILLIAMS, one via CLOVERDALE, LAKEPORT and UPPER LAKE, one via CALISTOGA and LOWER LAKE, and all connecting with the train LEAVING SAN FRANCISCO AT 8 A. M.

Fare will not exceed TWELVE Dollars either way. Daily Mail via LAKEPORT, Semi-weekly mail via WILLIAMS. Post Office, Express Office and Telegraph Office here all the year through.

C. R. CLARKE,
J. C. CRIGLER, Proprietors.

Pacific Congress Springs.

This Celebrated Resort for PLEASURE and HEALTH will be opened for the reception of guests

On and after April 15th.

Stage connections made at LOS GATOS with MORNING and AFTERNOON trains of the Narrow-gauge Railroad.

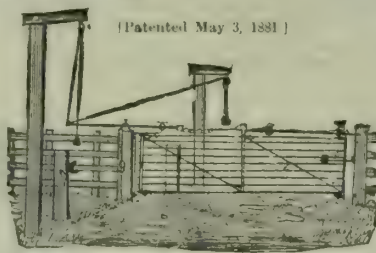
THROUGH TICKETS

Can be purchased at FERRY LANDING, foot of Market street, San Francisco, PRICE, \$2.75

ROOMS CAN BE SECURED

And arrangements made at any time by addressing
LEWIS A. SAGE,
Saratoga, Cal. Proprietor.

CAMPTON'S Self-Opening Iron Farm Gate

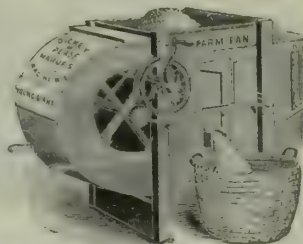


It is the Champion Gate of the World for its Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co., June 3, 1882.
A. P. CAMPTON, Esq., Donor. The two Automatic Iron Gates of your patent (one 12 and the other 10 ft. in width) erected by you on my farm, two miles west of Davisville, have given me entire satisfaction. They are all you represent them to be, the most substantial, the neatest and the most easily operated of any gate that I know of. They are just the gate that every farmer should have; in fact, they cannot afford to do without them. Respectfully yours,
H. M. LARKE.

A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee; John Aylward, manufacturer, P. O. Box, 88, Livermore, Alameda Co., Cal., and Jas. Stanley, Mission San Jose, Cal., agents.

A. P. DICKEY FARM AND WAREHOUSE FANNING MILLS.



THE BEST FANNING MILL IN THE WORLD. Obtained a Centennial Award and Grand Medal, also best award at Paris Exposition in 1878. It cleans perfectly Oats, Chaff, Cocks, and all four master from Wheat and Barley. It grades and separates for Seedling and Market, cleans all kinds of small seeds, and will save any farmer its cost annually. Lowest freight procured for purchasers. Address,
DUCKEY & PEASE, Manufacturers, Racine, Wis.

OUR NEW PACK FOR 1882.
500 ALL-Color Cards. Extra fine stock. Artistic designs of Bales, Floral, Sea-View, Wreath, Landscape, Gold and Silver Panel, Bird Motif, Butterfly, Moonlight, Summer and Winter scenes, all in beautiful first-class colors, with your name in fancy type. 10c. Sample Book of 90 creative styles for 1882 25c. 40 per cent paid to agents, or beautiful prizes given for clubs. Particulars with every order. CANTON PRINTING CO., Northford Conn.

GILES H. GRAY. JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

80 California St. SAN FRANCISCO

Dewey & Co. { 252 Market St. } Patent Agt's

CLEAR LAKE

CALISTOGA STAGE LINE. San Francisco

TO—
LAKEPORT
In Eleven Hours.

Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays, stages leave Calistoga for Lakeport via Middletown, Glenbrook, Kelseyville and Soda Bay; Returning alternate days.

This is the Most Direct Line from San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegler, Howard Springs and Soda Bay. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middletown, Guenoc, Lower Lake, and Sulphur Banks; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!
Driven by the most skillful drivers on the coast. For full information and tickets apply to SAM MILLER, Tourist and Ticket Agt., 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50. Lakeport office at W. W. Green's Hotel. JOHN CLARK, Agent. W. F. FISHER, Proprietor.

Excelsior Fruit Pitter.

Invented by A. Donatella.

This machine recommends itself by the following good qualities: Rapidity of work, one operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the riddle for the dryer. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Prunes, Apricots or Nectarines pitted with this machine dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address,
A. DONATELLA, Healdsburg, Cal.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING and SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

Only "PEBBLE" Establishment.

1863 1882

Muller's Optical Depot,
186 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

HORSES.

E. A. SACKRIDER, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Dress Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S.S. Hamburg, Plymouth Rocks and Pekin Duck's Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

L. C. BYCE, Petaluma, Cal. Breeder of Thoroughbred Poultry. Illustrated circular free.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

Mission Rock Dock and Grain Warehouse. San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors
Office—818 California Street, Room 3.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,
OF ALL DESCRIPTIONS.

Cor. Thirteenth and J Sts., Sacramento, Cal.

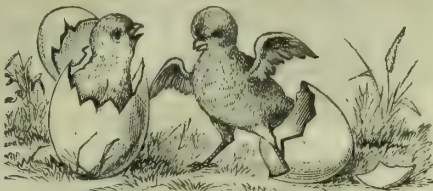
Repairing promptly attended to.

FOR SALE.

Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys,

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

Duroc, or Red Hogs.



The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Shaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 283 lbs. gross, and 244 lbs. dressed.

On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F., killed one weighing 1618 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

HINCKLEY & GETCHELL,

Laurelles Ranch, Monterey, Cal.

POULTRY,
Hogs & Cattle.

Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,
Los Angeles, Cal.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUISENBERG & CO
Sole Agents, 314 Sacramento St., San Francisco.Calvert's Carbolic
SHEEP WASH.
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

BADEN FARM HERD.

R. ASHBURNER,

Baden Station, - - San Mateo Co.,

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

IMPROVED FARM IMPLEMENTS.

Non-Explosive Steam Engines, Best Railway and Lever Horse Powers, Threshing Machines, Straw-Preserving Thrashers, La Dow's Disc and Steel Spring Tooth Harrows, Eagle Sulky Horse Rakes, Cultivators, Feed Mills, Feed Steamers, &c., &c. WHEELER & MERRICK CO., Albany, N. Y. Established 1880. Send for Illustrated Catalogue.

50 All Gold, Chromo and Lithograph Cards. (No two alike). Name on, 10c. Clinton Bros., Clintonville, Conn.

IMPROVED

EGG FOOD

It Cures all Diseases of Poultry, Keeps Hens Healthy and Makes them Lay.

1-lb. Boxes, 40 Cts. 3-lb. Boxes, \$1.
10-lb. Boxes, \$2.50. 25-lb. Boxes, \$5.

B. F. WELLINGTON, Prop'r.

Also, Importer and Dealer in Seeds.
425 Washington St., San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps L. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHBRED



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

LAUREL RANCH.

Thoroughbred

Spanish Merino
SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

PURE BRED POULTRY.

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap, considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock. For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

ONE HUNDRED

SPANISH MERINO BUCKS

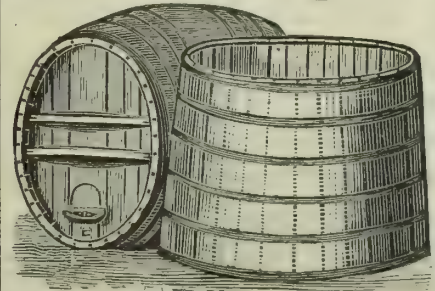
For sale in lots to suit at low prices.

J. H. SCHNEIDER,

Cornwall Station, Contra Costa County.

CALIFORNIA

Wine Cooperage Co.



FULDA BROS., Proprietors.

30 to 40 Spear St., S. F.

ALL KINDS OF CASKS, TANKS, ETC.

Ship, Mining and Water Tanks a Specialty.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address
J. A. POPPE, Sonoma, Cal.

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTEPELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co.
J. H. GARDNER, Rio Vista
T. E. TYNAN, Stanislaus Co.
URIAH WOOD, Santa Clara Co.
J. C. MERYFIELD, Solano Co.
H. M. LARUE, Yolo Co.
I. C. STEELE, San Mateo Co.
THOS. MCCONNELL, Sacramento Co.
C. J. CRESSEY, Merced Co.
SENECA WEBER, Napa Co.
A. D. LOGAN, Colusa Co.

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER.

Vacaville, Solano, Co., Cal.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,

410 Montgomery St.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place,

WM. C. PRINCE.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low vine and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

STOCK RANCH FOR SALE.

About 28,000 acres of the San Cristobal grant, located in Santa Fe county, New Mexico. Is one of the finest stock ranches in the Territory. It is well watered, and is only about six miles from a railroad station. It contains a large tract of irrigable land, a large house, thrifty orchard, etc. Price \$35,000, on easy terms. Title, U. S. Patent.

For further information call upon or address, S. N. LAUGHLIN, Castroville, Monterey County, Cal.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in Dewey & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR THE WEEK ENDING JUNE 20, 1882.

259,745—SHOE FASTENER—R. P. Bryant, S. F.
259,807—NOZZLE—Thos. C. Churchman, Sacramento.
259,830—PUMP VALVE GEAR—Pierre C. DuBois, S. F.
259,831—FLOW JOINTER—H. H. Hartsman, Sacramento.
259,832—VEHICLE DAWDLE FOR CHICKEN HORSES—Win. P. Kirkland, Hanford, Cal.
259,833—MANUFACTURE OF ICE—Samuel D. Lount, Phoenix, A. T.
259,940—FRUIT GATHERER—Leonard Stone, San Luis Obispo, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

WOOD PRESERVING COMPOSITION.—John C. Marshall, Oakland. No. 259,030. Dated June 6, 1882. With this peculiar composition the wood may either be immersed therein, or the compound may be applied with a brush, when found more convenient. The compound should be applied to the wood while hot. Take, for example, the tire of a wheel which has become loose. It should be raised suitably and allowed to revolve, so that its tire and felly will be immersed in the hot compound, which will penetrate between the wood, and the tire will fit as tightly as before. If applied to the felly, when the tire is first put on, the wood will be prevented from shrinking. This compound is useful for buckets or casks which are to stand in the sun, or have so been exposed for some time. Its previous application will prevent the shrinking or warping of the staves, or its subsequent use takes up shrinkage and makes them tight again. In all cases where wood is liable to shrink or warp, this application is useful in preventing this result, or in remedying it if it has happened. It is also a good preservative for wood, as it will prevent decay.

FRUIT GATHERER.—Leonard Stone. Patent No. 259,940. Dated June 20, 1882. This improved fruit gatherer consists of an endless traveling belt, arranged to operate in connection with a frame or conveyor, and having cutting devices. The object is to gather fruit from the trees readily. In using the device, any kind of stand is employed, or, if light enough, the stand may be dispensed with. The upper end of the conveyor is elevated into the tree, placing it just under or in proximity to the fruit. By turning a crank, the belt travels upward with its cutters, one of which, on account of the convex or semicircular shape, fits over the fruit; and its cutting edge, being thus brought in contact with the stem, cuts it. The fruit being embraced by the cutter or gatherer, is directed into the conveyor. The fruit picked in this way is not bruised by falling on the ground.

CAN FILLING APPARATUS.—William West, Keene, Ontario. This invention relates to that class of apparatus which is employed to pack meat, fish, or other solid substances into cans to be hermetically sealed for the market; and it is an improvement upon an apparatus patented by John West and R. D. Hume, Oct. 19, 1880, of which patent the present inventor is sole owner. The present improvements consist in certain details of construction, by which the material is delivered beneath the vertical plunger in a better manner; the operation of the cutting knives is more perfect, and the knives are less liable to become dulled. The mechanism by which the different parts are operated is also improved.

PUMP VALVE GEAR.—Pierre C. DuBois, S. F. No. 259,830. June 20, 1882. This invention relates to certain improvements in the valve chambers, seats and valves of pumps which are employed to condense chlorine or other corrosive gases. It consists of a combined glass and rubber seat and glass valve, in connection with a valve chamber and connecting passages of lead. This invention is fully described in another column.

APPARATUS FOR CRIMPING THE ENDS UPON CIRCULAR CANS.—Wm. West, Keene, Ontario, Canada. This is an apparatus for crimping the ends upon cylindrical cans, and for preparing these ends for soldering by applying the acid thereto after being crimped upon the can. The invention consists in certain constructions and combinations of devices for perfecting the operation.

The gimlet-pointed screw was patented in 1846. It is familiar to everybody, and millions have been realized from its manufacture; yet so simple is the principle that the wonder is that it was not thought out and applied almost as far back as the age of iron.

Pacific Coast Weather for the Week.

(Furnished for publication in the Press by NELSON GEROM, Sergt. Signal Service Corps, U. S. A.)

The following is a summary of the rainfall for each day of the week ending 11:58 A.M. Wednesday, July 5th, at noon, for the stations named:

Date.	Olympia.	Portland.	Roseburg.	Red Bluff.	Sacramento.	San Francisco.	Visalia.	Los Angeles.	San Diego.
Thursday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Friday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Saturday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Sunday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Monday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Tuesday.	.00	.02	.64	.00	.00	.00	.00	.00	.00
Wednesday.	.00	.40	.20	.00	.00	.00	.00	.00	.00
Totals.	.00	.42	.84	.00	.00	.00	.00	.00	.00

KRUPP'S GREAT FOUNDRIES.—Herr Krupp's possessions at Essen are enormous enough, as some fresh statistics of them will show. He has of steam boilers no fewer than 439; of steam engines, 456, their aggregate horse power being 18,500; of steam hammers, 89, varying in weight from 200 lbs. to 50 tons; of rolling mills, 21; of machines for making tools, 1,622; of furnaces, 1,556, of which 14 are high furnaces; of locomotives, 25, and of steam propellers, 5, their total tonnage being 7,800 tons. Krupp's annual production is 300,000 tons of steel and 26,000 tons of iron. At present the population of his workingmen's city is 15,700.

IVY ON WALLS.—It is a popular error to suppose that ivy growing on the walls of a house makes it damp. The attachment of ivy to walls, so far from injuring them and causing dampness, is an advantage. If the walls are dry when planted, ivy will keep them so. If damp, as the plant overspreads their surface, the dampness will disappear.

CHEAP STOCK RANGE.—Our advertising columns this week show cattle and sheep men where it is claimed that good land can be bought nearly as low as the rental of such land costs in many parts of California.

Hay Rakes.

The celebrated hay rakes manufactured by John Dodds, Dayton, Ohio, can be found in large stock at the San Francisco branch, 37 Market St. The old reliable Hollingsworth Rake has taken three Gold Medals at International Fairs. The Red Bird is cheap, simple and a great favorite. The new Reindeer is the strongest and most durable Self-Dump Rake on the market. The iron axle and wheels, rocker-frame movement, adjustable teeth, dumping device and other improvements make them the most desirable Rakes manufactured. See the agent, S. H. Gould, before purchasing, 37 Market St., S. F.

Try the Rural Press for 25 Cts. a Month.

Tell your friends that they can have the PACIFIC RURAL Press mailed to them one month on trial for 25 cents. Four back Nos. will be added on receipt of 10 cents additional—making eight copies for 35 cents. It is a handsomely printed and illustrated home journal. Mail it to friends abroad.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hives syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

NEW GIO OR SULKY.—Something novel and very elegant in the way of a Sulky, may be seen across the way from our office, at the store of Geo. A. Davis, the well-known Agricultural Hardware man. It must be seen to be appreciated. A cut of it will appear in our columns soon. Photographs sent on application to Geo. A. Davis, S. F., or Jacob Price, San Leandro, who is the inventor of it.

IMPORTANT additions are being continually made in Woodward's Gardens. The grove walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

SAMPLE COPIES.—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus, terms of subscription, etc., and request that they circulate the copy sent.

HOW TO STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

BY TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarthy, 502 Taylor St. Price, \$4.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. Knosout & Co., 10 Barclay St., N. Y.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.
G. W. McGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
B. W. CROWELL—San Luis Obispo and Santa Barbara counties.

Promptness Displayed, Etc.

MESSRS. DEWEY & CO., Patent Agents:—The Canadian patent obtained through you is at hand. This makes three patents received within a month. The ability, energy and promptness displayed by your firm must certainly be gratifying to your numerous patrons—as it assuredly is to
Yours respectfully,
THORPE & BRIDGEMAN.

A Wonderful Invention.

The wonderful effect of steam as applied to soil tillage can now be easily tested by whomever desires. In another column may be found an advertisement of two sets of the best English steam plowing machinery made especially for use on the Pacific coast. Those who are disposed to experiment with steam should heed the notice.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1368 Broadway, Oakland. Mr. Cunningham (recently from Haywards where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 5, 1882.

The several holidays around the 4th have broken up the week completely, and to-day (Wednesday) trade has not reassorted itself fully. Prices, except for fruit and vegetables, are not greatly changed.

Freights and Charters.

The annual review of the *Commercial News*, issued July 1st, contains, besides a detailed report of the marine disasters in the year 1881-82, a review of the Salmon trade and of Wheat freights to Europe. The highest freight rates to Cork were \$4 63 61 for Iron and \$4 63 for Wood; lowest \$2 12 61 for Iron and \$2 33 91 for Wood; average \$3 13 13 for Iron and \$3 63 91 for Wood.

Engagements for the present week have been as follows: British bark *Alastor*, 824 tons, Wheat to Cork, U. K.; \$2 15s. British ship *Orchomene*, 1,542 tons, wheat to Cork, U. K.; \$2 15s.

Eastern Wool Markets.

Boston, July 1. Wool is more active, manufacturers purchasing more freely of fine grades. California has been very quiet, and sales have been quite limited. Holders find it difficult to obtain cost.

PHILADELPHIA, July 1.—Wool is quiet and prices easier.

The Foreign Review.

LONDON, June 27.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The unfavorable weather has prompted the development of rusting. Wheat ears are small, but the recent increase of warmth is favorable. The supply of home-grown Wheat is small. Fine samples command an improvement. Foreign on spot is steady, considering the large arrivals of coast, but somewhat weaker. On Friday Maize was firmer in consequence of the small quantity of American offering. European, on passage for shipment, advanced 8d per quarter. Wheat cargoes off coast are inanimate, and have not materially changed. Thirty-nine cargoes arrived; ten were sold and twenty were withdrawn. The trade for Wheat on passage is very quiet, but Russian is somewhat dearer. Sales of English Wheat during the past week were 19,400 quarters at 46s 11d, against 19,571 quarters at 45s 4d the corresponding period last year.

BAGS.—A ship is just in from India with 3,000,000 grain bags. There are rumors of a ring to advance rates. The following are ruling now: Local make, 3s 10c; Dundee, 9c; Calcutta, 2s 10c; Wool Bags, 4s 4c for 3s 10c, and 47c to 50c for 4 lbs; Potato Gunnies, 18s 10c apiece; Burlaps, 7c for 40-inch, and 12c 1/2 yard for 60 inch; Hop Cloth, 11s 11c.

BARLEY.—To-day's trade amounted to nothing; \$1.15 was bid, and \$1.20 asked, for new barley, just delivered. On Saturday 50 tons of old sold at \$1.75.

BEANS.—There are several changes in our list, all indicating a slightly lower figure.

CORN.—A little is being done in speculation. On change to-day the following sales were made on call: 100 tons No. 2, Large Yellow Corn, seller 1882, \$1.20 1/2 per cwt; 100 tons do do do, \$1.20 1/2 per cwt; 100 tons do do do, \$1.30 per cwt; 100 tons do do do, \$1.30 per cwt; 100 tons do do do, \$1.30 per cwt.

DAIRY PRODUCE.—Trade is regular at old prices, both for cheese and butter.

EGGS.—Eggs are a fraction better, the best going at 27c per doz.

FEED.—The price for Bran rules from \$12 50 to \$13 per ton. Corn Meal is advanced \$1 per ton.

FRESH MEAT.—Beef is unchanged and strong. Pork is higher. Lamb and Veal are lower.

FRUIT.—The first Grapes are in from H. A. Bassford, of Vacaville; Cantaloupes from B. R. Sackett, of Winters, and Watermelons from H. B. Porter, of Winters. Fruit prices are generally lower, as found in our price list below.

HOPS.—Hops are firmly held at 26c/30c and there are but few.

OATS.—New Oats are in from T. T. Ford, of Monterey county. The best price offered on call to-day was \$1.65 per cwt.

ONIONS.—Reds at 50c per cwt, and some choice silver skins bring 75c/85c per cwt.

POTATOES.—Choice New Potatoes sell better this week, reaching \$1.12 per cwt for the best.

PROVISIONS.—Prices are still up, but trade was a little uncertain to-day, owing to the holiday interval.

POULTRY AND GAME.—Turkeys are 1c higher. Venison has appeared in small quantities.

VEGETABLES.—Our list shows a general cheapening and supplies are abundant.

WHEAT.—There is nothing doing to fix a price, but last week's rates are nominally correct. New Wheat has reached Stockton, and is reported on the way from several directions.

WOOL.—Prices are unchanged. More trade is expected as soon as the holiday influence is over.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., July 5, 1882.

BEANS & PEAS.
Bayo, cwt. 2 75 @ 3 00
Butter 3 75 @ 4 25
Castor 3 50 @ 4 00
Pea 4 00 @ 4 25
Red 2 40 @ 2 50
Pink 2 40 @ 2 50
Large White 3 25 @ 3 50
Small White 4 00 @ 4 25
Lima 4 00 @ 4 50
Field Peas, blk eye 5 @ 1 75
do green 2 60 @ 2 25

BROOM CORN.
Southern 3 @ 3 1/2
Northern 4 @ 6

CHICORY.
California 4 @ 4 1/2
German 6 1/2 @ 7

DAIRY PRODUCE, ETC.
Butter, Cal. Fresh, doz. 27 @ 29
do Fancy Branda 30 @ 32
Pickle Roll 28 @ 29
Pork, new 28 @ 29
Eastern 18 @ 20
New York 20 @ 22

CHEESE.
Cal. Fresh, doz. 12 @ 13 1/2
do Swiss 12 @ 13 1/2
Ducks, tanned doz. 50 @ 55
Cal. Fresh, doz. 24 @ 27 1/2
Ducks 25 @ 27 1/2
Oregon 25 @ 27 1/2
Eastern, by express 25 @ 27 1/2
Picked here 25 @ 27 1/2
Utah 25 @ 27 1/2

POULTRY & GAME.
Hens, doz. 8 00 @ 7 50
Roosters 5 50 @ 6 00
Broilers 3 50 @ 4 00
Ducks, tanned doz. 50 @ 55
Cal. Fresh, pair 1 00 @ 1 25
do young 1 25 @ 1 50
Wild Gray, doz. 50 @ 60
White do 50 @ 60
Turkeys 14 @ 19
Turkey Feather 10 @ 15

SEEDS.
Alfalfa 14 @ 16
do Chile 14 @ 16
Canary 30 @ 35
Clover, Red 14 @ 15
White 45 @ 50
Cotton 20 @ 25
Flaxseed 24 @ 25
Hemp 25 @ 30
Italian Rye Grass 25 @ 30
Perennial 25 @ 30
Millet, German 10 @ 12
do Common 7 @ 10
Mustard, White 14 @ 15
Brown 24 @ 25
Rape 20 @ 22
Rye 16 @ 18
Sweet V Grass 20 @ 25
Orchard 20 @ 25
Red Top 20 @ 25
Hungarian 20 @ 25
Lawn 20 @ 25
Mesquit 10 @ 12
Timothy 9 @ 10

TALLOW.
Crude, lb. 7 @ 7 1/2
Refined 10 @ 11
Wool, etc. 1882

HOPS.
Oregon 20 @ 21
California 25 @ 32
Wash. Ter 19 @ 20
Old Hops 20 @ 21
Stamhaus & Tuol 22 @ 24

WALNUTS, CAL. 10 @ 11
do Chile 7 1/2 @ 8
Almonds, hd sh lb 8 @ 10
Soft shell 15 @ 17

FRUIT MARKET.
Apples, bx. 50 @ 1 50
do Basket 15 @ 15
Apricots, lb. 25 @ 30
Blackberries, 5 00 @ 8 00
Cantaloupes, doz 4 50
Cherries, chst 11 00 @ 12 00
Cherry Plum, lb 25 @ 75
Cocoanuts, 100 6 00 @ 7 00
Cranberries, bbl 12 50 @ 14 00
Currants, chst 2 50 @ 3 50
Figs, doz 50 @ 100
Gooseberries 4 @ 8
Grapes, lb 15 @ 15
Limes, Mex. 8 00 @ 10 00
do Cal, box 75 @ 3 50
Lemons, Cal, bx 1 25 @ 2 25
Sicily, box 7 00 @ 7 50
Oranges, Cal, bx 4 50 @ 5 00
do Tahiti M 40 @ 40
do Mexican 15 00 @ 17 00
do Loreto 40 @ 40
Peaches, box 40 @ 45
Pears, doz 25 @ 45
Pineapples, doz 6 00 @ 8 00
Raspberries, chst 6 00 @ 8 00
Strawb's, chst 10 00 @ 12 00

DRIED FRUIT.
Apples, sliced, lb 10 @ 12
do, evaporated 12 @ 13
do, quartered 6 @ 6
Apricots 8 @ 8
Blackberries 14 @ 16
Citron 28 @ 30
Dates 9 @ 10
Figs, pressed 4 @ 4
do, loose 3 1/2 @ 4
Nectarines 14 @ 15

FRUITS AND VEGETABLES.
Peaches 7 @ 9
do pared 18 @ 20
Pears, sliced 9 @ 10
do whole 7 @ 8
Plums 4 @ 6
Pistons 11 @ 12
Prunes 9 @ 10
Raisins, Cal, bx 2 @ 2 50
do, Halves 2 @ 2 75
do, Quarters 3 @ 3 00
Eighths 3 @ 3 25
Zante Currants 8 @ 8
Artichokes, sk 25 @ 50
Asparagus, box 75 @ 1 00
Beets, cwt 60 @ 75
Cabbage, 100 lbs 50 @ 60
Carrots, sk, cwt 50 @ 65
Cauliflower, box 50 @ 75
Corn, green 10 @ 18
Cucumbers, bx 50 @ 1 25
Espalant, lb 5 @ 6
Gauld, lb 3 @ 3
do, poor 1 @ 1 1/2
Lettuce, doz 10 @ 12
Mushrooms, bx 20 @ 25
Okra, green, lb 20 @ 25
Peas, green, lb 1 @ 1 1/2
do, sweet 1 1/2 @ 2
Parsnips, lb 10 @ 12
Peppers 10 @ 12
do, Chile 2 @ 2
Rhubarb, bx 75 @ 1 00
Squash, Marrow 1 @ 1
do, fat, ton 20 @ 20
String Beans 2 1/2 @ 3
do, wax 4 @ 4 1/2
Summer Squash 25 @ 25
do, box 25 @ 25
Tomatoes, box 50 @ 75
Turnips, cwt 50 @ 65

WEDNESDAY M., July 5, 1882.

Eng Standrd Wheat. 82 @ 9
Cal Manufacture 85 @ 9
Hand Sowed, 22x36 83 @ 82
23x40 12 @ 13
24x40 12 @ 13
Machine Svd 22x36 84 @ 83
Flour Ska, halves 94 @ 101
Quarters 8 @ 8
Eighths 44 @ 41
Hosian, 60 inch 12 @ 12

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

Bags and Bagging.

[JOBBER'S PRICES.]

WEDNESDAY M., July 5, 1882.

Eng Standrd Wheat. 82 @ 9
Cal Manufacture 85 @ 9
Hand Sowed, 22x36 83 @ 82
23x40 12 @ 13
24x40 12 @ 13
Machine Svd 22x36 84 @ 83
Flour Ska, halves 94 @ 101
Quarters 8 @ 8
Eighths 44 @ 41
Hosian, 60 inch 12 @ 12

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

45 inch 94 @ 94
40 inch 84 @ 84
Wool Ska Hand Svd 44 @ 44
4 lb do 44 @ 44
4 lb do 44 @ 44
Machine Sowed 44 @ 44
Standard Gunnies 13 @ 13
Bean Bags 54 @ 54
Twine, Detroit's A. A. 35 @ 35

General Merchandise.

WHOLESALE.

WEDNESDAY M., July 5, 1882.

CANDLES.		Cement, Rosen-	
Crystal Wax.....16 @18		dale.....1 75 @ 2 00	
Paraffine.....20 @		Portland.....3 75 @ 4 00	
Patent Sperm.....25 @		NAILS.	
CANNED GOODS.		Assrt'd sizes.....75 @ 4 00	
Ass'd Pic Fruits.		OILS.	
2 1/2 lb cans.....2 25		Pacific Glue Co's	
Table do.....3 50 @		Neatsfoot, No. 1.....00 @1 00	
Jams and Jellies.....3 75 @		Castor, No. 1.....@01 05	
Pickles, hf gal.....3 25 @		do, No. 2.....@ 95	
Sardines, qr box.....1 67 @		Baker's A A.....5 25 @5 75	
Hf Boxes.....2 50 @1 30		Olive, Flagnoll.....4 75 @5 25	
Merry, Paul & Co.		Possel.....9 @	
Preserved Beef		Palm, lb.....@ 60	
2 lb doz.....3 25 @3 50		Linseed, Raw, bbl.....@ 65	
do 4 lb doz.....6 50 @6		Boiled.....@ 65	
Preserved Mutton		Cocoanut.....60 @	
2 lb doz.....3 25 @3 50		China nut, cs.....68 @ 69	
Beef Tongue.....5 75 @6 00		Sperm.....45 @ 50	
Preserved Ham		Cosmet Whalr.....35 @	
2 lb doz.....5 50 @5 60		Polar.....@ 61 00	
Deviled Ham, 1 lb		Lard.....@ 22	
doz.....3 00 @3 50		Petroleum (110°).....18 @ 22	
do Ham 1/2 doz 2 50 @		Petroleum (110°).....28 @ 35	
Boneless Pigs Feet		PAINTS.	
3 lbs.....3 50 @3 75		Pure White Lead.....73 @ 8	
2 lbs.....2 75 @		Whiting.....13 @	
Spiced Fillets 2 lbs 50 @		Putty.....4 @ 5	
Head Cheese 3 lbs 3 50 @		Chalk.....14 @	
COAL Jobbing.		Paris White.....2 @	
Australian, ton.....@ 8 50		Ochre.....3 @	
Coos Bay.....@ 6 50		Venetian Red.....3 @	
Bellingham Bay.....@ 6 50		Averil mixed Paint	
Seattle.....@13 00		White & Tints.....2 00 @2 00	
Cumberland.....@		Green, Blue and	
Mt Diablo.....@		Ch Yellow.....3 00 @3 50	
Lehigh.....@		Light Red.....3 00 @3 50	
Liverpool.....@		Metallic Red.....1 30 @1 60	
West Hartley.....@ 8 50		RICE.	
Scotch.....@ 8 50		China Mixed, lb.....43 @ 5	
Scranton.....@		Hawaiian.....43 @ 5	
Vancouver Id.....@ 9 00		SALT.	
Wellington.....@		Cal. Bay, ton.....14 00 @22 00	
Charcoal, sack.....@		Common.....6 50 @14 00	
Coke, bush.....@		Carmen Id.....14 00 @22 00	
COFFEE.		Liverpool fine.....14 00 @22 00	
Sandwich Id lb.....@		SOAP.	
Costa Rica.....@ 14		Castle, lb.....9 @ 10	
Guatemala.....13 @ 14		Common brands.....43 @ 6	
Java.....13 @ 14		Fancy Brands.....7 @ 8	
Manilla.....15 @		SPICES.	
Ground, in cs.....@ 22 1/2		Cloves, lb.....37 1/2 @ 40	
FISH.		Cassia.....19 @ 20	
Sac'to Dry Cod.....@ 5		Nutmeg.....25 @ 30	
do in cases.....@ 5		Pepper.....15 @ 16	
Eastern Cod.....7 @		Pimento.....16 @ 17	
Salmon, bbls.....7 00 @ 7 50		Mustard, Cal 1/2 lb	
Hf bbls.....3 50 @ 4 00		Glass.....@1 25	
1 lb cans.....1 12 1/2 @ 1 22 1/2		SUGAR, ETC.	
Pk'd Cod, bbls.....@		Cal. Cube lb.....@ 12 1/2	
Hf bbls.....@		Powdered.....@ 13 1/2	
Mackerel, No. 1.....9 50 @ 10 00		Granulated.....@ 12 1/2	
In Kite.....1 75 @ 1 85		Golden C.....@ 11	
Ex Mess.....3 50 @ 4 00		Cal Syrup, kgs.....65 @	
Pickled Herring		Hawaiian Molasses.....25 @ 30	
box.....3 00 @ 3 50		TEA.	
Boston Smoked		Young Hyson.....40 @ 65	
Herring.....65 @ 70		Moyune, etc.....@ 40 @ 65	
LIME, etc.		Country pk'd Gun-	
Plaster, Golden		powder & Im-	
Gate Mills.....3 00 @ 3 25		perial.....35 @ 75	
Land Plaster,		Hyson.....30 @ 35 1/2	
ton.....10 00 @ 12 50		Floco-Chow O.....27 1/2 @ 32	
Lime, Santa Cruz		Japan, medium.....35 @ 37 1/2	
bbl.....1 25 @ 1 50			

Leather.

[WHOLESALE.]

WEDNESDAY M., July 5, 1882.

Sole Leather, heavy, lb.	30 @ 32
Light.....	25 @ 23
Jodot, 9 to 10 Kil, doz.....	36 00 @45 00
11 to 13 Kil.....	50 00 @60 00
14 to 16 Kil.....	65 00 @72 00
Second Choice, 11 to 16 Kil.....	40 00 @65 00
Simon, Ulmo, Females, 12 to 13 Kil.....	52 00 @65 00
14 to 15 Kil.....	60 00 @64 00
16 to 17 Kil.....	66 00 @68 00
Simon, 18 Kil.....	@ 67 00
20 Kil.....	@ 60 00
24 Kil.....	@ 66 00
Kips, French lb.....	85 @ 1 20
Cal, doz.....	55 00 @60 00
French Sheep, all colors.....	12 00 @15 00
Eastern Calf for Backs, lb.....	1 00 @ 1 25
Sheep Roads for Topping, all colors doz.....	9 00 @10 00
For linings.....	6 50 @10 00
Cal. Russet Sheep Linings.....	3 00 @ 5 50
Boot Legs, French Calf, pair.....	@ 4 50
Good French Calf.....	@ 4 00
Best Jodot Calf.....	4 75 @ 5 00
Leather, Harness, lb.....	35 @ 40
Fair Bridle, doz.....	45 00 @66 00
Skirting, lb.....	33 @ 37
Welt, doz.....	30 00 @36 00
Buff, ft.....	17 @ 20
Wax Side.....	19 @ 20

Lumber.

WEDNESDAY M., July 5, 1882.

Redwood.		Shingles.....	@ 2 50
CARGOES.		Posts, each.....	15 @ 20
Rough.....@18 00		Pine.	
Qu faced.....@28 00		CARGOES.	
Floor and step.....@27 50		Rough.....@18 00	
RETAIL.		Surfac. d.....27 00 @28 00	
Merchandise.....@22 50		RETAIL.	
Surfaced, No. 1.....@35 00		Rough.....@22 50	
Tongue & Groove.....@35 00		Flooring.....32 50 @35 00	
Pickets, rough.....@20 00		Floor and step.....@35 00	
do, fancy.....@27 50		Laths.....@ 3 75	
do, square.....@17 50			

Retail Groceries, Etc.

WEDNESDAY M., July 5, 1882.

Butter, California	45 @ 55	Yeast Powder, doz.	1 50 @2 00
Choice, lb.....	17 @ 25	Can Oysters, doz. 2	00 @3 00
Cheese.....	25 @ 30	Syrup, S F Gold'n.	75 @1 10
Eastern.....	20 @ 25	Dried Apples, lb.	10 @ 15
Lard, Cal.....	20 @ 25	Ger. Prunes.....	12 1/2 @ 20
Eastern.....	20 @ 25	Figs, Cal.....	9 @ 10
Flour, ex. hf. bbl. 8 00 @9 00		Peaches.....	15 @ 25
Corn Meal, lb.....	20 @ 25	Oils, Kerosene.....	50 @ 60
Sugar, wh. crushed, 12 1/2 @ 13 1/2		Wines, Old Port.....	1 30 @5 00
Light Brown.....	8 @ 9 1/2	French Claret.....	1 00 @2 50
Coffee, Green.....	23 @ 35	Cal. doz bot.....	2 00 @4 50
Tea, Fine Black.....	50 @1 00	Whisky, O K, gal. 3	50 @5 00
Finest Japan.....	55 @1 00	French Brandy.....	4 00 @8 00
Candles, Adm'te.....	15 @ 25		
Soap, Cal.....	7 @ 10		

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending July 4, 1882.

HIGHEST AND LOWEST BAROMETER.

June 28	June 29	June 30	July 1	July 2	July 3	July 4
29.976	29.911	29.894	29.934	30.079	30.153	30.103
29.870	29.862	29.833	29.870	29.984	30.070	30.052

MAXIMUM AND MINIMUM THERMOMETER.

63	61.5	62	64.5	63	64	63
52.5	53	53.5	54.5	55	54	54.5

MEAN DAILY HUMIDITY.

78.7	81.3	86	87	89	85.7	87
------	------	----	----	----	------	----

PREVAILING WIND.

SW	SW	W	SW	W	SW	W
----	----	---	----	---	----	---

WIND—MILES TRAVELED.

292	298	307	312	293	317	329
-----	-----	-----	-----	-----	-----	-----

STATE OF WEATHER.

Fair.	Clear.	Foggy.	Fair.	Foggy.	Fair.	Foggy
-------	--------	--------	-------	--------	-------	-------

RAINFALL IN TWENTY-FOUR HOURS.

Total rain during the season from July 1, 1882, — inches

THE PACIFIC RURAL PRESS.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES—HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

5 to 9 California and 108 to 112 Market St. **FLAGS.** San Francisco, California.

ANDERSON'S SPRINGS,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, Napa county. Five miles from Middleton, and ten miles from the GREAT GEYSERS, between which and Anderson Springs, there are good Wagon Roads.

Hot Sulphur and Steam Baths

For the Cure of Rheumatism, Paralysis, St. Vitus' Dance, Dropsy, Etc. Cold Sulphur for Dyspepsia, Diseases of the Stomach and Kidneys.

Scenery Unsurpassed. Climate Mild and Equable.

Consumptives generally improved in health, and asthmatics are invariably relieved. Trout Fishing in the grounds. Deer hunting in the immediate vicinity. New Cottages for the better accommodation of guests. Cooking good.

IMPORTANT RECOMMENDATIONS.

Remarkable Cure of Dropsy.

I suffered intensely with dropsy, and was induced by Mr. Edgcomb to try Anderson's Springs, he having been cured there, after undergoing frightful agonies, being tapped three times before he reached there; and I am deeply grateful for taking his advice, for such a beneficial effect had the Springs on me, that I am now entirely cured, and advise all who may be suffering to try Anderson's Springs. KATS MACKAY.

Sight Restored.

A candid and well-known gentleman from San Francisco certifies briefly as follows:

May 31, 1882.

"I was cured of inflammation of the eyes at Anderson's Springs, Lake county." M. J. DUNN, 425 Brannan St., S. F.

Many other cases of Dropsy and Paralysis, Rheumatism, Swelling of Limbs, and various other obstinate cases of chronic diseases have been cured from year to year, at the above-named Springs, which are located in Lake county, 19 miles from Calistoga. Special regard is paid to the diet of guests, who are liberally furnished with good home cooking, etc. Send for further information. Address Anderson's Springs, Lake Co., via Calistoga, Cal.

The Pacific Rural Press

[Established in San Francisco in 1870.]

This is the leading farming journal on the western half of the continent, and second to none in America. It is well printed and illustrated, weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and other timely and important subjects of live interest to farmers and their families; agricultural and other useful and ornamental illustrations; correspondence from various quarters of our new and rich developing fields of agriculture on the Pacific coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; Good Health; Entomological; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; The Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations of new and improved machinery); Agricultural Notes; Items of General News, etc. Its columns are studiously filled with chaste, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Send for sample copies.

Subscriptions, in advance, \$3 a year. Agents wanted, on liberal pay. No. 252 Market St., S. F., Cal. DEWEY & CO., Publishers.

DIVIDEND NOTICE.

San Francisco Savings Union

532 California St., Cor. Webb.

For the half year ending with June 30, 1882, a dividend has been declared at the rate of four and thirty-two one-hundredths (4 32-100) per cent. per annum on Term Deposits, and three and sixty one-hundredths (3 60-100) per cent. per annum on Ordinary Deposits, free of Federal Tax, payable on and after WEDNESDAY, July 12, 1882. LOVELL WHITE, Cashier.

DIVIDEND NOTICE.

The German Savings and Loan Society.

San Francisco, June 30, 1882

For the half year ending this date, the Board of Directors of THE GERMAN SAVINGS AND LOAN SOCIETY has declared a dividend on Term Deposits at the rate of four and thirty-two one-hundredths (4 32-100) per cent. per annum, and on Ordinary Deposits at the rate of three and six-tenths (3 6-10) per cent. per annum, free from Federal Taxes, and payable on and after the 10th day of July, 1882. By order. GEO. LETTE, Sec'y.

J. H. WYTHE, M. D.

Residence: 965 West Street, Oakland. Office: 759 Market St., San Francisco. Before 10 A. M., after 5 P. M. From 11 A. M. to 9 P. M.

Commission Merchants.

JAS. P. HULME, Late Miller & Co. JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange).

211 and 213 Clay St., S. F.

Liberal advances made on Consignments

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

PETER MEYER LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F. Prompt Returns. Advance Librally on Consignments.

HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange.)

20 California Street, San Francisco.

SEND YOUR CONSIGNMENTS TO



"THE OLDEST HOUSE"

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCE.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

A PUBLISHER WANTED.

A good printer, or a steady and able business man, with a good reputation and a little means, can purchase (at less than two-thirds its value) the whole or a part of a long and well-established and paying newspaper and job printing office, in one of the rising business centers of this State.

Principals only need apply, (and that soon) to DEWEY & CO., at the office of this paper.

P. S.—A first-class printer can secure a permanent situation by applying soon. Also, a steady country boy a situation as janitor.

MUSIC

FOR LESS THAN

One Cent a Page.

IN ELEGANT BOUND VOLUMES.

Useful and Inexpensive for the Summer of all Grades and Styles of Sheet Music.

"GEMS OF ENGLISH SONG."

256 pages—over 30 choicest of songs.

"GEMS OF GERMAN SONG."

216 pages—100 of the best German songs.

"GEMS OF SCOTTISH SONG."

200 pages—over 150 best Scottish songs.

Educational.

The Harmon Seminary,
BERKELEY, CAL.A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.Will be conducted by REV. S. S. HARMON
and Mrs. F. W. HARMON, for the last 10
years principals of Washington College.The HARMON SEMINARY will receive girls of all
ages; the instruction comprising Primary, Preparatory
and Academic. Thorough course in the English
branches. The Arts, Music and Modern Languages in
charge of well known masters. Special course prepara-
tory to the State University.The HARMON SEMINARY will be first-class in all re-
spects, and will combine the best educational advantages
with home care, guidance and guardianship.The first year will open August 3, 1882.
For prospectus and other information, address
S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.

STOCKTON

Business College

Telegraph Institute and Normal School. Corner Hunter
street and Miner Avenue, Stockton, Cal. Largest School of
its kind on this coast. Open day and evening. Tuition and
expenses less than one half the usual rate. Excellent board,
\$10 per month. Courses of Study. Full Business Course.
Full Normal Course, Review Course, Special Courses, Teach-
ers' Course, Preparatory Course, Telegraphy, Languages. The
College Journal, containing full information, will be sent
post paid to any address. F. K. CLARK, Principal.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON

PACIFIC
Business College
320 POST ST.
SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$70.

Paid in installments, \$75.

Send for circulars.

SACKETT

(FOR BOYS)

SCHOOL.

Takes first rank for thorough-
ness and ability of its teachers;
also for home care.Business, Classical, and
English Departments.

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M.,
Principal, Oakland, Cal.

CALIFORNIA
COMMERCIAL COLLEGE

417 Kearny Street, San Francisco.

C. N. ANDREWS,

President.

G. B. BARNARD,

Business Manager.

Send for Circulars

THE HOME SCHOOL

FOR—

YOUNG LADIES,
1825 Telegraph Avenue, Oakland, Cal.The next year will begin on
WEDNESDAY, JULY 26, 1882.
H. N. FIELD, Principal.HOPKINS ACADEMY,
Oakland, Cal.

REV. H. E. JEWETT, Principal.

This Institution, heretofore known as Golden Gate Acad-
emy and open Tuesday & M. July 18, 1882. The building
and grounds are undergoing extensive improvements.
Classical, Literary and English courses. Telegraphy
taught. Boys and young men received. Send for pros-
pectus to H. E. JEWETT, Principal.

THRESHING ENGINE.

A No. 3, 7x10 Ames Engine, in use only one season,
in thorough repair, will be sold cheap.H. P. GREGORY & CO.,
2 & 4 California St., S. F.25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name
in gold and jet, 10c. Clinton Bros., Clintonville, CoNOTICE:
To Farmers and Stockmen?You well know the virtue of our H. H. H. Horse Liniment. It has been used for
years throughout the entire Pacific Coast, and has been found without an equal as a
Liniment for man and beast. We have now added to our list of medicines "The H. H. H.
Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-
raiser, once having used our medicines will ever be without them in the house. For
sale everywhere.

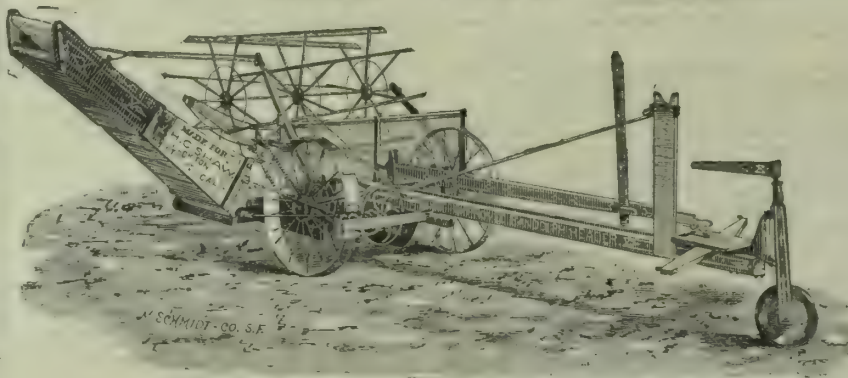
Trade } H. H. H. { Mark Trade } H. H. H. { Mark Trade } H. H. H. { Mark

Hoof and Healing Ointment Horse Liniment

Condition Powders.

For Brittle Hoofs,
Fever in Feet,
Founder,
Contracted Hoofs,
Sand Cracks,
Quarter Cracks,
Collar Galls,
Harness Galls,
Scratches,
Mud Fever.
Etc., Etc.The most effectual
liniment ever used for
Ringbone,
Spavin,
Sweeney,
Callous Lumps,
Old Sores,
Sprains,
Stiff Joints,
Bruises,
Windgalls, Etc.For Inward Strains,
Hide Bound,
Loss of Appetite,
Yellow Water,
Poll Evil,
Scratches,
Mange,
Rheumatism,
Epizootic,
Coughs,
Colds, Etc.H. H. MOORE & SON,
Sole Proprietors.H. H. MOORE & SON,
Sole Proprietors.H. H. MOORE & SON,
Sole Proprietors.

H. C. SHAW PLOW WORKS.



GENERAL AGENTS

IMPROVED RANDOLPH HEADERS,
LIGHTEST DRAFT!! BEST ELEVATION!!!

Three Hundred Sold in Two Years.

Chieftain Sulky Hay Rakes,

H. C. SHAW Stockton Gang Plow,

ALSO, AGENTS FOR

WALTER A. WOODS' IRON MOWERS,

FISH BROTHERS' FARM AND SPRING WAGONS.

FURST & BRADLEY SINGLE AND SULKY FLOWS,

Powell's Electric Hay and Grain Elevator.

HEADER EXTRAS! MOWER EXTRAS!! PLOW EXTRAS!!!

(Send for Illustrated Catalogue and Price list.)

201-3 El Dorado Street,

Stockton, Cal.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

O. F. BECKER, Proprietor

Free Coach to the House,

PACIFIC BRANCH.

GEO. D. DORNIN, Manager.
WM. SEXTON, Asst. Manager.INSURES ON GROWING CROPS under a
plain and easily understood Contract, also on Grain in
Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

S. P. BAILEY, O. E. BADGLEY, JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Sts., Stockton, Cal.

Importers and Jobbers in

Agricultural Implements, Hardware, Etc.

Agents for the

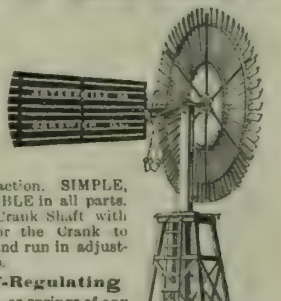
J. L. Case and Woods Headers, McCormick Harvesting Machine
Co.'s Binders, Reapers and Mowers, the LaBelle Freight,
Farm and Header Wagons, Alchouse Vaneless Windmills,
Minnesota Chief Thrashers, Engines and Horse
Powers, San Leandro, Buford and Stockton
Gang and Sulky Plows.Also, State Agents for the Celebrated
AMERICAN HAY CARRIER and ELEVATOR.
Large Stock of Builders' Hardware and Carpenters' Tools.
Orders Promptly Filled, and Goods sold at Bedrock Prices.HORTON & KENNEDY'S
FAMOUS
ENTERPRISE

Self Regulating

WINDMILL

Is recognized as the

Best.

Always gives satisfaction. SIMPLE,
STRONG and DURABLE in all parts.
Solid Wrought-iron Crank Shaft with
DOUBLE BEARINGS for the Crank to
work in, all turned and run in adjust-
able babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any
kind. No little rods, joints, levers, or anything of the
kind to get out of order as such things do. Mills in use
6 to 12 years in good order now, that have never cost one
cent for repairs. All genuine Enterprise Mills for the
Pacific Coast trade come only through this agency, and
none, whether of the old or latest pattern, are genuine, ex-
cept those bearing the "Enterprise Co." stamp. Look out
for this, as inferior mills are being offered with tes-
timonials applied to them which were given for ours.
Prices to suit the times. Full particulars free. Best
Pumps, Feed Mills, etc., kept in stock. Address,

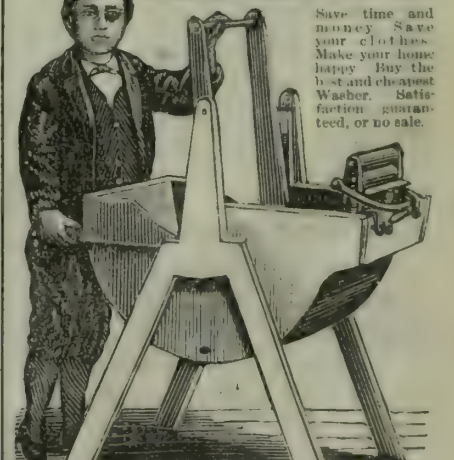
HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.San Francisco Agency. LINFORTH, RICE
& CO., 323 & 325 Market St., S. F.

The California Washing Machine.

GEO. M. PURSELL,

Inventor and Patentee, 431 Fourth St., S. F.

Save time and money. Save
your clothes.
Make your home
happy. Buy the
best and cheapest
Washer. Satis-
faction guaran-
teed, or no sale.

LAND

Good land that will raise a crop every
year. Over 12,000 acres for sale in lots to
suit. Climate healthy. No drouths, bad
floods, nor malaria. Wood and water
convenient. U. S. Title, perfect. Send stamp for illus-
trated circular, to EDWARD FRISBIE, Proprietor of
Reading Ranch, Anderson, Shasta County, Cal.

GEO. W. MEADE & CO.,

Office and Warehouse, Nos. 416 and 418 Front Street, San Francisco, Cal.

WHOLESALE DEALERS IN

California and Oregon Sun Dried and Evaporated Fruits,

CALIFORNIA RAISINS AND FRENCH PRUNES.

CALIFORNIA COMB AND EXTRACTED HONEY, ALMONDS, WALNUTS, Etc., Etc.

As the LEADING HOUSE and HEADQUARTERS in all these products, we are ready to correspond with the producers with the view of purchase or contract for the coming crops. REMEMBER, that we purchase outright either at points of production, paying freights, etc., ourselves, or delivered in S. F., freight paid. Remember, also, that in dealing with us you are operating through strictly FIRST HANDS. NO COMMISSIONS charged. NO DELAYS in settlements.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1882:

252 Market Street, Elevator 12 Front,
SAN FRANCISCO.

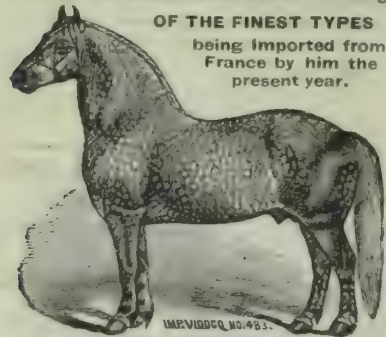
Branch Offices in all Foreign Countries.

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE
ON APPLICATION

GEO. H. STRONG. W. B. EWER. A. T. DEWEY.

NEARLY 1,000
Percheron-Norman HorsesM. W. DUNHAM,
Wayne, Du Page Co., Illinois.

Two Hundred and Fifty

OF THE FINEST TYPES
being imported from
France by him the
present year.OVER 200 STALLIONS, THE
CHOICEST OF ALL BREEDING STALLIONS
In service in La Perche.

They will be shipped as soon as their seasons
completed. This reputation will also be
added to the already great collection of Oakland,
will make the Largest and Most Select
Stud ever collected, and will make it possible to

SEE MORE FINE SPECIMENS IN A DAY
than one could see in their native country
in months.100 OF THE ABOVE STOCK
ARRIVED JULY 4TH.

Send for Catalogue, and come and see for your
elves. Visitors always welcome, whether they
desire to purchase or not. Carriage at Depot.
Telegraph at Wayne with private Telephone con-
nection with Oakland.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent
Law.

N. B.—Mr. J. L. Boone, of the above firm, has been con-
nected with the patent business for over 15 years, and de-
votes himself almost exclusively to patent litigation and
kindred branches.

This paper is printed with ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph H. Dorsey 527
Commercial St., S. F.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Har-
rows, Cultivators, Seed Sowers, Hay Presses, Haying and Har-
vesting Machinery, Headers, Iron Farm and Freight
Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain
Cleaners, Barley Crushers, Eureka Ditching and Grad-
ing Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,500 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres.
The wharves, connected with the works by rail, are over 800 ft. in length, and have a floor surface of more than 40,000 square
ft. including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth
Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and
parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving
time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus
making a good saving for parties in the interior who order goods from these Works. We particularly invite correspond-
ence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufactur-
ing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron
Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon.
We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of
which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a
clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hun-
dred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers.
Tule Plow. Plows. Cultivators.
Improved Granger Gang. Side Hill Gang. Gem Seed Sowers.
Im'd Single Sod and Tule Plow. Double Deep Tiller. Hill's Improved Headers.
Single Plows. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or
near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying
Goods manufactured by the Benicia Agricultural Works, either direct, or through Messrs. Baker & Hamilton,
agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the in-
terior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and con-
sumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of
California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best
implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast,
both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science
can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send
Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

NEW STORE AND LARGE STOCK!

AUSTIN BROTHERS,

IMPORTERS OF

HARDWARE, IRON, AND BLACKSMITH SUPPLIES.

Rope, Wire, Belting, Pumps, Pipe and Steam Fittings.

310 and 312 Main Street, Corner of America,
STOCKTON.

Agents Halladay Wind Mills.



Star
CYLINDER
AND
CONCAVE
TOOTH.

Steel Laid and Hand Made.

Parties wishing Star Teeth, telegraph at my expense.

Address,

A. F. LA SHELLS,
Biggs, Butte County, Cal.

C. E. CASE, M. D.,

Consulting and Operating Physician,

1116 Broadway Oakland,

Will visit patients at a distance for consultation or to
perform operations.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to
\$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens'
Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; Cali-
fornia Leather, \$3.50; Mens' Working Shoes from \$2.50 to
\$3; Children's Shoes made to order. Persons in the coun-
try ordering to the amount of \$12.10 pay the express
charges. I sell nothing but my own manufacture.



THE "CALIFORNIA CHIEF."

The best Small Bale Hay Press made. Puts
10 tons of the Driest Hay in a common
box car. Capacity about
one ton per hour.

Height 4 ft.; Width, 2 ft.; Length, 12 ft.; Weight, 2,800 lbs.
Size of bale when out of press, 13x23 inches, and 3 ft., 5
inches long. Average weight, 175 lbs. One hundred and
twenty-eight bales will go in a car. Bales as smooth and
square as plugs of tobacco. Press strongly pointed. Can
be moved anywhere, up canyons and over hills, with two
horses. Requires no taking down. Ready for business as
soon as it arrives at stack. Bale is pressed against an end
door which is opened after the bale is used and is pushed
out simply by putting in more hay. Horse works on a lever,
16 ft. long, walking half way round and back, pressing a
charge when going either way. Follower goes back itself.
No side doors. Bale tied through slots in the sides. Made
of the toughest Eastern white oak. Iron work very heavy.
MADE STRONGER THAN ANY PORTLAND CEMENT EVER
MADE BEFORE. Warranted not to break for one year, giving
best satisfaction wherever used. Price, \$750. Manufac-
tured at the works of the San Leandro Plow Co., by

JACOB PRICE, San Leandro, Cal.,

Inventor and manufacturer of the Price or Petaluma Press,
the improved Eagle Press, the Edison Press, and importer
and manufacturer of the CELEBRATED DEDERICK
PRESSES, all styles. Send for illustrated catalogue and
price list of the above-named Presses.

COMPOUND OXYGEN

NEW TREATMENT BY INHALA-
tion, for Consumption, Asthma,
Bronchitis, Dyspepsia, Catarrh,
Headache, Debility, Rheuma-
tism, Neuralgia, and all Chronic
and Nervous Disorders. Prepared
by DR. STARKY & PALEN, Philadel-
phia. Package contains all directions, and is
easily sent by express, ready for USE AT
HOME. H. E. MATHEWS, Forwarding
Agent, 606 Montgomery Street, San Fran-
cisco, Cal. Send for Free Pamphlets

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for
the purpose.

Fruit evaporated by the Zimmer-
man Process commands the highest
price of any. Fruit growers should
send for descriptive catalogue, with
testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno. B.
Niles, Los Angeles; L. S. Lesh,
Marysville; T. B. Wait, Salem, Or.; T. W. Winter, The
Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

STEAM PLOWS.

For sale—Two sets Steam Plows, manufactured by the
world-renowned firm of John Fowler & Co., of Leeds,
England, with all latest improvements and duplicate ac-
cessories. These plows are capable of plowing from 15 to
50 acres per day per set, at a depth of from one inch to
two feet, or more. The four powerful traction engines be-
longing to the outfit were expressly constructed for use
on the Pacific Coast and colonies, with a view, not only
to economy in fuel, but also for transportation purposes,
and for all kinds of farm work where steam power is ad-
vantageous or requisite. Apply to

H. N. CHAUNCEY,

Room 10, No. 109 California St., S. F.

NEW CATALOGUE

—OF—

SEWING MACHINE NEEDLES,
Oil and Other Supplies.

Just out. For Dealers only. Mailed free.

MARK SHELDON,

9, 11 & 13 First St., - - San Francisco,
CALIFORNIA.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, JULY 15, 1882.

Number 3

The Redwood Industry.

We give on this page a sketch which may suggest the redwood industry and call forth some comments upon its extent and the value of the timber prepared for use. Of the redwood tree we shall say nothing, for we have on this page an article by Dr. Kellogg, who writes of trees like a poet as well as a botanist. Of redwood lumber and timber it may be said that it is the mainstay of our carpentry and building, and its production is a leading source of wealth in several of the coast counties. This may be inferred when we cite the figures of redwood production for 1881. The following is the total mill shipment as furnished us by the Secretary of the Redwood Manufacturers Association:

Rec'd in San Francisco bay...\$5,414,556
Shipped from Mills to other
points, foreign and domestic...\$5,051,158

Total mill shipments...130,465,714

The value of this lumber, figured at \$18 per M is \$2,348,370, which is certainly a respectable amount when it is considered that it is for one variety of timber.

Redwood has many excellent qualities, but one which we would especially emphasize at this time is its durability, as this has been called in question by correspondents of Eastern papers. We can best demonstrate its lasting qualities by the enumeration of instances which have been reported to us by one who is well informed in the manufacture and use of redwood.

There is now standing in Santa Cruz a split picket-fence built in 1841, by J. P. Springer, of redwood pickets, most of them one inch thick, and it is perfectly sound to-day.

Redwood fences made of split pickets, at Trinidad, in 1852, are sound and still in use.

F. P. and J. A. Hooper, in building a railroad at Trinidad, were obliged to fell a redwood tree 150 ft. high and 10 ft. in diameter, which had grown up beside a fallen redwood tree, and the roots of 10 inches in diameter had grown over the fallen tree. The fallen tree was found to be sound, and stringers for a trestle were cut from it.

At Fort Ross, on Myers & Bennett's property, there is a corral of hewn redwood and fences built by the Russians 60 or 70 years ago. The ends of the timbers and fence posts which are in the ground are sound to-day.

At the corner of Montgomery and California streets there is a piece of redwood pavement that has been in use for 20 years. The durability of redwood depends a great deal upon the place in the tree from which it is taken. Near the butt the wood is full of sap and very heavy and dark-colored, and will last indefinitely. The lumber men say that redwood which will weigh five pounds to the foot, board measure, will not rot in 50 years. The lumber nearer the tops of the trees is soft and not so durable as the butt, and yet even the top redwood will outlast pine when exposed to the elements or in contact with the earth. There is a corral which was built 30 years ago from the timber from a single tree. The man began cutting and setting posts from the butt of the tree upward. The first posts to rot were from the top of the tree and the decay followed around the corral until the posts from the lower end of the trunk were reached, and they are sound now.

Redwood has come into request for export eastward, where it is used in panels for its beautiful color and grain. It is also coming forward in fine cabinet work in our own State for beauty rather than hardness.

The Redwood.

"For they sing to my heart,
And it sings to them evermore."—J. P. Lowell.

Towering redwood trees of most enormous proportions sentineled our entrance of the Golden Gate in 1849. Alas! what wits it now to us whether they saw the vandals or the vandals them? Lofty landmarks, objects of intense interest, this great colossal and characteristic evergreen of the California coast! Bold, nay, awe-inspiring, grand and imposing, herculean pillars of the heavens, from out whose blue vault they

young saplings spring from the parent root, say within the usual area of 15 to 30 ft. or so, renewing their youth in such close proximity, two or more may unite to form one large tree. Dr. Wm. P. Gibbons, J. Muir, myself and others, have often seen the forested Philemon and Beaucis in lasting embrace, typically transmigrated, beneficent and happy still. Redwood foliage is like yew; the same flat and final starry spray or twiglets of small leaves, say one-half to one inch long, distinctly in two rows, flat, line-like, with a sharp point, dark green above, though not so shiningly varnished; underside soft grayish sea-green; tipped with

ing, fragile and granular secretion, like gum catechu. Seeds, three to five to each scale, flat, oval, or obovate in outline, lateral wings very narrow or slightly and often obliquely margined, color dark reddish-brown, only a little notched at the outer and larger end, and shaped like parsnip or other similar seeds.

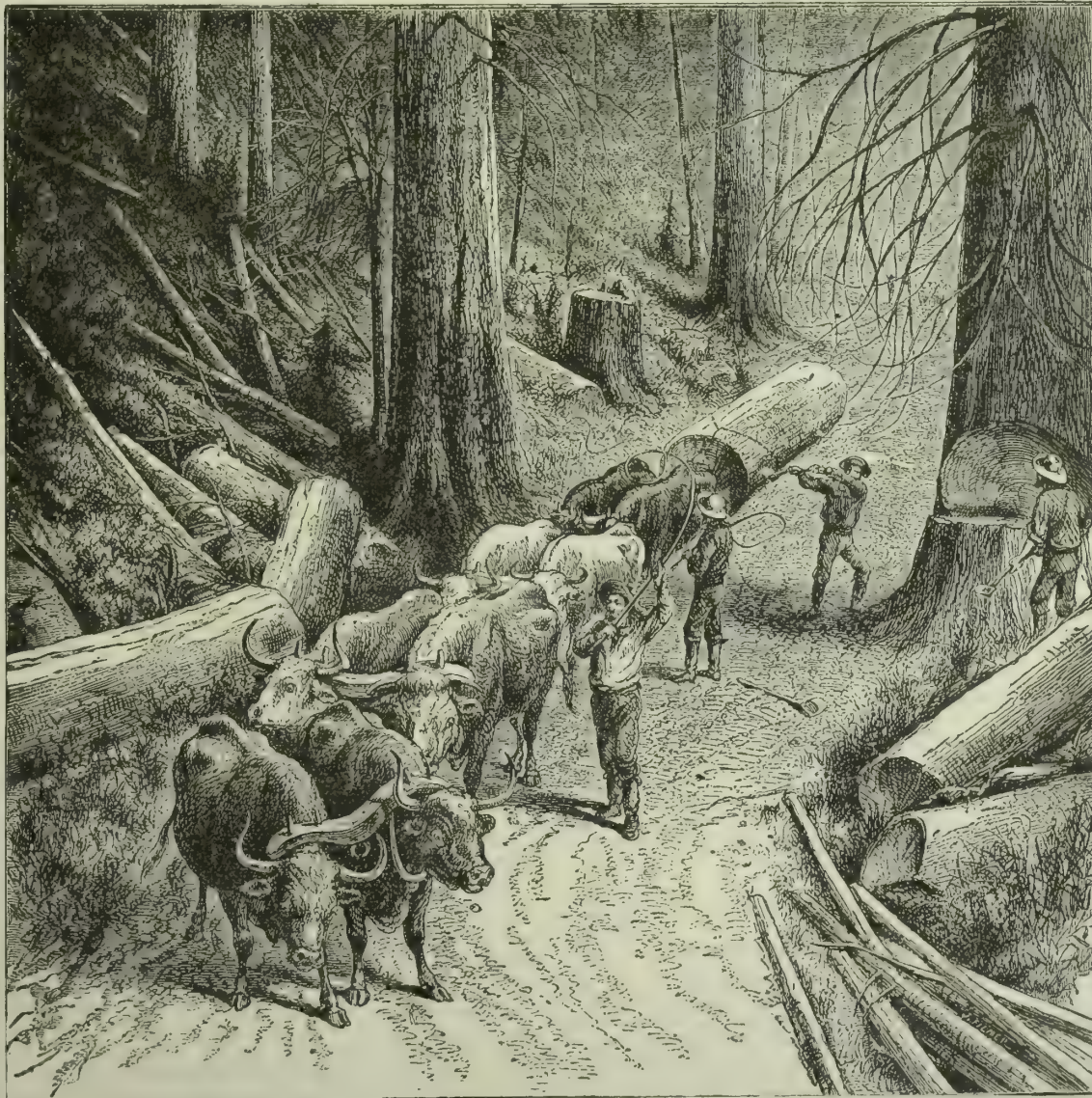
Redwoods abound chiefly, if not entirely, on sandstone soil—light, loose, black or ashy—and always in the track, and confined to the fog limits of the coast, say 15 to 30 miles inland, and probably never exceed 40 or 50 miles, even in the most favorable low coast ranges where the fog passes over low lands or through open gaps. These mighty, majestic redwood wands possess a magic power over passing fogs, wontedly precipitating them in showers of rain at their feet—for this, mainly, among many other good reasons, living springs of the purest water ever bubble and babble at their bidding—choice guards, as they undoubtedly are, stationed around springs and water supplies, they are, for this very reason, all the poorer roadside or more intimate rural companions. The continual timber supply capacity of a redwood forest, under judicious care, is so prodigious as to be simply incalculable; none but a suicidal and utterly abandoned infanticidal policy, wantonly and untiringly practiced, can ever blot them out.

The timber is red, with a faint coppery or metallic iridescent gloss. Choice curl-grained wood is very ornamental for cabinet finishing and similar work—takes a fine polish, simply stained or varnished, it is far preferable to any paint; the hues deepen to richer darker shades with age. Well-matured heart-wood of the base of these trees is so solid and heavy as to sink in water, i. e., for a few saw-log "first cuts," as the log-men express it; these will last for ages, under the most trying circumstances, like cedars and yews. The upper part of the same tree, on the contrary, is soft, exceedingly light, though of like fine grain, only more brittle, but insects seem never to trouble any of it. It is a great, and certainly too common error, to choose timber by name rather than by selecting the proper quality. During our earthquake experiences we had occasion to examine many walls, all alike laid upon redwood plank, in the lower made portion of the San Francisco city front. Some foundations, of just the same age, were apparently nearly as perishable as poplar, while others were as solid as so much cypress or cedar. Seasoning alone, important as that is, like age for wine, will never make the originally poor good. Probably, from

a fair estimate of the redwood forests along our coast, it would not comprise much more than about 3,000 square miles of timbered land. The already extinct and too scattered portions are ignored in this estimate. This Coast range timber belt extends from the northern portion of the State south to San Luis Obispo. Access to tide water, great economic value and universal use, have altogether doomed these mammoth cedars to a speedy destruction.

The bark, reduced to bast, has been utilized for upholstering—an excellent material. The woodman covers his corduroy swamp passes and bridges with this very superior and imperishable material.—Dr. Kellogg's Forest Trees of California.

In the low-lying districts of England, land is under water, and wheat is much beaten down. If this goes on much longer, the harvest of 1882 will be quite ruined, and the collapse of the British agricultural interest will be complete, a contingency which must add to the perils before the country.



THE LUMBER INDUSTRY—HAULING REDWOOD FROM THE FOREST.

looked abroad o'er land and sea, high above the hilltops beyond the bay.

Of the same genus as the giant Washington cypress, of world-renowned fame, of nearly equal height—200 to 300 ft., 15 to 20 ft. in diameter (rarely more), and usually 75 to 100 ft. or more of clean trunk, only second to Sequoia of Sierra—attains to thousands of years of age; and, what is even more marvelous, these monstrous stumps still maintain their vitality. Trees of all sizes and to the extreme age, when cut down, forthwith shoot up unnumbered saplings of great vigor and exceeding rapidity of growth; continued repetition at brief intervals only can kill them. The numerous branches are small and very short; indeed, relative to the size of the trunk, in age, quite insignificant; as it were, mere appendages. So intently devoted are they to the all-absorbing timber producing purpose of their great sylvan colossus, this enables them to close their ranks and crowd the land with an immense amount of timber per acre, absolutely unparalleled.

Occasionally, when a social circle of these

young spring growth of bright vivid yellow-green, then for beauty, they far surpass the gayest flowers and the prettiest ferns. More or less mixed with the common foliage, are leaves reduced to scales; indeed, some trees are found in every grove with awl-pointed, scaly leaves, like the foliage of the Great Sequoia; but among the redwoods these are exceptional and somewhat rare. The garland-like limbs are chiefly spreading, save in great age, or tipped and drooping with male flowers like the Mammoth King, or pending tiny terminal cones of an oblong shape, one to one and one-fourth inches long and one-half to three-fourths of an inch thick, consisting of numerous trapezoidal disked scales, thickly and roughly imprinted by the indrawn or quilted-like center; its very sharp prickly point turned forwards or pressed down and looking outwards; the shield-like disk more or less distinctly marked by a sharp laterally transverse ridge, stem of the scale stout, persisting, compressed, broadly-wedged form with some sharp angles, covered and stained by a dark purple, almost black, shin-

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Ems.

Arrowhead Hot Springs.

EDITORS PRESS:—One of the most interesting, pleasant and noted places of resort for the invalid and tourist, in the future, will be Arrowhead Hot Springs, in Southern California. These springs are situated in the foothills of the San Bernardino mountains, and have an elevation of about 2,000 ft. above the level of the sea, and 1,000 ft. above the San Bernardino valley, which stretches away to the south, the range forming its northern boundary. At the present time there are accommodations for but a limited number, and as the springs have not been advertised to any extent, they are not generally known. A few hundred yards above the springs, on the precipitous mountain side, is a curious white mark, taking the form of an arrowhead, or much resembling the ace of spades, and from which the springs derive their name. This singular mark is formed by the outcropping of a body of light-gray quartz or granite. This disintegrated rock supports a scanty growth of light colored weeds and grass. A thick growth of dark green bushes and shrubs covers the surrounding soil, forming a sharp contrast to the arrowhead, which, owing to its size—1,115 ft. in length and 396 ft. wide, and pointing downward toward the springs—presents a very conspicuous figure to the surrounding country below.

To make Arrowhead Springs one of the most useful and paying resorts in the southern part of the State, it only requires the laying out of a comparatively small amount of capital in the erection of a good, commodious hotel, convenient and suitable bath-houses, the laying out of grounds and walks, and the setting out of shade trees, etc. By nature, this place is admirably adapted for this mission; large streams of water issue from the earth in quantities that never diminish, indicating, many think, the existence of large, subterranean caverns, or reservoirs, from which the inexhaustible supply is drawn. The water is thought by some to be heated by chemical action. Others imagine that the water is brought up to the boiling point by volcanic heat. A little above the springs is a deep, shady canyon over whose bed rushes a cold clear stream of mountain water, partly formed by the melting snow, far up towards the highest peaks.

The canyon is made good use of by camping parties and picnicking excursionists from San Bernardino, Colton and Riverside, which are, in the order given, 7, 10 and 17 miles north from the springs. At this altitude a remarkably fine and uniform climate is realized. The close air and extremes of heat which are experienced at times in the valley during some of the summer months, and which is so annoying to some classes of invalids, are never known to occur here; while, on the other hand, the rapid changes and cold air of higher elevations are also avoided. The baths are said to be adapted to a wide range of disorders—especially to some diseases of the blood brought on by dissipation, and also to pulmonary and asthmatic conditions.

The view from the springs and from some portions of the grade leading down into the valley is interesting and embraces quite a wide range of scenery. The valley below presents an appearance not unlike the upper end of the Santa Clara valley from the Mt. Hamilton grade—large squares of yellow and green fields, towns and hamlets almost enveloped in groves of shade trees, winding streams bordered with cottonwood and willow, festooned with the graceful foliage of wild grape vines. At the foot of the grade, and just on the edge of the valley, is a field of worn ground and rounded boulders, gravel and sand. For some little distance, the road winds round among these huge stones which lie piled on every hand in massive groups which are very suggestive of the work of an ancient glacier.

These are but a few of the interesting and instructive scenes of this locality, and by virtue of their variety and abundance, this resort is surely destined to be one of the most popular and valuable in this part of our State. At present the chief attraction is a little artificial lake close to and fed by the springs, which, owing to the mild temperature of its waters, affords an inexhaustible amount of fun to large numbers of bathers, who can paddle about for an almost indefinite length of time with impunity.

S. B. WRIGHT.
Colton, Cal.

A GENTLEMAN in a Paris theatre had his view of the stage entirely obstructed by a huge hat worn by a lady in front of him. He politely requested her to remove her head-covering. She refused. Nothing daunted, he presently took his hat from under the seat and put it on, when, with a degree of vociferousness only to be heard in a French theatre, there were shouts all around him of "The hat! the hat!—off with the hat!" Swiftly removing it, he again addressed the lady, saying, "You see, madam, it is not I alone who complain, for every one is objecting to it now." The ruse succeeded, and the offensive hat was removed.

FORESTRY.

Forest Trees of California—No. 4*

Satin-Tassel Tree.

(Garrya elliptica.)

"The mind—that ocean where each kind
Doth straight its own resemblance find."—MORRIS.

A large evergreen shrub or tree, 8 to 15 or 20 ft. high, three inches to a foot or more in diameter. The most notable for size lately grew near San Francisco, at the San Bruno mountains, having five principal branches, each five to six inches in diameter, from a short main body about one and one-half feet in diameter—surpassing any oak trees of the vicinity. This tree, indeed, bears some casual resemblance to the field live oak (*Q. agrifolia*); but the satin-tassel tree has opposite, entire leaves, i. e., without teeth or lobes. On the contrary, most oaks have saw teeth, frequently more or less deeply cleft or bayed leaves—always alternate. This has the twigs also somewhat four-angled. Of course, if the fruit of the female tree is observed, it is found in clusters of tiny little grapy bunches of purple bladdery-like berries, more or less silky, which stain your fingers purple on pinching them, even though dry and crispy skinned outside. Then to you, this tree is no longer doubtful, and as the fascicles of stiff tags—one to three inches long—fruits, or relics of some one remain on all the year round, they never lack a present manifest witness of their identity. The leaves of both male and female trees are alike elliptical, base rounded, mostly sharp pointed; margins wavy-bent, dark green and smooth above; whitish, with short wool beneath, one and a half to two inches long, about an inch or so broad; nevertheless, many details must needs be omitted. So, only the aided and quickened eye of the observer seizes some relatively strong points that distinguish them and passes on. Confronted with the masculine tree, which promptly steps to the front rank of sylvan beauty, when in winter or early spring his partner's modesty makes but humble display, behold the long satiny tags, five to eight inches in length, pendant in parallel plumb lines on the tranquil air of calm days, or early dawn, like little lambs' tails on the lawn—air of the honest and upright, even to the last jot; in perfect keeping with rectitude to the extreme frankness and candor of innocence. In a word, these tags, or catkins, are the most sensitive, softest and most flexible satiny pearls, strung with living lines, ever hung on emerald mantle. From out the vast empire of love, significance to landscape art, to painter, or to poet, ruralist or sage, higher and highest, is ever begotten, ruled in wisdom, registered on all these—His works. To us, this tassel tree mingles with the rugged and sturdy, sober and serious, somewhat of the pretty and the playful. Return with us again; view it as stirred by the breeze; now, those long, limsy tags in their rollicking, giddy motions will surely remind you, in their perfect abandon, of those wanton lambs' tails—when the lambs themselves were wont to play "tag" on the sunny old barn floor of a gay spring morn, in the days when you were young; or witness the like joyous lines and big successive drops leap out of the cascade, arching airy diamonds aloft with an extra touch and toss of freedom, grace and beauty, high above and beyond, arating the choicest gems of the fountain; or, have we in all serenity of delight, seen the lambs cascading, tail and all, in a similar way? then tell us if they do not run together in parallel lines of a just similitude adown to the great ocean of truth.

The wood appears to be exceedingly hard and tough, but we have no knowledge of its applied use. As a tonic and febrifuge it is scarce at all inferior to Peruvian barks. Of the *Garryas* we have about half a dozen species, of which this is, perhaps, the best type. Ere long we trust they will be duly appreciated, for ornament, for medicine, and for other uses.

* From "The Forest Trees of California," by A. Kellogg, published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

MISSISSIPPI RIVER IMPROVEMENTS.—It is estimated that from \$80,000,000 to \$100,000,000 will be required to make the Mississippi river a highly serviceable and safe stream for Western commerce. The immediate result will be to reclaim 32,000 square miles of land, worth, at \$10 per acre, \$320,000,000, and capable of producing \$300,000,000 worth of products. The Mississippi Valley Cotton Planters' Association, which is to hold a convention in Memphis, Tenn., on May 25th, proposes to appeal by petition to the Government, to take the project in hand. Is this not a most legitimate object for Government aid, where millions of square miles and millions of population are interested?

RAILWAY CONSTRUCTION IN 1882.—What effect the strikes of the iron-workers may have upon railway construction during the rest of the current year cannot be told; thus far the work has greatly surpassed that of last year, when the increase of mileage—between 9,000 and 10,000 miles—exceeded that of any previous year. Indeed, during the first 5 months of the year the increase was more than double that of the corresponding month of 1881. According to statistics compiled by the *Railway Age*, in 36 States and Territories, on 120 roads, no less than 3,480 miles of new railway were laid down during the time mentioned.

POULTRY YARD.

Do Chickens Pay?

EDITORS PRESS:—With a view of still further testing this much-disputed question, I have kept a close account of receipts and expenditures for the past year, and now send you my second semi-annual report. Six months ago I sent you my report for the last half of 1881, which footed up as follows:

EXPENSES.	
For wheat.....	\$25.00
" corn.....	9.20
" bran.....	13.65
" shorts.....	6.55
" middlings.....	13.45
" corn meal.....	1.30
" freight, etc.....	3.90
Total expense.....	\$76.95

RECEIPTS.	
From 271 dozen eggs.....	\$86.89
" 87 young roosters.....	27.00
" 60 pullets.....	30.00
Total receipts.....	\$143.89
Less expense.....	76.95
Profits.....	\$66.94

Thus a clear profit was made of \$1.34 on each hen in six months, no account being made of the eggs used in my family of eight persons. We use all the eggs we want, and these are, of course, worth something. But let them be offset by table refuse, which we always give to the chickens. It pays better than to keep a pig. Experience has taught me that there is neither utility nor beauty in the time-honored family hog. He is very nearly an unmitigated nuisance. The strongest point in his favor is the manure he furnishes for the garden, but this point will not save him. So the hog has had to go, once and forever; I will never keep another hog. I mean a "family pig." The hog business is quite another thing.

ANOTHER RECORD.

During the past six months, ending June 30th, I have kept 125 hens and 7 cocks, with the following showing:

EXPENSES.	
For wheat.....	\$25.00
" corn.....	10.00
" shorts.....	24.75
" middlings.....	11.35
" shells.....	50
" sulphur.....	50
" freight on 20 cases eggs.....	10.00
Total expense.....	\$88.00

RECEIPTS.	
From 600 dozen eggs.....	\$150.10
" 50 hens sold.....	25.00
Total receipts.....	\$175.10
Less expense.....	88.00
Profits.....	\$87.10

This gives a profit of about 74 cents on each hen for the six months, making no account of the eggs consumed in the family, the quantity of which was probably three times larger than in the half-year preceding, since "spring is the time to eat ham and eggs."

The 50 hens were sold June 28th, on account of age, being two and three years old. But they are justly included in the account of income, since I have more than enough young stock to take their place.

It will be seen that my flock did not pay nearly as well this spring as last fall. The reasons, probably are the following:

First—A part of my hens were too old. In this country a hen ought to be pretty much drained of eggs within two years after she begins to lay.

Second—My chickens suffered this spring for lack of range. Last fall I had 60 hens on 10 acres. This spring I kept 125 hens in a one-quarter acre yard nearly the whole time. I had to do this to save my garden stuff.

Third—Feed has been unusually high, while the price of eggs has been much lower this spring than last fall.

I shipped all my eggs by express to W. B. Cluff & Co., No. 19, Sixth St., San Francisco. The price averaged about as follows: January, 35 cents; February, 25 cents; March, 20 cents; April, 21 cents; May, 26 cents; June, 27 cents. I get the highest market price and no commissions to pay. Fifty cents a case of 30 dozen is all the expense there is to pay.

I began, a year ago, with the belief that a good hen, well cared for, would pay \$1 clear profit in a year. The results show that each hen can be made to pay \$2 a year.

Any man who has gumption and patience and a 10-acre range, can keep 500 hens and make a clear profit of \$1,000 a year.

My hens are good layers, and they have been pretty well cared for. But I had distressingly bad luck with my young chickens. Lost nearly 200 by hawks, skunks, dogs, cats, lice, &c. So I have all the more confidence in future success, because my hens paid \$2 a head in spite of these losses.

I feed whole corn and wheat at night, and shorts and middlings wet up with dish water and sour milk in the morning. But my hens have got much more dish water than sour milk the past year.

A five-gallon oil can serves as a slop-pail and feeding-bucket combined. Thus everything from the table is saved and turned to good account.

My chickens are mixed, Brown Leghorn,

Black Spanish and Brahmas, but more Brown Leghorn than anything else. I have a few pure Plymouth Rocks, but the Leghorns will beat them clear out of sight at laying eggs. Next year I will keep only Plymouth Rock roosters. This will give added vigor and size to my next year's chickens.

But let beginners remember this, that no breed of hens will produce eggs in paying quantities unless they have plenty of lime (shells are best), gravel, and some green food or meat. In the early spring time all hens lay because they get grass and insects. In the fall these both fail them. But beet-tops or cabbage-leaves furnish excellent green feed during the dry period, while oilcake meal answers as a good substitute for meat. Chickens treated in this manner will give a good account of themselves.

W. C. DAMON.

Napa, July 5, 1882.

THE DAIRY.

Guernsey Cows.

A careful examination will show why the butter made from Guernsey cream possesses qualities not obtainable from the milk of any other animal. The disposition of the cows is remarkably gentle and affectionate, their whole care upon the island being confided to women and children, whose kind ways are perhaps reflected in their favorites. Passing through the island, little children hardly able to totter along, will be met with leading these beautiful animals to water, their only halter being a frail string, the least twitch of which secures obedience.

Almost all the milk produced by the cattle of Guernsey is made into butter. This butter is carried to the handsome stone market building of St. Petersport, where the matrons sit awaiting their customers with their pats of golden butter daintily displayed in the deep green leaves of the Guernsey cabbage. It invariably commands the highest price on the island and in England. When Mr. Ledyard, of Fenwood farm, was there, its price was 18 cents per pound above that made on the sister island of Jersey. The cattle on the island are in almost all instances tethered, and have but very little food beyond the grasses, that in so moist a climate afford pasturage during nearly all the year.

Although little or no grain is fed, the yield of butter from a mature Guernsey cow is expected to average a pound a day for the year, and there are many trustworthy statements of cows making 14 and 15 Guernsey pounds of butter, equal to 16 and 18 lbs. of our weight, per week, without the forcing food that in this country has ruined many a fine cow by unnatural stimulation for the purpose of making a great butter record.

It has been our good fortune to taste Guernsey winter butter. Its color is a beautiful gold, not artificial or obtained by the feeding of carrots, and the flavor is of the best. It is, without doubt, the best butter in the world, and those who have not tasted it do not know what good butter is. This is an honest opinion, and will be backed by users of Guernsey butter.

If the purpose of the farmer is to produce butter that will meet the demand of critical consumers, he will attain the best results by using Guernsey males, thus availing himself at once of the centuries of careful breeding that have been carried on in the Channel islands.

Points of Guernsey Cows.

In the second number of the "Herd Register of the American Guernsey Cattle Club," the following proposed scale of points for Guernsey cows is given:

Quality of Milk.—Skin deep yellow in ear, on end of bone of tail, at base of horn, on udder, teats and body generally, 20; skin loose, mellow, with soft fine hair, 10; total, 30.

Quantity and Duration of Flow.—Escutcheon wide on thighs, high and broad, with high-ovals, 10; milk veins long and prominent, 6; udder full in front, 6; udder full and well up behind, 8; udder large, but not fleshy, 4; udder teats squarely placed, 4; udder teats of good size, 2; total, 40.

Size and Substance.—Size for the breed, 5; not too light bone, 1; barrel round and deep at flank, 4; hips and loins wide, 2; rump long and broad, 2; thighs and withers thin, 2; total, 16.

Symmetry.—Back level to setting on of tail, 3; throat clean, with small dewlap, 1; legs not too long, with hocks well apart in walking, 2; tail long and thin, 1; horns curved and not coarse, 2; head rather long and fine, with quiet and gentle expression, 3; general appearance, 2; total, 14. Total all counts, 100. For both bulls and heifers deduct 20 counts for udder.

A DIPLOMATIC ANSWER.—Lady Godiva: "But surely, doctor, you don't approve of those horrid æsthetic fashions in women's dress?" The doctor: "My dear madam, so long as a woman is beautiful, she may wear whatever she likes, for me; and if she isn't, what does it matter what she wears?" Lady Godiva thinks the doctor a most delightful person, and quite agrees with him.

A CHICAGO woman wrote to her friends in Boston that "she lived in Hide Park." When they came out to visit her, they found the artless thing out at the stock yards.

HORTICULTURE.

Awards for Fruit Displays.

As the horticultural interest grows there may be expected increased interest in the exhibition of fruit at our fairs and more accurate methods of judging than have heretofore prevailed. As an item indicating such a progress in interest, we give below the report of a committee of the Santa Clara County Horticultural Society concerning a new form of award and the rules for bestowing it. A proposition had been made that the society offer a gold cup (the character of which was to be determined hereafter) for the best display of fruit at the next county fair. The committee (Messrs. Townsend, Younger and Ward) submitted the following rules and regulations as their report:

Report on Challenge Cup.

This cup shall be known as the "S. C. C. Horticultural Society's Challenge Cup," and shall be subject to the following rules and regulations, to wit:

1. This cup shall be competed for annually, at what is known as the County Fair, held at San Jose, or any fair that may be held hereafter by the S. C. C. H. Society.

2. Any holder is required to deliver the cup to the order of the Secretary of the Horticultural Society on the first day of the fair.

3. Said cup shall be held by the winner until Wednesday of the following fair; and he shall exhibit the same on his table at the annual fair and until the Awarding Committee shall pass judgment; and should it then be awarded to another party or parties, it shall then be placed on the winner's table by the committee.

4. On Wednesday of fair week a committee of three disinterested judges shall be appointed by the society to award this cup. Should at any time the committee tie, a fourth party is to be called in, and is to decide between one of the parties having a vote, and their award shall be final, unless some collusion can be proven against the party or parties, then a new award is to be made.

5. This cup shall be won three consecutive times by one person or firm to entitle the owner to its perpetual ownership.

6. The exhibition of fruit entered for this cup shall be grown by the exhibitor, and raised in Santa Clara county; said fruit to be free from noxious insects to entitle any one to compete for the cup.

7. Commencing with the year 1882, every year thereafter the cup shall have the following engraving: "Awarded by and under the auspices of the S. C. C. H. Society, for the most meritorious exhibit in the fruit department, to —, won in 18—, by —."

8. The following table is to govern the judges in making their awards:

GREEN FRUITS.						
KIND OF FRUIT.	Size.	Flavor.	Shipping qualities.	Canning qualities.	Drying qualities.	Hardness of Tree.
Apples.	1	4	3	10	8	30
Plums or Prunes.	1	4	3	10	8	30
Pears.	1	4	3	10	8	30
Cherries.	1	4	3	10	8	30
Peaches.	1	4	3	10	8	30
Nectarines.	1	4	3	10	8	30
Quinces.	1	4	3	10	8	30
Berries.	1	4	3	10	8	30
Currents.	1	4	3	10	8	30
Figs.	1	4	3	10	8	30
Nuts.	1	4	3	10	8	30
Other Fruits.	1	4	3	10	8	30

SUN DRIED OR EVAPORATED FRUITS.						
KIND OF FRUIT.	Size.	Flavor.	Shipping qualities.	Canning qualities.	Drying qualities.	Attractive Appearance of Package.
Prunes.	1	4	3	10	8	30
Plums.	1	4	3	10	8	30
Apples.	1	4	3	10	8	30
Any other kind of dried fruit.	1	4	3	10	8	30

HERMETICALLY SEALED FRUIT, PRESERVES, JELLIES (in glass only.)

KIND OF FRUIT.	Size.	Flavor.	Shipping qualities.	Canning qualities.	Drying qualities.	Attractive Appearance of Package.
Any one kind of fruit hermetically sealed.	1	4	3	10	8	30
Any one kind of preserves.	1	4	3	10	8	30
Any one kind of jelly.	1	4	3	10	8	30

The points in this schedule are the maximum number to be given to any one variety or kind. Judges may withhold points altogether from any one or more varieties in an exhibit underserving, or may withhold points for those qualities only which are lacking, but in no case can more points be given than provided for in this schedule; nor shall the full number of points for any one or more of the qualities named be given, unless the highest degree of excellence

has been obtained in such qualities. Points must not be awarded for the general excellence of an exhibit, but each variety or kind must be considered separately, and be awarded points in accordance with this schedule. An exhibit made by members of the same family living together may be considered as being made by one person.

9. These rules can be changed from year to year to meet the best requirements of the Society; provided, after this cup has been won two consecutive times by one person these rules cannot be changed without the consent of the holder.

10. No one will be allowed to combine with another for the special purpose of contending for this cup. Should this be proven on the party or parties, they will be excluded from further competition.

11. The judges must award this cup for the most meritorious exhibit.

12. Persons contending for this cup must make a special entry with the entry clerk.

THE GARDEN.

Propagation of Plants by Seeds and Slips.

Peter Henderson, the well-known horticulturist, has an article on this subject in the *Floral Cabinet* for July, from which we quote, as follows: One of the most interesting operations in the culture of flowers to the amateur is that of being able to propagate or increase the stock of a favorite plant from seed or from cuttings. It is not so much the saving by being himself the producer as it is the satisfaction of being able to say that this is of my own raising. Such plants are usually more valued than the highest-priced plants purchased from the florist. Of late years the methods of raising plants from seeds and cuttings have been so simplified that even the inexperienced amateur of to-day is usually more successful than the average professional of 20 years ago. The raising of plants from seeds can be done nearly as well in the window of any ordinary sitting-room as in a greenhouse, if the following directions be carefully complied with:

Seeds should be sown in shallow boxes of a depth not to exceed three inches, with open seams at the bottom to permit the water to pass off rapidly. These boxes should be filled within half an inch or so of the top with light, rich soil. This is best composed of old rotted manure and soil that is formed from sods, the object being to get a soil that is friable, through which the water will filter quickly. This soil should be run through a sieve as fine as mosquito wire, at least that portion on the top which is to receive the seeds. The soil should then be made as level in the boxes as it is possible to make it.

When the boxes have been prepared in the manner described the seeds should then be sown quickly and evenly over the surface, and pressed down by a smooth board into the soil, so that the seed, be it large or small, will form a level surface with the soil. This being done, the same material of soil should be sifted evenly over the top, just enough to cover the seed. Again press this layer of soil which has covered the seeds gently with the smooth board.

This method of sowing seeds has been our usual practice for over 20 years. A few years ago, however, we discovered that it was a great help to the seed to have the surface again covered with a light material that would hold moisture, and for that purpose we have used dry moss, which we put through the same mosquito-wire sieve; or leaves from cocoanut fibre may be made fine in the same way, and will answer the purpose equally well. Both of these materials are exceedingly light, and, at the same time, are of that spongy nature that will hold moisture; and experience has shown that when sifted over the seed-boxes, just thick enough to cover the soil (not more than one-sixteenth part of an inch), they are greatly beneficial in the germination of the seed, as with such a top-dressing one watering with a fine rose watering-pot will keep the soil moist enough usually until the seeds come up. It is a great mistake to be continually watering seeds after they have been sown. The rule in all these things is never to water until the surface indicates that the soil is dry, which will be shown by its getting whiter.

After the seedling plants have come up they should be transplanted, or "pricked off," as it is technically called, at distances of half an inch apart, in a box of soil prepared exactly in the same way as that in which they were sown. After being pricked off they should be shaded, if the sun is out, for a few days until they begin to root, after which they should be gradually exposed to the light.

Of course, much depends on what the seeds are that have been sown to determine the suitable temperature, and, in a paper of this kind, we cannot enter at length into specific directions for the many varieties of plants. For plants in general, however, the safe average temperature would be 65°. If the plants are of a tropical nature the temperature may be 10° higher; if of a hardy nature, 10° lower.

The conditions required for propagating plants by cuttings or slips are very nearly the same, as far as temperature and soil go, as are

found to give the best results in raising from seeds. In fact, it makes but little difference what the soil is for rooting cuttings, provided it is porous. We have experimented with nearly everything, and find there is little choice, although it is our practice to use ordinary building sand, as it is cleaner to work with than anything else, and, when watered, never gets muddy, as a heavier soil would do. But do not suppose for a minute that sand is indispensable to the rooting of cuttings, for if the conditions of temperature are right, and the condition of the cuttings is right, they will root in almost any material in which they are placed. The temperature required is very similar to that in which seeds should be germinated. If of a hardy nature, they will do nicely in a temperature averaging 60°, but if of a tender or tropical nature then the temperature should not average less than 75°. For example, you can very easily root cuttings of geraniums, roses, verbenas, petunias, carnations, and others of what are known as "greenhouse plants" in a temperature averaging 60°; but if we attempt to root coleus, bouvardias, begonias and other plants, whose nature is tropical, at that temperature, they will be almost certain to fail, and success can only be complete at a temperature ranging from 70° to 80°. Much depends on the condition of the cutting. I believe I was the first, some dozen years ago, when I wrote my book, "Practical Floriculture," to introduce what is known as the snapping condition of the cutting, that is, when the shoot of a verbenas, geranium, fuchsia, bergonia, stevia, or plants of that character, is bent, if it breaks or snaps clean off then it is in the proper condition for rooting; if it bends it is not. Not that the bent cutting would not root, but that it would take longer to root, and would make a feeble plant when it did root than one that had the proper conditions for the forming of roots.

Florists use what are called propagating benches for rooting cuttings when wanted on a large scale, as they usually are by them; but when an amateur, not having greenhouse facilities, wishes to root a few slips, there is no process that we can recommend better than what is known as "the saucer system," which, even at the risk of telling some of your readers who already understand it, I must again repeat, as there is no other plan that is so simple and so safe. Take any common saucer or plate, into which put sand to the depth of an inch or so. Prepare the cuttings in the usual manner and put them in the sand close enough to touch each other. The sand is then to be watered so as to bring it into the condition of mud. The saucer thus filled with slips may be placed on the window-sill and exposed to the sun. The cuttings must be fully exposed to the sun and never shaded. But one condition is absolutely essential to success: until the cuttings take root the sand must be kept continually saturated with water, and always in the condition of mud. To do this the slips must be watered at least once a day with a very fine rose watering-pot, and the watering must be done very gently, else the cuttings may be washed out. There is every certainty that 99% of the cuttings put in will take root, provided they were in the proper condition when placed in the saucer, and that the temperature has not been lower than 60° for greenhouse plants, or less than 80° for tropical plants. By the saucer system a higher degree of temperature may be maintained without injury than by any other system of propagation, as the cuttings in reality are placed in water, and will not wilt, provided the water is not allowed to dry out. Still, the tender slip, until rooted, will not endure a long continuation of very high temperature, and we would advise that propagation be done at such seasons that they may have as near as possible a uniform temperature of 75° or 80° in the sunlight. When rooted they should be potted in dry soil, such as is recommended for sowing seeds in. They should be placed in pots not exceeding two and a half inches in diameter and treated carefully by shading and watering for two or three days.

THE GREAT WALL OF CHINA.—An American engineer who, being engaged in the construction of a railway in China, has had unusually favorable opportunities of examining the famous Great Wall, built to obstruct the incursions of the Tartars, gives the following account of this wonderful work: The wall is 1,728 miles long, 18 ft. wide, and 15 ft. thick at the top. The foundation, throughout, is of solid granite, the remainder of compact masonry. At intervals of between 200 and 300 yards, towers rise up, 25 to 30 ft. high, and 24 ft. in diameter. On the top of the wall, and on both sides of it, are masonry parapets, to enable the defenders to pass unseen from one tower to another. The wall itself is carried from point to point in a perfectly straight line, across valleys and plains and over hills, without the slightest regard to the configuration of the ground, sometimes plunging down into abysses a thousand ft deep. Brooks and rivers are bridged over by the wall, while on both banks of larger streams strong flanking towers are placed.

TO CLEAN MARBLE.—Mix one-quarter of a pound of soft soap with the same of pounded whiting, 1 ounce of soda, and a piece of stone blue the size of a walnut. Boil these together for 15 minutes, and then, while hot, rub it over the marble with a piece of flannel, and leave it on for 24 hours; then wash it off with clean water, and polish the marble with a piece of coarse flannel, or, what is better, a piece of an old hat.

THE VINEYARD.

Meeting of the Viticultural Commission.

An adjourned meeting of the Board of State Viticultural Commissioners was called to order by President Haraszthy, at 10 o'clock A. M., July 10th; there were present: Commissioners De Turk, Krug, Blowers, Haraszthy, Rose, Wetmore, Chief Executive Horticultural Officer, Matthew Cooke, and the Secretary, John H. Wheeler.

The following communication from the Horticultural Commission was read, unanimously approved, and the Chief Executive Horticultural Officer advised to act in accordance therewith, the same having been commended by the Horticultural Board at its last meeting, held June 29th:

Resolved, That the Board of State Horticultural Commissioners recommend to the Board of State Viticultural Commissioners the adoption of instructions to the Chief Executive Horticultural Officer as follows: That in consideration of the great and constant danger of the introduction to this State of the curculio or plum weevil upon fruit trees from the Eastern States, he shall take the necessary measures to strictly enforce the quarantine rules relating to this subject, and shall establish such places as he shall deem necessary for the inspection of all trees imported into this State from without its limits, so that all such trees shall be held in his hands for examination and permit to go to their place of destination; and also that in order to enable this officer or his properly appointed inspector to perform this duty, the railroad and other transportation companies are hereby requested to aid in every way in their power the proper carrying out of this resolution.

The Chief Executive Viticultural Officer was then, by resolution, adopted, endowed with like powers and duties relating to the importation of vines.

A communication was then read from the Fresno Republican of July 8th, addressed to the Board of Viticultural Commissioners by M. Denicke, Inspector. This communication requested the formation of an organization for the protection of the pure wines and brandies of California, the same to become, or strive to become, a national institution, etc., urging that such steps are urgently required to protect our viticultural industry from any further encroachments of adulteration, fraud and deception.

In answer, a resolution was offered by Mr. De Turk and adopted, as follows:

Resolved, That this Commission recommend that, in all viticultural sections of the State, local organizations of wine growers be formed for mutual aid and advice, and to effect co-operation in measures of general interest to all wine growers through communication with the State Commissioners for the several districts.

Resolved, Also, that the Chief Executive Viticultural Officer be requested to call a convention of inspectors and wine growers, to be held in San Francisco, to ascertain the wants of the many viticultural sections of the State, and to promote progress in viticulture and wine-making, and that he be authorized to make rules necessary for the government of such convention.

The subject of the Clardy bill was informally taken up for discussion, and Commissioner Rose, who was not present at the time the resolution relating to it was passed by the Board, expressed himself fully in sympathy with the others on the Commission, with respect to their efforts to compel all imitated and compounded wines and liquors to be so stamped as to indicate to the consumer the true character of the goods offered for sale; provided, that the amount of the tax was only sufficient to pay for the cost of affixing the stamps. The resolution of the Board was read to show that there was no important difference of opinion in this respect, as the Board had declared that it did not consider the amount of the tax of vital importance.

Following the above came the

Election of Officers.

Previous, to which, however, it was resolved that hereafter the officers of the Board be elected annually, and that at the regular meeting of the Board, which falls in June. The result of the ballot was the re-election of the old officers, as follows: President, Arpad Haraszthy; Vice-President, Chas. A. Wetmore; Treasurer, Chas. Krug; Secretary, John H. Wheeler; Chief Executive Viticultural Officer, C. A. Wetmore; Chief Executive Horticultural Officer, M. Cooke. The elections were made unanimous.

Inquiry was made as to the result of questions propounded to the U. S. Commissioner of Internal Revenue, asking information relative to the tax on imported cherry juice for coloring wines, glucose, etc., for adulterating wines and grape spirits, for fortifying sweet wines. The committee having received no answer yet, further consideration of the matter was postponed, and the meeting adjourned.

IMPROVING THE MEMORY.—All the methods of improving the memory are based upon the principle of attention. Whatever you study or observe should be earnestly regarded. The mind should not be permitted to wander off to side issues. Outside matters generally should be ignored for the time being. Memory, of course, depends first upon the organization, next upon its use of training.

BOILED ONIONS, to be free of strong odor, should be boiled in salted water for 10 minutes, and then put in cold fresh water for half an hour; after that they should be put into a stewpan with just enough cold fresh water to cover them, and boiled gently till tender. Drain and serve with melted butter.—Sanitarian.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 3.

Written for RURAL PRESS by CHARA DEMING.

What Shall We Read?

In our daily reading we find coming under observation all kinds of literature, good, bad and indifferent. The time we have for reading in the busy turmoil of ever-day life is too short to be spent on any but the very best; therefore, what to select for our own pleasure and that of those who look to us for guidance, is a question of grave importance, requiring the attention of all. Some talking and writing are necessary, even if it comes from one who has had but little experience, but has used her powers of observation.

In the first place, great care should be taken to train the literary tastes of the children in the right direction. These tastes are formed very early in life, even earlier than most people think. As soon as the child begins to read, he should be provided with good wholesome matter for his entertainment and instruction. There are many magazines for little folks, printed in large type with easy reading, embodying many facts worth knowing in simple, pleasing anecdotes. The *Nursery* is one that may be mentioned, the *Wide Awake*, for those a little further advanced, and the *Youth's Companion* is a source of information for old and young. Children enjoy works upon history, botany and natural history, if they are only written in language that they can readily understand, and if parents will show a little care and forethought in making selections, they can be instrumental in stimulating a thirst for useful reading. But, as a general thing, children are supposed to enjoy nothing but fairy stories, and consequently these are placed, and wrongly, in their hands. These tales of hobgoblins, elves and monster giants, give them false ideas that are very hard to overcome in after life, and also engenders a desire for stories that are exciting; nothing seems to satisfy them that does not call forth the imaginative powers in their highest degree, causing them to devour with avidity the bad literature of the day. More of these vile books and papers, than parents have any idea of, are read by children who have no good reading matter given them.

The number of these unwholesome works is astounding, and their effect upon the morals of the readers is certainly not good, as the crowded conditions of our prisons and houses of correction will testify. These books produce an eagerness for evil acts and a notoriety which must be had, although at the expense of a life precious to the nation, and are well aware that the letter of the law is a "life for a life." But they must have fame, if only of an unenviable character, and they hope to be freed on the plea of insanity.

This vast hoard of books portraying the evil in humanity is soon to be added to by the publication of a work upon the life of the highwayman, Jessie James. "The wife," as stated by a newspaper of recent date, "of the notorious Jessie James, with the assistance of Mr. Frank Triplett, is preparing a book about her deceased husband. It will be a complete history of the life and tragical death of the highwayman. Mrs. James is the only person who has the facts, and the history ought to be authentic. She is to have a royalty on all copies sold." Will the American people allow the biography of such a man and the history of such deeds to be circulated among and read by the youths of our land? If they could take it as a warning against and not as an incentive to evil action, it might be tolerated, but as it will do much more harm than good, it should not be countenanced at all.

I hope that the day will come when people will not dare to write up such lives nor publishers to publish them. One would think we were proud of outlaws, and wished their vile acts to be handed down to posterity. It were better that such as Jesse James should be thrust into oblivion. A woman who is proud of such a husband has certainly lost her womanhood and her right to be man's moral guardian.

If such books were not in demand they would not be printed; so it goes to show, there is a wrong somewhere that should be corrected; and the minds of the children cannot be too closely guarded against the wiles of the Tempter. Parents are more responsible for the proper clothing of the minds than of the bodies of their little charges. If mothers and fathers are careless, or know no better, the duty rests with the teacher and is doubly hard for him. If the mind of a child is already steeped in trashy literature, it is like a garden overgrown with some terrible weed that must be patiently eradicated before the good seed can be sown.

Parents should do all in their power to advance their children in the right direction, and the children should encourage them by showing that they appreciate the efforts made in their behalf. This they may do by studying diligently, being obliging, obedient and trying to form their characters for noble men and women.

Many think when they leave school their education is finished, whereas, even if theirs

has been a high school or seminary course, only a foundation is laid for good work in the future. The last year of such a course is often considered unnecessary, but it is very essential to a boy or girl. It is like the last layer of a foundation making an even base for a fine structure to be built upon. It gives a knowledge of literature and science that will be useful in pursuing a course of reading and a thorough understanding of the subjects of the day. The last years of a course form the tastes of a student for the best in literature; he finds his chief delight in a careful perusal of histories, biographies and the standard authors. There is no excuse now for people to spend their time in reading poor literature, because they cannot afford better. Most of the best works are now published in cheap editions so that they are available to all who may desire to read them. The libraries, some of them free, that we find in nearly every city and town, contain good literature, and some poor; if the general demand is for good reading matter the libraries will not keep poor. The libraries are doing more toward advancing civilization, than anything else.

Patrons and farmers should take special pains to provide their families with good reading and innocent home amusements, if they would have educated and good men and women to take their places in the home and Grange. Reading clubs and literary societies are an addition to a community, for they teach people how to express themselves in public and circulate the opinions of the members, correcting false impressions and establishing the truth. The Grange can do much toward taking the place of a literary club, and if each member is willing to do his or her part in writing, speaking, debating, and in music, their united efforts may result in much good to all and make the meetings very pleasant.

A Trip to the Wheat Lands.

Mr. Montpelier, Manager of the Grangers' Bank, on the occasion of the Fourth of July vacation, made a quick trip in the Sacramento valley, down the west side of the river, starting from Woodland with teams. He noticed rich lands and excellent crops along the river. Thence he went westward, toward the foothills, to Black's Station and Dunnegan; thence to Grand island, in Colusa county, among the tules, a charming place, especially when one gets lost in them. Then from Grand island westward to Arbuckle, then westward toward the foothills; thence to Williams, and from Williams to Maxwell, and then from Maxwell towards the foothills on the J. H. Glide and T. W. Campbell places, driving among their wheat fields all the time; then along the foothills to A. D. Logan's place and the northern part of Colusa county. Mr. Montpelier reports the crops towards the foothills very fair, especially on Glide's place. In the center of the county they are very poor, while along the foothills they are good. Colusa has much wheat which looks badly, but, on the other hand, there is an immense amount of summer-fallow land, ready to receive seed next fall, and all in all, Colusa county will come out with considerable wheat yet. Yolo county will have a pretty fair average crop. Toward the foothills and Cache creek, and from the foothills down to Winters, there is some very good grain.

This trip has been made by team from farm to farm, and the reports are that the yield is better than was at one time anticipated.

The Grangers' Bank.

Albert Montpelier, Cashier and Manager of the Grangers' bank, has just issued a circular concerning the work of the bank, from which we quote as follows:

For the past five years this bank has made it a specialty to advance money to farmers on the wheat stored in warehouses at home. We will be pleased to see our grain on some security, this year, with plain notes at current low rate of interest, without compounding. The business of the Grangers' bank is growing very rapidly, and the institution is gaining popularity throughout the state every year. It has stimulated the systems of loans on wheat stored in warehouses in the country, it has also contributed, largely in reducing the rate of interest on such loans, and the bank may be properly called the farmers' friend. We hope that our large number of stockholders and farmers generally, will stand by an institution in whose dealings are recognized to be honorable and upright, and whose earnest aim has always been, and actually is, for the welfare of the farming community.

"BREEDER AND SPORTSMAN."—Our contributor, Joseph Cairn Simpson, is the editor of a new and handsome weekly entitled the *Breeder and Sportsman*, published in San Francisco. The new journal aims to elevate the literature of the turf and other sports far above the plane upon which it has moved on this coast, and to present matters relating to live stock. Mr. Simpson is a very well-informed and acceptable writer, and he has associates who understand all the intricacies of outdoor sports. The new paper has our best wishes for success in its peculiar field.

EGG FOOD.—The Superior Court of San Francisco, on Friday, July 7th, issued an injunction restraining B. F. Wellington, of this city, from manufacturing or selling his so-called "Improved Egg Food," the court considering the same to be an infringement upon the well-known "Imperial Egg Food."

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

THE FAIR. *Chico Chronicle*: The Directors of the Third District Agricultural Association have issued a neat speed programme for the races to come off at the next fair, commencing Tuesday, Sept. 5, 1882, and lasting five days. There will be 11 races, 7 running and 4 trotting. The closing will be something worth seeing, as it will be a running race free for all mules owned in the district. Dash of one and a half miles for a purse of \$100. All entries for the above races must be closed with the Secretary at Chico, July 22, 1882, at 11 o'clock P. M.

LAKE.

A SLANDER REFUTED.—The editor of the *PACIFIC RURAL PRESS* has given publicity to a series of false statements and misrepresentations in his paper of the 3d instant, from the pen of G. T. Thissell. In speaking of our valley he says, "the lands are rich and low, and a fine place for hogs." I admit and thank the slanderer for the only truth he has given, that our land is rich. Mr. Thissell says, "fruit does well, but little or no attention is paid to its cultivation." In this he perpetrates an absolute falsehood and knowing at the time he wrote it that it was false, and I will here say there is not in the county or State a better orchard of fruit than mine and this visitor to our county knew it, if he knew anything about what is considered proper care and attention to fruit, and every farmer in the valley is giving this matter his attention. This gentleman says, "there is one thing we have noticed all along the road; at every house there is from five to ten children, the reason for this, it is a sheep county; the children herd them through the day and the dogs guard them at night," whereas no family in the valley has to exceed four children, and none in the valley had half as many dogs as he had with him. Besides there are comparatively but a few sheep in the valley, and they require no herding at night and never did. Hear what this scribbler says about Lower Lake: "Not one pound of bacon, cheese or potatoes to be had. Land, second grade; farms in a dilapidated condition; that the people are ten years behind the times," etc. Such barefaced and contemptible misrepresentations merit, as they receive from more than ten thousand visitors to our county every year, the unqualified condemnation and contempt such false statements deserve. The whole article to which we have reference is a tissue of falsehoods and misrepresentation, not only as regards our county but of every place mentioned in his quite lengthy communication, and that it was written from fancy, and not from facts, is patent to everybody who ever visited our county or has read his article. Mr. Thissell will receive a cordial welcome if he will call on us when he visits our county again. Will the *RURAL PRESS* please copy.—A. F. MORRELL, in Lower Lake Bulletin.

EDITORS PRESS.—I am sorry to say that I find an article in the *Lower Lake Bulletin*, written by A. F. Morrell, in which he gives me "Hail Columbia" in reference to the article, "From the Valley to the Coast." I shall send you a copy; if you consider it worth while to notice it, you can do so. However, I will give you the facts of the case: We camped at his ranch. He had a nice pair of horses, which he sold to me for \$300. He said they were true to pull and gentle. I found them wilder than reindeer, and one of them would not pull a pound. I made him take them back, but I lost a good deal of time, spent several dollars, and had to travel about 160 miles, so you can easily see the cause of his spite against me. I wrote nothing but the truth, as I saw it.—G. W. THISSELL, Winters, Cal.

MERCED.

THE WHEAT CROP.—*Valley Argus*, July 8: Harvest operations are progressing favorably, and the reports from all quarters of the county are that the quality of the wheat is excellent, and the yield better than was expected before the harvest began. The straw is generally short, but the heads are well filled, and are plump and heavy. On Dry creek, north of the Merced river, the crop is exceptionally good, as is also the case along the foothills as far west as Mustang Flat; and on the sand, both north and south of the river, farmers report the yield nearly equal per acre to that of the good crop of two years ago. On the heavy lands of Bear and Mariposa creeks, there are a few farms upon which the yield is nearly an average per acre for good seasons, though the acreage is light, owing to the fact that a large proportion of the land in cultivation last year was plowed this spring for summer fallow, and another large portion—the winter-sown—was killed by the dry and frosty weather during the winter season, the moisture that fell early being just sufficient to cause the seed to rot in the ground. On the westerly side of the San Joaquin river there is a total failure upon lands lying above the canal, while much of the area of the irrigated land is given up to alfalfa culture, leaving comparatively a small strip of that broad belt of the valley for the production of wheat, though the yield upon the irrigated lands is good. South of this town, for many miles, nearly all the land was plowed last spring, and will be in excellent condition for seeding next fall. The winter-plowed fields will be in good condition for a crop next season.

son, also, and we may look for a large acreage to be sown in wheat for the season of 1883. A shrewd observer of farming matters here, gives it as his opinion that the wheat of the county warehoused this season will amount to from 8,000 to 12,000 tons.

MENDOCINO.

HOPS.—*Ukiah Press*, July 7th: The Hop Growers held an election of officers on Saturday, as follows: President, L. F. Long; Vice-President, W. D. White; Secretary, J. B. McClure; Treasurer, Wm. Ford; Trustees, L. M. Ruddick, J. M. Luce, T. J. Fine and N. Bartlett. The hop outlook remains most flattering. The promise is that the hop harvest will open 10 days earlier than usual, and the yield will be better than last year. The outlook for prices is also improving. Eastern figures are 40 cents for choice, with a fair demand and no surplus. Local buyers have offered 25 cents. One grower refuses to take 30 cents for a large field.

WOOL.—B. Mark's warehouse, on Main street, is the headquarters of wool activity. About 800 bales are stored there. The Wool Association has its headquarters there, and the operations of grading and baling are in progress. The press is similar to a hay press, the follower falling and bringing pressure from above. It is worked by horse power, and four men are occupied in working it. When the workmen become expert it is expected that about 10 tons of wool can be baled daily, the bales running close to 600 lbs. weight. Two loads of baled wool, of Angle's clip, were started for Cloverdale Thursday. Mr. Angle expects to ship, and unless prices improve, we hear of others who will do so.

SAN BENITO.

HAY.—*Hollister Democrat*, July 7: This season's hay crop is being rapidly hauled in, a great many of the farmers taking it right from the press to the warehouse. The hay is of a finer grade, being far in advance of the usual quality. The comparative dryness of the season has prevented the growth of weeds, to a great extent, leaving the hay almost entirely clean. The same cause has prevented a rank growth of straw, to a great extent, and even in cases where the straw is large, it is pronounced sweet and juicy, so much so that horses and cattle eat it with a relish. While the yield per acre has been below the average, the acreage has been much larger than previous years, so that our hay crop will be about as large as usual. On account of the fineness of the straw a bale contains an unusual amount of heads, which makes it weigh more than usual. The price seems to be steady at \$10 per ton, delivered.

SAN BERNARDINO.

CROWDED CANNERIES.—*Index*, July 8: The last three or four days of extreme heat have had a ripening effect upon fruits, in consequence of which the canneries at Colton and Riverside are overrun. At Riverside the cannery had contracted for large amounts, and the fruit ripening, it came in so rapidly that they were unable to receive it, and a great deal was wasted.

SAN JOAQUIN.

THE CROPS.—*Farmers' Journal*: J. B. Caldwell and W. B. Garner have commenced hauling wheat to the Grange Company's warehouse. The grain of the latter gentleman is from summer-fallow, and is yielding about 16 bushels to the acre. S. H. May is also hauling to the Farmers' warehouse. F. Spunker has thrashed grain yielding about 26 bushels to the acre. C. P. Garner has thrashed some summer-fallow which gives about 30 bushels to the acre, which is of a very fine quality. T. S. Roe commences to-day to cut his winter-sown wheat, which it is estimated will go 20 bushels to the acre. He has some grain sown on bottom land which is expected to yield as high as 60 bushels to the acre.

LODI HARVEST.—*Review*, June 29: The grain harvest has commenced in good earnest in this valley. The yield is turning out much better than was expected. Headers have been kept busy in barley fields, but the wheat is ripening so fast that the work of heading wheat will also begin. Several thrashing machines have begun operations. Messrs. Taylor & Conwell began work last week. They run two headers and carry direct to the thrasher, thus saving the extra work of stacking. Joe Mead and Dill Brothers, of the Poland house, and Chesering, of Lodi, began work yesterday. John Kerr, of Lockeford, and John Harris, of Dexter, will begin Wednesday. R. Daniels, of Elliott, will begin the last of this week, and John Kerr will send out his big thrasher the 7th of July. All these thrashers were in the field last year, and gave satisfaction.

SAN MATEO.

CROPS.—*Cor. Journal*, July 6: Our crops are better than for many years past. The foothill crops are better than ever before. We cannot help but think, however, that cultivating the hills, in the long run, will be a sad failure, and our rich grass-producing ranges will be ruined. Our valley fields are turning a golden color, where the grain is not already ripe, and we can show some of the finest wheat, barley and oat fields in the State. We have a field of each barley and wheat, between Spanishtown and the bay, that will make an enormous yield. The grain is free from trash, and stands as high as the fence; it is as even and level as if sheared, and the bay breeze makes it wave like the ocean, with a beautiful sunset tint. These two fields are cultivated by Portuguese, and, when

thrashed, we will give the figures. In the richest fields, where the heavy grain is lodging, the heads are ripening, and the kernels will mature without much loss. The weather this summer has been very favorable to heavy grain, as it prevented smut and rust; but the gabels will resemble the beautiful tangled locks of an unkempt squaw. The barley and oat fields are better, if anything, than the wheat fields, and pay better.

SANTA BARBARA.

BALD BARLEY.—Santa Maria Times: Messrs. Stanley & McKee, who are farming about 15 miles northeast of this place, on the Alamo creek, has sent to this office what appears to be a distinct and new variety of barley. It was found growing wild in the mountains on the above creek about three years ago, and, by propagation they obtained seed enough to raise one acre of the grain this year. The formation of the head and grain is about the same as other barley, with the exception that it is beardless. On the end of each grain there grows a peg-shaped husk, giving it a double-grain appearance. It is remarkably plump, and has the appearance of being much superior to any known variety. Besides the acre mentioned, a barley crop is growing, and is almost ripe enough to cut, while the new variety is green and still growing, although planted at the same time.

HONEY.—Independent, July 8: The honey crop in this section of the country is going to be exceedingly small this season. Flowers and plants seem to have been plenty, but the early part of the year was cold and wet, and for this reason the bees failed to work as usual.

SANTA CLARA.

A NEW CANNERY.—Santa Clara Messenger, July 5: The building of a cannery in Santa Clara is a subject that has been written on and talked about for several years, and now, without any blow or stir, one has come to us. Messrs. Violoevich & Draghicevich, who purchased the Redmont property a few weeks since, and are now building a wine cellar, have also remodeled the old adobe on the south side of the place, and added to it a large frame structure, two stories high. The piazzas surrounding have been latticed in, and the whole building put in shape to handle fruit in a convenient manner. The firm are now prepared to buy, pack and sell green fruit for market. They will also dry largely this year, and we understand that, as soon as they get their present business well under way, they will add the proper machinery for canning fruit.

SOLANO.

ANOTHER CANNERY.—We are informed that a number of the fruit-growers of Vacca and Pleasant valleys have formed a joint stock company for the purpose of putting up the necessary buildings at Vacaville for a fruit canning and drying establishment. Enough stock has been subscribed to insure the success of the enterprise, and work will be commenced within a short time. The buildings will be finished and the requisite machinery put in in time for the next season's crop.

VACA VALLEY.—Solano Republican: During a visit to Vacaville last week we met Mr. W. B. Parker, who bought the Wilson tract, and learned from him that he was going to set out 100 acres to trees and 20 acres in vines this season. Mr. Tom. Wilson intends to set out 170 acres to trees this fall. There are many others who are adding to their already large orchards, and making new ones, and as the business of fruit-growing in that valley is not known to be a success, we predict that it will be but a short time before the whole vale will be one vast orchard. The cannery is doing a rushing business, shipping on an average one carload a day. About 100 men are employed, and between \$700 and \$800 are paid out every week in wages alone. Our first stop above Vacaville was at Mr. W. W. Smith's place. This gentleman was away from home, but we learned from Mrs. Smith, who, by the way is a very pleasant and interesting lady, that they had on their ranch about 4,000 cherry trees, 2,000 of which are now bearing, and that they have altogether in the neighborhood of 15,000 trees, a large number of which are apricot. Mr. Smith is shipping his apricots to a San Jose cannery. Mr. G. W. Gibbs we found in good spirits, and well he might be, as his crop of apricots and tomatoes is certainly a fine one. Mr. O. Garlich, next above Mr. Gibbs, has about 3,500 trees, most of which are heavily loaded with fruit. He also has about 9,000 grape vines, which are in a healthy condition, not having suffered any from the phylloxera. Mr. H. Schroeder we found well and happy, but very busy. At F. Vermilion's place, we visited the oldest apricot orchard in the valley, it having been set out in 1876.

SONOMA.

SEBASTOPOL.—Editors Press: In this part of the county there will be an abundant yield of fruit. Apple trees are loaded and the peach crop promises well, although I do not know how it compares with former years, having been a resident of this section not quiet a year. The best cherries sold at Santa Rosa are from Sebastopol and vicinity. The grape prospects are excellent, and that dreaded pest, the phylloxera, does not exist here and never will, for the nature of the soil of Anay township will not permit of its ravages, being of a sandy and gravelly character, underlain by a red clay sub-soil, and consequently retentive of moisture, which makes it one of the best soils in the State for all kinds of fruit. On Mr. Talmadge's

ranch, adjoining our place, are a large number of fruit trees and grapevines of various kinds, of which the Zinfandel is the principal variety. He has also a magnificent hop yard, situated on the bottom lands along the laguna, which is a deep, rich, black, alluvial deposit. Mr. Otis Allen has also a splendid hop yard along the laguna. In a few years this whole section will be one vast orchard and vineyard. There is so much fruit here at present, that Sebastopol would be a very good place for some one to start a fruit canning establishment.—O. F. SHAW, M. D., Sebastopol, Sonoma county, Cal.

WHEAT YIELDS.—Santa Rosa Republican, July 6: There will be larger individual yields from fields of wheat, in some instances, in Sonoma county, than for many years. The cause is attributed to the light rainfall of the season and its favorable effect on low-lying heavy soils seeded to wheat. Several crops, in advance of the harvest, are set down as promising from 50 to 60 bushels an acre. Such well known judges as John Laughlin and W. H. Rector set the T. L. Harris crop at not less than 55 bushels.

SUTTER.

HARVEST NOTES.—Sutter Farmer, July 7: R. C. Berry, of southwest Sutter, was in town on Wednesday of last week, and reports that they are in the midst of their harvest in that section and that they are going to have a good crop. His barley will yield from 30 to 35 bushels per acre. J. M. Gladden, of Meridian, says that they are in the midst of the harvest in No. 70, and that the yield is excellent. Conrad Scheuler is thrashing barley, and farmers in that section are heading wheat and barley. At the Buttes, E. J. Howard says that the whistles of thrashers is heard on every hand. Mr. Heir and Henry Rachelbush have thrashed both wheat and barley while Miller & Sewer have thrashed their barley. Mr. Howard has finished heading. George Harter commenced thrashing wheat on Wednesday. T. J. Mulvaney says there are seven steam thrashers in and about Nicolaus, and thrashing, both wheat and barley, have commenced. The yield, as far as we have heard from all sections, comes fully up, if it does not exceed expectations. John Schwall, near the mouth of Coon creek, last year, built a levee so as to have protection for about 500 acres of land, put in his crop, and it is estimated that he will harvest from 13,000 to 15,000 bushels therefrom. His pluck entitles him to the reward. Wednesday morning, July 5th, the Farmers' Union received the first new wheat on store. It was sent in by Mrs. Mary Weber, which was a few minutes in advance of J. S. Haynes. The former, three miles west of town, and the latter seven. The wheat is of the variety known as Pride of Butte; the Weber lot was thrashed by S. R. Fortna, re-cleaned by his cleaner, which he attaches to his separator at the will of the farmer. The sample is a large, full berry, and perfectly cleaned, and will grade as extra milling, if not "gilt-edged." Mr. Haynes' wheat grew on adobe soil, was injured some by the hot north winds, and is a little shrunken.

News in Brief.

THERE have been three fatalities from yellow fever lately among the Panama canal employees, and seven soldiers have died of the disease at Havana.

REPORTS from various sections of Virginia represent that not more than half the tobacco crop is planted. Indications are that the crop will be late.

It is estimated that 200,000 sheep in New Mexico have been sold to Texas men this year and driven to that State, and 30,000 wethers have been sold to Nebraska men.

DURING the fiscal year ending June 30th, there were used by the distillers of Peoria, Illinois, 4,831,568 bushels of grain, producing 18,563,156 proof gallons of spirits.

STANLEY continues to explore the Congo. It is said his report to the King of the Belgians will be so favorable that the Congo will be the chief conductor of trade into the center of Africa.

THE question of abrogating the treaty of reciprocity with the Sandwich Islands, which the Louisiana sugar interest has tried to have abrogated, has been laid over until the next session.

MEXICAN advices say that the black small-pox is raging with great violence at Mazatlan, and that Hermosillo and Guaymas are quarantining against it. There have been 50 deaths at Mazatlan.

THERE will be required in the building of the North Pacific's coal bunkers at Tacoma, W. T., more than a million feet of first-class sawed lumber, and the whole cost will be from \$75,000 to \$100,000.

It is stated on good authority that Governor Stanford intends to put the Alameda county warm springs property in complete repair and to improve it in every way, including the erection of a magnificent hotel.

THE Prince of Wales and the Duke of Cambridge will subscribe toward a fund for sending a rifle team to America. The total subscriptions now amount to £542. There will be a final exhaustive test for the selection of the team shortly.

THE walls of the foundry for the Judson Manufacturing Company, Oakland, are nearly up to the required height, and work on the wood work of the other buildings will begin this week. Property is advancing in price in the neighborhood of the factory.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR THE WEEK ENDING JUNE 27, 1882.

260,168—CLEANING CLOTHS AND OTHER FABRICS Mrs. E. I. Couch, S. F.
260,000—DEVICE FOR OPERATING STEAM ENGINE GOVERNORS—Wm. M. Ferry, Park City, U. T.
260,024—BOOT OR SHOE—Henry C. Holbrook, S. F.
260,026—ADJUSTABLE STEAM CUT-OFF VALVE—W. D. Hooker, Oakland, Cal.
260,200—APPARATUS FOR REMOVING SANDRARS IN RIVERS, ETC.—John H. Huffer, Jacksonville, Oregon.
260,217—BASIN-BIB—E. O. McGlaulin, San Jose, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

A Rural Commemoration.

One of those pleasant impromptu celebrations, such as occur naturally in the rural districts without much effort on the part of any one in particular, occurred at Anderson's Springs, on the Fourth. Ex-Supervisor Fay acted as President; Father Joseph Gallagher, Chaplain; Captain A. C. Freese, Orator; Dr. Roche, Poet; Miss Sarah O'Donnell led the audience in singing "America;" Miss Louisa Freese read the "Declaration of Independence" admirably; Miss Beckie O'Donnell gave a popular recitation. Among other sentiments offered was the following, appropriate to the place of celebration:

LAKE COUNTY.
The grandest health and pleasure ground of California. Its hills are the sublimes; its forest "plumage" the handsomest; its crystal lakes and brooks the purest; its atmosphere the clearest; its skies the fairest and bluest; its starry firmament the most prolific and brilliant; and its patriotic sons and daughters the sturdiest pioneers of all our glorious Yankee nation.

A large number of the guests of the Springs, with neighboring citizens, were present, and it was generally conceded that all duties were well performed. Dr. A. Anderson photographed the procession and the audience as assembled. Many enjoyed the afternoon in strutting about the Springs and the fine natural park in the heart of which they are located. A lively country dance closed at 12 P. M., the rare pleasures of the occasion.

Zimmerman Fruit Drier Testimonial.

SAN FRANCISCO, Sept. 5, 1881.

EDITORS RURAL PRESS:—I bought, a few weeks since, of Messrs. Linforth, Rice & Co., of San Francisco, a Zimmerman Fruit and Vegetable Drier, No. 3. I tested its merits immediately at my French Prune Orchard, near St. Helena, Napa Co. Its work was completely satisfactory in every respect. I am acquainted with some dozen fruit driers in the State, and I have not seen one whose merits equal the Zimmerman. Many of the fruit driers require from 40 to 48 hours for drying prunes, at a temperature of 150 degrees. I dried the French prunes in 12 hours. A sample of these prunes may be seen on exhibition at the Mechanics' Fair.

The success was equally satisfactory with apples, pears and smaller fruits. The construction of the drier is such that I found an unexpected economy in the use of fuel.

Its operation is so simple, that in a single day I taught a man who had no experience in fruit drying, to use it with entire success.

I tested the drier as a bleacher also, and merchants unite in saying that they had never seen such improvement in color on almonds, apples and other fruits.

C. W. HEWES, 933 Valencia St.

Volunteer Testimonials from Those Who Have Used Booth's Exterminator.

CAMBRIDGE, CAL., August 5, 1879.

A. R. BOOTH, Dear Sir:—The case of your Squirrel Poison you sent has given entire satisfaction. Our customers prefer it to any other. Will order more soon as this is sold.

GRANT, LULL & CO.

SAN LUIS OBISPO, CAL.

A. R. BOOTH, Dear Sir:—We have tried your Squirrel Poison and find it the best and cheapest of any that we have ever used, and recommend it to all who wish to get rid of the rodent.

STEELE BROS., Coral de Piedra.

JAS. H. BLACKBURN, Paso de Robles.

P. McARDLE, Los Osos.

N. NUCKOLS, Old Creek.

and many others.

FRUIT AT THE MECHANICS' FAIR.—The Record-Union started a report to the effect that the State Horticultural Society would make an exhibit of fruit at the Mechanics' fair next month. This report has been copied into several other newspapers. The statement is incorrect. The Mechanics' fair will have a fruit display, and we trust an excellent one. No doubt some members of the Horticultural Society will contribute as individuals, but the society, as such, will have nothing whatever to do with the exhibit this year. It will be under the direct charge of the managers of the fair.

"OLD RED," alias Wm. Bartree, died in his cabin, alone, on Clover creek, Baker county, Oregon, lately. Deceased was 73 years old, and was a noted character. He was a guide to Fremont, and claimed to be the first man who hoisted the American flag on the Pacific coast.

CHEAP STOCK RANGE.—Our advertising columns this week show cattle and sheep men where it is claimed that good land can be bought nearly as low as the rental of such land costs in many parts of California.

S. F. MARKET REVIEW.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 12, 1882.

The weight of the interest has attached itself to Wheat which is strong and advancing. The market is characterized by an eagerness to buy and a corresponding disinclination to sell. The result is an advance of about 5c per cwt.

The latest from abroad is the following:
LIVERPOOL, July 11.—California Wheat improving, at 10s 1d to 10s 4d. Cargoes are higher, at 5s for off coast, 4s 6d for just shipped, and 4s 6d for nearly due. The enhanced views of sellers prevent business. The tendency is upward. The weather in England is wet and unfavorable for crops. Continental crops are generally reported suffering. The Eastern political crisis is an additional stimulant to the market. Arrivals of Wheat are small. Receipts of Wheat the past three days, 158,000 cwt., including 103,000 American.

The Foreign Review.

LONDON, July 10.—The Mark Lane Express, in its review of the British grain trade for the past week, says: The unsettled and rainy weather of the past week has further endangered the Wheat harvest. English Wheat is now very scarce, and values have advanced fully a shilling. Foreign Wheat has tangibly improved on account of the increasing uncertainty of the harvest. There was a better trade on Friday, and prices were from 6d to 1s higher. The off coast market was firm, and prices about 6d higher. There were 22 arrivals and 12 sales. More business in forward trade was doing. The floating bulk increased 25,000 quarters. Flour was 6d dearer, and foreign similarly improved, being in small supply. Foreign Barley maintained full prices. Oats were firm, and Maize improved 3d to 6d since Monday, and on Friday was held for 1s advance. Sales of English Wheat during the week were 14,191 quarters, at 47s 7d per quarter, against 16,141 quarters, at 46s 8d per quarter, for the corresponding week of last year.

Freights and Charters.

The following is a summary of the engaged and disengaged Wheat tonnage in port and to arrive, according to the latest advices:

In port.	1882.	1881.
Engaged, tons.....	31,500	40,800
Disengaged, tons.....	38,800	400
To arrive, tons.....	284,400	352,200
Total.....	354,700	393,400
Decrease for 1882.....		38,700

The amount of tonnage under engagement yesterday to load Wheat was 29,300 tons, against 35,800 tons for the corresponding date last year, showing a decrease of 6,000 tons. There were 23 vessels under engagement yesterday morning at this port to load Wheat. The engaged and disengaged tonnage in port has a Wheat-carrying capacity for 105,400 short tons, against a capacity for 61,300 tons on the corresponding date last year, being an increase of 44,100 tons. The latest Wheat charters reported are the British ship Carnarvonshire, 1,330 tons, Liverpool direct, £2 10s, and ship Rence, 1,924 tons, Liverpool direct, £2 11s 3d.

Eastern Wool Markets.

BOSTON, July 11th. There continues to be quite a market for wool, and articles move slowly here and in the interior markets. Ohio and Pennsylvania fleeces have been selling at 40¢ to 42¢ for X and XX, with choice selections a shade higher. Michigan and Wisconsin X is sought at 38¢ to 40¢. Unwashed fleeces have been in steady demand, and the prices range from 25¢ to 33¢ for fine and medium, and 17¢ to 23¢ for low and coarse. Combing and delaine selections are wanted at from 43¢ to 48¢. Coarse combing dull and success nominal. California wool is very quiet, most of the stock being held above the views of buyers. Pulled wools remain quite steady, with sales of choice Eastern and Maine supe s at 45¢ to 50¢, and common and good supe s at 25¢ to 43¢. Foreign wool is quiet. The sales were confined to a few small lots of carpet, of no special importance.

BAGS.—On the Produce Exchange call, for Calcutta, buyer July, \$9 35 was bid, \$9.40 asked. On the afternoon call sales were: 2,500 Oakland, spot, \$8.65; 30,000 Calcutta, July, \$6.25. Sale on the Grain Exchange of 10,000 spot, Dundee, \$9. For July, \$9.10 was bid, \$9.20 asked, and for Calcutta, July, \$9.10 was bid, \$9.25 asked.

BARLEY.—Feed barley is more in request. Sales on the Produce Exchange call, 750 tons, as follows: 50, No. 1 Feed, spot, \$1.22; 100, July, \$1.20; 200, August, \$1.19; 100, \$1.18; 200, \$1.18; 100, September, \$1.19. Bids and offers were: No. 1 Feed, October, \$1 21 bid, \$1.22 asked; December, \$1.24 bid; No. 2 Feed, spot, \$1.19 bid, \$1.19 asked; August, \$1 15 bid, \$1.15 asked; September, \$1.15 bid, \$1.15 asked; October, \$1.16 bid, \$1.17 asked; November, \$1.18 bid; December, \$1.18 bid, \$1.20 asked; January, \$1.18 bid; No. 1 Chevalier, July, \$1.45 bid, \$1.46 asked; August, \$1.40 bid, \$1.57 asked; September, \$1.40 bid, \$1.55 asked; October, \$1.55 asked; No. 2 Chevalier, August, \$1.42 asked; No. 3, July, \$1.26 asked.

BEANS—Barn, Pink, and Red Beans are slightly advanced.

CORN—Corn has weakened and there is little demand. Bids and offers were: No. 1 Yellow, spot, \$1.50 bid, \$1.70 asked; September, \$1.72 bid, \$1.79 asked; No. 2 Yellow, October, \$1 35 asked; Nebraska, spot, \$1.60 asked; No. 2 January, \$1.27 bid; seller 1882, \$1.31 bid, \$1.32 asked.

DAIRY PRODUCE.—Butter is doing better this week, the best bringing 31¢ per lb. Cheese has advanced also about 2¢ per lb.

EGGS.—In demand and 2¢ higher.

FEED.—Bran has advanced. Corn-meal has declined considerably.

FRUIT.—C. V. Talmadge sent in the first Sacramento River Crawford Peaches of the season Tuesday, and they sold at \$1 75 per basket. Fruit is now plenty and selling well. Rates are quite well maintained, as a rule.

HOPS.—The rate is now 35¢ for the best California hops.

OATS.—Oats are quiet, and no sales reported. Bids and offers were: No. 1, July, \$1.56 bid, \$1.58 asked; September, \$1.46 bid; No. 2, October, \$1.35 bid, \$1.44 asked; seller 1882, \$1.35 bid, \$1.36 asked; No. 1, seller 1882, \$1.40 bid, \$1.41 asked.

(CONTINUED ON PAGE 44.)



We Can Make Home Happy.

Though we may not change the cottage
For a mansion tall and grand,
Or exchange the little grass plot
For a boundless stretch of land—
Yet there's something brighter, dearer,
Than the wealth we'd thus command.

Though we have not means to purchase
Costly pictures, rich and rare—
Though we have not silken hangings
For the walls, so cold and bare—
We can hang them o'er with garlands,
For flowers bloom everywhere.

We can always make home cheerful,
If the right course we begin;
We can make its inmates happy,
And their truest blessings win.
It will make the small room brighter
If we let the sunshine in.

We can gather round the fireside
When the evening hours are long;
We can blend our hearts and voices
In a happy, social song;
We can guide some erring brother—
Lead him from the path of wrong.

We may fill our home with music,
And with sunshine brimming o'er,
If against all dark intruders
We will firmly close the door—
Yet, should evil shadows enter,
We must love each other more.

There are treasures for the lowly
Which the grandest fail to find;
There's a chain of sweet affection
Binding friends of kindred mind.
We may reap the choicest blessings
From the poorest lot assigned.

Grandpapa's Old Coat.

"Only one silk and that not new! Dear me, dear me, it is dreadful!" and Aunt Grayson caught up the pretty bodice of the garment in question, and gave it a spiteful little shake. Kathie, hemming ruffles by the window, laughed.

"What can't be cured must be endured; there's no help for it, auntie," she said.

"Yes, there was help for it," cried the lady, tossing the bodice from her, "if you had taken my advice; but you must go and act like a simpleton! The idea of a girl of your age giving away her hard earnings, and then getting married without a decent change of clothing! I declare it is too absurd. And you are making such a good match, too! Charles Montague comes of one of the best families in the county, and he'll be rich one of these days, though he may be poor enough at the start, and you, having as good as thrown your money away, can contribute nothing—not even 'able to buy your own clothes, which every wife ought to do.'"

"At which time, let us hope, my scanty wardrobe will be replenished," said Kathie, merrily.

Her aunt frowned contemptuously.

"But what are you to do now?" she went on. "What do you think Mrs. Montague, of Oaklands, will think of you, when she sees your outfit?"

"Not one whit less than she thinks of me to-day," answered Kathie, stoutly, "or I should be greatly mistaken in my estimate of her character."

Mrs. Grayson laughed in scorn.

"You poor little simpleton! Wait until you know the world as I know it, and you'll change your tune. I tell you, Kathie, appearance is everything. Your bridegroom himself will feel ashamed of you when he sees you in the midst of his stately sisters, in the grand rooms of Oaklands."

Kathie winced, but she answered bravely: "I don't believe Charlie will ever feel ashamed of me, or I should give him up to-day."

"Wait until he sees you in your shabby garments."

"Shabby garments!" said Kathie, opening her bright brown eyes. "My garments are not shabby, auntie. I am quite sure I never looked shabby in my whole life."

Mrs. Grayson glanced at the trim, graceful little figure. The close-fitting blue merino was faultless; the linen cuffs and collars were as spotless as snow. Kathie was right; she never looked shabby. Her garments seemed to be part and parcel of herself, like the glossy feathers and black tuft of a canary. Yet these garments were usually made of all sorts of odds and ends, for Kathie was poor, and obliged to be rigidly economical. But she was possessed of that tact, or talent, or whatever it may be called, which is more to a woman than beauty or fortune; enabling her by the mere skill of her willing fingers and artist soul, to make life, her home, her own person, "a thing of beauty and a joy forever."

Mrs. Grayson, Kathie's well-to-do aunt, with daughters of her own, who trail their silks in the dust, and tumble their laces and plumes, and looked dowdy all the while, regarded the trim little figure by the window with a half admiring, half contemptuous smile.

"You're rather a pretty girl, Kathie," continued her aunt, "and you understand the art

of getting yourself up in good style. What you've got will do well enough, perhaps, but there's so little of it. Your bridal outfit is shameful. What will you do for carriage dresses, and dinner dresses, and evening dresses, when you are Charles' wife? Why, when I was a bride I had everything; a round dozen of silks of every hue, poplins, merinos, tissues, and a half dozen sorts of wraps. I didn't go to James Grayson bare of clothes, I tell you."

Kathie said nothing for a moment, but bent over her ruffles, her bright eyes dim with tears; then answering, "You may well say that aunt; but is it kind that you should tantalize me, when you know that your father was a rich man while mine was poor, and my uncle with all his promising to me, died, leaving me nothing."

"Such a simpleton as you've been," her aunt continued, "after toiling and teaching for your money, to turn round and give it away! I declare it puts me out of temper to think of it."

"What else could I do?" the girl burst out passionately. "Could I see poor George's children turned into the street?"

"Assuredly," answered the lady coolly, "he could have rented a house easy enough. In your place, I should have kept my money in my pocket; but you wouldn't listen to my advice. You are sorry for it now, no doubt."

"I am not sorry. I would do the same thing again to-morrow. I'm glad I had the money to pay poor George's debt, and I don't care if I even should look shabby."

"Very well, I shall try not to care, either. I shan't help you; I told you that in the beginning; I can't afford it, and even if I could I should not feel it my duty. You must bear the consequences. I'll give you some lace for your neck and sleeves, and you may wear the garnet set of Josephine's."

"I am perfectly aware of your not caring, though you are my aunt; but I don't want the lace, nor should anything induce me to wear borrowed garments. Besides I have some very fine lace which belonged to my dear, dead mother, which I shall wear in remembrance of her, knowing how happy she would be, were she alive and with me, at the event that is soon to take place."

"Oh! very well; don't snap my head off, I beg; you needn't wear them. Much thanks one gets for trying to assist you. You won't wear any hat either, I suppose."

"I have plenty of trimmings; I shall trim that light felt I wore last winter."

"And your jacket? Where's that to come from, pray?"

"Kathie's tears were gone, and her brown eyes flashed like stars as she answered, 'I intend to make myself a jacket of grandfather's coat.'"

Her aunt threw back her head and laughed boisterously, as she went on: "Grandfather's old coat! oh, that is too good. What would Mrs. Montague say to that? Kathie, child, what a goose you are!"

Kathie threw aside her ruffles, and going to the clothes-press, brought out the old coat. "The material is very fine," she said, "and this rich, old-fashioned fur will cut into nice stripes for trimming. Oh, I am sure that I can make a handsome jacket out of it, and I think," she added, softly, "grandpapa would like me to have it, if he knew."

"Grandpapa, indeed!" echoed Mrs. Grayson. "I should think you'd have but little respect for his memory after the manner he treated you, in never leaving you a penny, after having nursed him and slaved for him, as you did, night and day, for all those years."

"I have no doubt he intended to leave me something," said Kathie. "I know he did; but he died so suddenly, and put off altering his will until it was impossible to do so."

"Oh, nonsense! I wouldn't give a fig for good intentions! He had lots of money—everybody knows that; it has all gone to that scapegrace, Dugald, and leaving you without a shilling for your wedding dowry."

"Charlie won't mind that," said Kathie, her cheeks blooming like a rose.

"Won't he? Don't tell me, child! Every one thought you would be old Tom Rowland's heiress when you first met Mr. Montague. Ten to one he'd never have given you a second thought but for that. Now, that he's disappointed, he's too much of a man to back out, of course, but he feels it all the same. Don't tell me, I know it better than you."

Kathie uttered no word in answer. She took the old coat, and, crossing to the window, sat down to rip it apart. Her wedding day was drawing near, and there was no time to lose. Mrs. Grayson settled herself on the lounge for an afternoon nap; the big Maltese cat purred on the rug; the canary chirped lazily in her cage; and, without, above the waving line of the wooded ridge, the December sunset glowed.

Kathie began to rip the strong, closely stitched seams, her pretty, fresh face looking sad, but not hopeless. Aunt Grayson's world-wise talk had somewhat hurt her from its unkindness, or, rather, heartlessness.

All her life she had been such a brave, sweet little soul. Left an orphan early, she had lived with her grandfather, and made his last days bright. He said to her more than once: "You're a dear child, Kathie; by-and-by, when you think of being a bride, I'll give you a wedding dowry."

Yet, after his sudden death one mid-winter night, there was no mention of Kathie found in

the will, and everything went to Dugald, the son of a second marriage.

Kathie did not complain, but it cut her to the heart to think that, after all, she had been utterly forgotten. She tried to believe that there was some mistake, but it was very hard to do so.

And when Dugald sold out the old homestead, gathered up the funds and went off to America, she gathered up all the souvenirs and took care of them. The old fur-trimmed overcoat was one, and this was distinguished from all the rest by having a card appended to it, on which was her full name.

Then, boarding at her aunt's, she taught the village children, and saved up her earnings for her marriage day, for Charles Montague had asked her to be his wife.

The wedding day was appointed, and Kathie was beginning, with a fluttering heart, to think about making her purchases, when her brother George fell ill; and worse, got into trouble. He was rather a thriftless man and had been unfortunate; his little home was mortgaged, and unless the debt could be repaid, the house would be sold over his head. Kathie heard, and did not hesitate an instant. Her hoarded earnings went to pay the debt.

She did not regret her generosity, sitting there in the glow of the waning sunset; she would have done the same thing again. She did not doubt her handsome, high-born lover's loyalty, yet her girl's heart ached, and tears dimmed her clear, bright eyes.

It was hard to be so cramped for a little money, and one's wedding day so near. Her wardrobe was limited and sadly needed replenishing. Aunt Grayson told the truth; she would look shabby in the grand rooms at Oaklands, in the midst of Charlie's stately sisters!

The tears came faster, and presently the sharp, pearl-handled knife, with which she was ripping the seams, slipped suddenly, and cut a gash right across the breast of the coat.

Kathie gave a shriek of dismay.

"There, now, I've spoiled the best of the cloth; I can't get a jacket from the much-abused old coat. What shall I do?"

Down went the bright young head, and with her face buried in grandpapa's old coat, Kathie cried as if her heart would break.

Mrs. Grayson sneered on the lounge, the Maltese cat purred before the hearth, the canary twittered, and out above the wintry hills the sunset fires glowed in golden glory.

Her cry out, Kathie raised her head, dried her eyes, and went on with her ripping, when something rustled under her hands.

"Why, what's this? Some of grandpapa's papers!"

She tore the lining loose, and there, beneath the wadding, was a package done up in parchment, and tied with red tape and addressed in a clear hand to herself!

Kathie drew it forth. One side was marked: "This package belongs to my granddaughter, Kathie."

"Why, what can it be?" cried Kathie, her fingers fluttering as she tugged at the tape.

At last the knot yielded, and she unfolded the package. Folded coupon bonds—a round dozen at least—and a thick layer of crisp bank notes. On the top a little note. She read it: "My dear little granddaughter, here is your marriage dowry. Two thousand pounds. One day, some fine fellow—none other, I trust—will claim you for his wife. You are a treasure in yourself, but take this from old grandpapa as a light remembrance for all your care and kindness to him."

"Oh, grandpapa, then you did not forget me!" sobbed Kathie.

A ring at the door at that moment startled her. She looked out and saw her lover. Gathering her treasures into the lap of her ruffled apron, she rushed out to meet him.

"Oh, Charlie, come in quick; I've got some wonderful news to tell you!"

The young man followed her into the drawing-room, wondering what had happened.

"Oh! Charlie," she cried breathlessly, holding up her apron, her eyes shining, her cheeks aglow, "see here; I'm a rich girl, after all! I've found my marriage dowry. A minute ago I was so poor, and had nothing to give you with me. I had to give poor George all my money, and I've only one silk; and I had to trim my old hat over, and auntie laughed at me so and said you would feel ashamed of me. I was cutting up grandpapa's old overcoat to make a jacket, and I found this. Only see, £2,000! Oh, Charlie, I am so glad for your sake."

The young man bent down and kissed the sweet, tremulous mouth with a full, glowing heart as he said:

"My darling," his voice thrilling with tenderness, "I am glad of all this because you are glad. For my own part, I would rather have these dear little hands without a shilling in them. You need no dowry, Kathie; you are crowned with beauty and purity and goodness, and what could I wish more? In my eyes you are always fresh and fair and lovely, no matter what you wear. I love you for your own sweet self, rich or poor."

Kathie let the folded bank coupons and notes slip from her apron and fall to the floor in a rustling shower.

"Oh, Charlie," she whispered, leaning her head against his shoulder, "I am so glad."

"Glad of what, Kathie—grandpapa's dowry?"

"No; glad you love me for myself."

He clasped her closely, and at their feet grandpapa's marriage dowry lay almost unheeded.

Her aunt and her cousins, though they pretended to be pleased and to congratulate her,

yet it was easy to see how thoroughly they were chagrined.

The marriage proved to be a happy one, not only to the party directly concerned, but equally to "Mrs. Montague of Oaklands," and her proud, stylish daughters.

The money given to Kathie's brother proved to be the making of him. He recovered his lost ground, and in a few years he had accumulated a handsome property, repaid his sister all that he owed, though against her wishes, and showed to her how fortunate was the result of her liberality so heartily condemned by her aunt.

"The Widow's Mite."

[Written for the RURAL PRESS by JEWELL.]

Said an intelligent and charming woman to me the other day, "I aspire to be a writer some day, when more confident of my ability to entertain and instruct;" and it is the feeling and desire of many, whose ripe culture and experience make them eminently qualified for writing, if they would only begin. Now is the accepted time, friends. The present is the only time we are sure of, and any subject that interests you, as mothers, wives and sisters, will interest other mothers, wives and sisters. Your experiences, successes and failures are made easier to bear when told into the ears of sympathetic friends, and by writing them out, they reach hundreds of such friends, who learn to love you, and, perhaps, bless you for the helping hand extended them in your wise, cheerful counsel and brave words. Every one is capable of helping others; let their mite be ever so small and their lives ever so remote from civilization, so much more need have we for casting our contribution on the winds of the PRESS, that we may reach other hearts and cheer other lives equally far away, who are groping for light, and have felt just as we do and thought our thoughts, although we have never met. We all have duties to perform to others as well as to ourselves, and if we hide our light under a bushel, both we and others are deprived of the light; and if we wait until we shall be capable of writing perfect essays, or speak only when we have the power to be great orators, the world would miss very much of its richness and good, in the modest words and ideas that come from plain people, whose lives are rich in wise experiences that may help many an humble one up higher. I feel deeply the necessity for us women to read more, and write more, and think more, and talk less. "Speech is silver, but silence golden," is an old saying. It is true in writing. When it contains a germ of an idea or gives expression to a single good thought, it is golden, and does the writer, as well as the reader, a benefit. So I would say to my friend, who desires to be a writer and worker for the good of the many, begin now. Give us, of the RURAL "Home Circle," a glimpse into the sacred portals of your aspirations and soul communings. Do not hesitate in giving your mite for the benefit of us all, and who knows but, like the "widow's mite" of old, it may prove of more worth than all others.

Many persons are over-sensitive, unassuming and timid, and feel that what their hearts yearn to convey to others is of little moment to the world, and might be better expressed by others. After all, it is common experiences, common thoughts and expressions of speech that most directly concern and most readily reach us all. The writer who thinks of self rather than the subject must ever fail of reaching hearts and pleasing the fancy. Delay not because you think yourself incapable, but write because you have something you wish to say; and the simpler the language used to express an idea the better. So say the most learned and appreciative authors and readers.

Deer Ridge Farm, Alma P. O.

A GAME WITH THE CHILDREN.—"I have no time to devote to my children," says the business man, with a sigh, for he really feels the privation of their society keenly. But the excuse is an insufficient one; he should make time—let other things go, for no duty is more important than that he owes his offspring. Parents should never fail to give the child such sympathy in its little matters of life as will produce in its confiding mind that trust and faith which is a necessary element in parental influence. Filial affection is a great safeguard against evil influence, as well as a great civilizer to its possessor. Do not forget, too, that the childish mind in process of development absolutely needs the cheerful and happy influences which are produced by amusements, as sure as the plant needs sun and light for its proper growth. And who can be better persons to afford recreation than both parents? Too frequently does the stately father, filled with the cares and responsibilities of life, forget that his little one is yearning for that familiar love which induces a game of romp between them. The father's entrance after the day's labor should be a cause for rejoicing, and the signal for a merry game which would benefit him as well as the little ones.

PET NAMES.—He: "May I call you Revenge?" She: "Why?" He: "Because 'revenge is sweet.'" She: "Certainly you may, provided, though, you will let me call you Vengeance." He: "And why would you call me Vengeance?" She: "Because 'vengeance is mine.'" And she became his in a few months after.

Woman's Rights and Wrongs.

[Written for the RURAL PRESS by Mrs. C. I. H. NICHOLS.]

With all my faith in Bro. Berwick's honesty of heart (and without that faith I doubt if I would have enjoyed, as I have done, the keen encounters of his pen), I confess myself equally honored and delighted by his "graceful" and manly acceptance of what "M. E. O. W." terms a "delightful cudgeling." "Cudgeling!" I exclaimed, mentally; "I didn't think it was so bad as that!" Then I bethought me of an old friend, a clergyman's widow, who used, laughingly, to tell how, in her little girlhood, her husband—at that time her teacher—corrected her misdemeanors by furling her hands, and later, when he came a wooing, insisted that the cruel blows were "love pats." Accepting this anecdote as an illustration, I may admit the cudgeling and insist that the excellent use made of my rough lesson, accepted, as it was, for the sake of the truth it conveyed, justifies both the faith of the teacher and the worth of the pupil. But before I attempt to comply with the expressed wish of M. E. O. W.'s "Good many of us," and Bro. B.'s request that I would "enumerate the laws which I consider the most galling and obnoxious," I will answer his query in regard to the widows being legally prevented from burial in the family grave-lot. They may have been, as he suggests, "execrable widows, but as "execrable-ness" is not recognized as a statutory offense, and execrable widows find no legal bar to their final rest beside their deceased companions, we may set that matter aside as irrelevant to the cases in question.

One of the widows noticed was a childless wife and not responsible for the training of her grown step-children. The status of the other wife was not given; she may have been obnoxious to some collateral heir, not of her own blood, aided and abetted by some execrable limb of the probate confiscatory; or, what is so common as to almost pass unnoticed, she may have been the much enduring wife of a man whose precept and example, emphasized by his supreme authority, controlled and brought her influence into contempt with her children—the first great social wrong of the legal subjection of the wife; or, taking my cue from the popular witticisms of public journals and masculine literature, she was probably the mother-in-law of some graceless son-in-law, whose lack of respect and decent consideration for his wife was expressed in snubs of her patient, painstaking mother while living, to reach its climax in the denial of her right of burial in the family vault when dead. Without pretending to have exhausted the probabilities and possibilities of the cases in question, I repeat that the decisions of the courts in both turned on the legal fact that the claim of the widows was simply a life-lease—a "dower use" of one third of the husband's real estate "during life." In such a claim it is evident there was no hook to hang a hope on for the "relic" of the man from whose estate her death removed an "incumbrance." It may be proper for me right here to suggest that by cremation these non-suited widows might be legally incinerated in the tea-pot or sugar bowl generously exempted to the widow in the distribution of personal effects among heirs and creditors, if, happily, these useful articles survive her widowhood.

And now, if Bro. B. will refresh his memory by a reperusal of sundry articles in back numbers of the RURAL, all the way from January, 1874, he will find that I have pretty thoroughly and several times at his suggestions, discussed the galling and obnoxious legal discriminations against woman; meanwhile, to save time and space, I elect to follow M. E. O. W.'s suggestion, and offer a specific for "blotting them out," which I find under consideration in the Wyoming Legislature. As all legal discriminations against women have their source and origin in the one great fundamental outrage on the divine unity of the sexes in the matter of inherent rights, the only permanent cure must come through a generous practical recognition of equality of rights, irrespective of sex.

The following bill before the Wyoming Legislature, if adopted by that body, secured equality of rights to the women of that Territory, and blots out the last remnant of sex rule, as did the national 15th amendment that of color supremacy; the right of suffrage having been granted them in 1871 or 1872, and exercised with such satisfaction to the intelligent citizens of the Territory, that no voice has been lifted up for its repeal.

It is enacted by the Council and House of Representatives of Wyoming, That

SEC. 1. Hereafter women shall retain the same legal existence after marriage as before marriage, and shall receive the same protection of her rights, as a woman, which her husband does, as a man; and for any unjust usurpation of her property or natural rights, she shall have the same right to appeal, in her own name alone, to the courts of law or equity, for redress, that the husband has.

SEC. 2. Henceforth the rights and responsibilities of the parents shall be equal, and the mother shall be as fully entitled to the custody, control and earnings of the children as the father; and in case of the father's death, the mother shall come into as full and complete control of the children, and their estate, as the father does in case of the mother's death. All laws or portions of laws inconsistent with the foregoing are hereby repealed.

What more I have to say, and more especially the bearing of the question on California and its future, I leave to another week, hoping that if I have failed to meet the expectations of my friendly questioners, I have not failed to make a point or suggest a train of thought in the direction of Godlike conduct—doing justly, loving mercy, and walking humbly the panacea recommended by Bro. B. Heaven bless him!

Pomo P. O., Mendocino Co.

Young Folks' Column.

The Cunning Wee Mousie.

A hungry wee mousie peep'd out of a hole—
O, he was cunning! O, he was cunning!
Then on to the carpet he quietly stole,
Watching and running, watching and running!

Sweet crumbs on the floor lay, abundance to eat—
But he was greedy, but he was greedy;
Naught but the cheese on the table would fit.
On it would feed he, on it would feed he.

Host, guests and domestic had all gone to bed,
Ev'ry one sleeping, ev'ry one sleeping;
"What has a thief in such silence to dread?"
Mousie kept cheeping, mousie kept cheeping.

Close to the table, embolden'd, he drew,
Nearer the treasure, nearer the treasure;
Catching the cover, up quickly he flew,
Oh! what a pleasure! Oh! what a pleasure!

Traitor to conscience is subject to fear,
"What is that stirring? what is that stirring?"
Is it the smoldering ashes I hear,
Or a cat purring, or a cat purring?"

Nibbling and nibbling, again mousie starts!
"Time to take warning, time to take warning!"
Fatal delay! how it tempts wicked hearts!
Now there's no turning, now there's no turning.

There is the cat lying crouched for the spring,
Mousie detected, mousie detected;
Never again will he do such a thing,
Prayer rejected, prayer rejected!

Cats have no mercy, and neither has fate;
Left to ill-doing, left to ill-doing,
Punishment comes to us early or late;
Then we go rueing, then we go rueing.

Take you the crumbs which kind Providence sends,
Blest and contented, blest and contented;
If you must eat stolen cheese, my young friends,
You will repent it, you will repent it!

—Agn. Advertiser.

How Joe was Brought Home.

Some of Buckland's stories contain an anecdote of Joe, the chimpanzee, who was living in the Zoological Gardens some 12 years ago. He used to be let out in the mornings for exercise, and, when the time came for going back to the cage, delighted in just keeping out of reach of Sutton, the keeper. "No amount of bribery of fruit or sweets would cause him to descend from his perch. To what passion of the monkey's mind could an appeal be made, and in what form was that appeal to be presented?" Mr. Bartlett, the superintendent, had observed that two weak points in Joe's character were curiosity and cowardice; and he therefore approached the keeper in a mysterious manner, and pretended to point out to him some strange monster in the dark passage underneath the gaspise, saying, "Look out, there he is, there he is!" This worked upon Joe's fear and curiosity until he gradually came close to the passage, crooning with agitation. Then Mr. Bartlett and the keeper, crying, "He's coming out! he's coming out!" fled as if in great alarm towards Joe's house, with the effect of inducing Joe to rush into it himself at top speed. Joe, Mr. Buckland adds, never found out the trick with which he was repeatedly taken in.

STRAW AIR-CASTLES.—I will try and give directions for making straw air-castles. Cut 12 straws of a length, say six inches, and cut six little squares of red cloth; now a darning needle and long thread. Double a piece of the red cloth and string it on the thread, then a straw, and then a piece of cloth, and so on till you have four straws on the thread; then put the needle through the first piece of cloth, then put on a straw and cloth and a straw and through a corner; then a straw and cloth and straw and fasten in the first piece of cloth and cut off the thread. Now put the thread through one of the free corners and string on a straw, then through the next corner, and so on around to the first piece, and it is finished. Make three of this size and one with eleven-inch straws; hang up one of the small ones, then tie the large one on the bottom of it, then another on the bottom of that, and hang the others inside of the big square, and put a straw on the thread that we hang the inside square on, and that lets it down nearer the center of the big square; then we make smaller squares and tie on the four corners of the three and one for the bottom, and then smaller ones for the bottom of them. We make them different ways, we add more small squares wherever they will look well. I think they are the prettiest air castles I have ever seen.

SCHOOL.—School; how many pleasant memories are awakened in our mind by this single word; at the mention of it we seem to see familiar faces and hear happy voices, as in fancy we follow the well-known path to the school house. And what thoughts of hard work arise; of times when it seemed as though we never should learn this rule or work that difficult example correctly. I think the only unpleasant duty of school is writing compositions, although they are very useful. I do not think we quite appreciate our schools, if we did I think we would be more careful of how we use the advantages they give us; how many, many children there are in the world who would be glad of the opportunities we enjoy and which we are so apt to abuse. Then let us try to do our best during our school life, so that, when we come to live and look back over our past, we may have nothing to regret and nothing but pleasant memories to carry with us.

GOOD HEALTH.

The Wooing of Sleep.

An endeavor to go to sleep is a mistake. For example, when the will makes an effort to dull the ear the mental sense behind the sense organ is thrown into a condition of listening and tension. The power of hearing is not diminished, but, as it were, restricted in its range and in its heightened sensibility—as the vibratile capacity of a musical reed may be raised by reducing the length of the fiber along which its vibrations are propagated. Noises that would not previously have been noticed are perceived, and become sources of annoyance. This intensifying of the sensations in the attempt to go to sleep, of which most persons are conscious, is doubtless partly due to the quiet that prevails in the house and bed-chamber; but there is also an increase of the susceptibility of the perceptive faculty, frequently to such an extent that the ticking of a watch or the tapping of an insect behind the wall-paper will not only be heard, but be actually painful.

So it is with sight; when the eyelids are closed the inner mental sense of vision becomes increasingly acute, and the field of sight is soon crowded with grotesque and rapidly changing images. The worrying effect of this phantasmagoria is a too familiar experience of the sleep-waiter. All the mental senses are in like manner stimulated and their acuteness intensified by the endeavor to lower the sensibility of the sense organs. The mental sense of smell may be rendered so keen that the scarcely perceptible odor of bed-linen will prove offensive. Taste may be so stimulated that the natural moisture of the mouth becomes loathsome. General sensation may be so intensified that a rough thread in a sheet, or a little stream of cold air finding its way under the coverlet, will occasion the most irritating experience. In short, the whole process of attempted sense-subduing is unnatural and opposed to the dictates of reason.

No such effort ought to be made. External quiet should be secured, if quiet be personally agreeable, and whether light or darkness be preferable must depend on the idiosyncrasy. No control ought to be exercised over the senses. The eyelids should not be closed, but allowed to droop when weary. There should be no resolution to disregard sounds, or to suppress sensations of any kind. The surroundings being propitious and consonant with the "feelings," or, still better, disregarded, mind and body should be left to take their chance of sleep, without the striving which, in truth, is the principal cause of wakefulness. This is why it often happens that persons who cannot sleep in bed by night will drop off to sleep readily in a chair by day. It is the effort to sleep that keeps off slumber, and when there is no effort, sleep comes naturally. If the endeavor to sleep is made, as soon as it commences expectancy begins, and paradoxical as it may seem, the consciousness is actually kept awake to watch for sleep! This watchfulness, arising out of the eagerness of the desire for sleep and the intensity of the effort made to woo it, throws the mind into a state of tense anticipation incompatible with somnolence. Then comes the period of restless and irritated disappointment, in which the mind is so vexed, the brain so excited, and the organism, as a whole, thrown into such a state of irritability, that the best thing to do is to rise and take a bath, or wash from head to feet, with the double purpose of allaying the excitement and inducing a more peaceful mood by physical exercise.

O, HEAVEN! for one generation of clean and unpolluted men—men whose veins are not fed by fire; men fit to be companions of pure women; men worthy to be the fathers of children; men who do not stumble upon the rock of apoplexy at mid-age or go blindly groping and staggering down into a drunkard's grave, but who sit and look upon the faces of their grand-children with eyes undimmed and heart uncantered. Such a generation as this is possible in America; and to produce such a generation as this the persistent, conscientious work of the public press is entirely competent as an instrumentality. —Dr. J. G. Holland.

BITING THE NAILS.—It is a bad habit for one to get into, for the reason that those who become addicted to it forget themselves, wherever they may be, and when embarrassed they are especially apt to indulge it. The injury which is done in most cases to the fingers is one of deformity—who likes to see the stubby, uncouth finger-ends which inveterate nail-chewers show? We have the impression that the practice has a mischievous effect on a person's mouth, distorting its shape, perhaps thickening the lips, possibly giving an abnormal tendency of growth to the jaws and teeth.

TEMPERAMENT IN THE NEGRO.—Prenologists of experience are able to discern differences of temperament in the negro, but no positive rules have been laid down concerning him as in the case of the Caucasian. It remains, therefore, for the physiologists and anthropologists to classify the Negro and the Mongol temperaments. Here is a good field for wide study. We should be glad to hear from those who have had opportunities to study the races of Asia and Africa, and to communicate their views through our columns.

DOMESTIC ECONOMY.

ASPARAGUS OMELET.—Cut in half-inch pieces the tender parts of half a bunch of cold cooked asparagus and put them in a small saucepan with a bit of butter and seasoning of salt and pepper. Place it on the range where it will just get hot enough without stewing or burning while you make your omelet. Break six eggs in a bowl, add salt and pepper and two tablespoonfuls of milk. Beat until the eggs are well broken. Have your frying pan ready, with a tablespoonful of hot melted butter; turn in the eggs and stir gently with a fork until the eggs begin to set. Just before the omelet is ready to fold lay the asparagus on it, turn both ends toward the middle, hold a hot dish in the left hand, and with a dexterous turn of the right wrist invert your frying pan over the dish. The result (if you have been successful) will be a deliciously flavored golden brown omelet that will tempt the palate of an epicure. Utilize in this way cold asparagus left from dinner.

SOUP STOCK.—In making soup from raw meats break the bones apart, place them in a pot, cover them with cold water and boil slowly for five or six hours; add salt to quicken the rising of the scum, which should be thoroughly removed. Cut up three carrots, three turnips, two heads of celery and two onions; add to the stock, together with six or eight cloves, a bouquet of herbs and a teaspoonful of whole peppers; strain into a deep saucepan and clarify with the white of an egg. It will then be ready for an indefinite variety of soups.

STRAWBERRY BLANC MANGE.—Stew nice ripe strawberries, strain off the juice, and sweeten to taste; place over the fire, and when it boils stir in corn starch wet in cold water, allowing two tablespoonfuls of corn starch for each pint of juice, continue stirring until sufficiently cooked, pour into moulds wet in cold water, and set away to cool; serve with cream and sugar, and fresh strawberries if desired. This makes a pretty and delicious dessert. Raspberry blanc mange prepared in the same way, is equally good.

BAKED CODFISH.—Baked codfish is an excellent breakfast dish; cut the fish in small pieces and let it soak all night in cold water; in the morning pick it in shreds, and let it simmer on the stove until it is tender, then draw off the water, and to one-third mashed potato put two-thirds fish; stir in so that the potato will be evenly distributed. Bake until it is a rich brown on the top, serve with a sauce of drawn butter, in which cut two hard-boiled eggs.

LAMB A LA BORDELAISE.—Roast the lamb before a good fire, or bake in a quick oven, basting it constantly with butter. When it is nearly done sprinkle it with bread crumbs and a little minced mint and chopped shallot; baste now with the drippings from the meat; sprinkle salt over it and dish it up; have ready a thick brown gravy, and pour it round, but not over the lamb; add a little mint and a tea-spoonful of vinegar to the gravy.

CAKE CUSTARDS.—Moisten two cupfuls of stale cake with a custard made of one pint of milk, four eggs, and two tablespoonfuls of sugar; put it into buttered cups, set them in a pan with enough hot water to reach half way to the brim, and bake in a moderate oven until the custard is firm. They may be served in the cups or may be turned out and dusted with powdered sugar; any kind of pudding sauce preferred may be served with them.

PASTE FOR WALL PAPER.—Moisten common laundry starch with cold water to the consistency of paste, pour on boiling water until it is quite thin, stirring briskly till it is smooth; let it boil up once, and remove from the fire. Have ready a small piece of glue, dissolve it in boiling water, and add to the starch just before removing it from the fire. This paste I have found far superior to that made from flour.

TO REMOVE PAINT STAINS.—Stains of oil paint may be removed from cotton or wool with bisulphite of carbon; many by means of spirits of turpentine; if dry and old, with chloroform. For these last, as well as for tar spots, the best way is to cover them with olive oil or butter. When the paint is softened the whole may be removed by treatment, first, with spirits of turpentine, and then with benzine.

EGGLESS CAKE.—One half cup of butter, one and a half cups of sugar, one cup of sour milk, three level cups of sifted flour, one teaspoonful of soda, one half teaspoonful each of cinnamon and grated nutmeg, and one cup of chopped and well floured raisins. Beat the butter and sugar very light, and in stirring in the flour beat very thoroughly.

HOMINY FRITTERS.—Beat three eggs and half a pint of milk with a pint of cold-boiled hominy until all these ingredients are smoothly blended and form a thick batter; drop by the tablespoonful into plenty of smoking not fat, fry brown, drain on brown paper, and serve hot with maple syrup, powdered sugar, or cream.

CREAM FRITTERS.—If you have cold corn-starch pudding stiff enough to cut in slices, dip them in cracker dust and egg, and fry them, laying them on brown paper to free them from grease after they are fried; serve them with powdered sugar.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY* which occurs in any reason occurring in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.
Per line25 .80 \$2.20 \$5.00
Half inch (1 square) \$1.50 \$3.00 10.00 24.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 15, 1882.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Redwood Industry; The Redwood, 33. The Week; Beef Supplies and Values; Hop Crop, 40. Wheat Values; The Fair Season; The English Winners; Our Wool at the East; War and Wheat, 41.

ILLUSTRATIONS.—Hauling Redwood from the Forest, 34. Shotover—Winner of the Derby; Geheimnis—Winner of the Oaks, 41.

CORRESPONDENCE.—Arrowhead Hot Springs, 34.

FORESTRY.—Forest Trees of California—No. 4, 24.

POULTRY YARD.—Do Chickens Pay, 34.

THE DAIRY.—Guernsey Cows, 34.

HORTICULTURE.—Awards for Fruit Displays, 25.

THE GARDEN.—Propagation of Plants by Seeds and Slips, 35.

THE VINEYARD.—Meeting of the Viticultural Commission, 36.

PATRONS OF HUSBANDRY.—Grange Leaflets; A Trip to Wheat Land; The Grangers' Bank, 36.

AGRICULTURAL NOTES, from the various counties of California, 36-37.

HOME CIRCLE.—We can Make Home Happy, (Poetry); Grandpa's Old Coat; The Widow's Mite, 38. Woman's Rights and Wrongs, 39.

YOUNG FOLKS COLUMN.—The Cunning Wee Mouse, (Poetry); How Joe was Brought Home; Straw Air-Castles; School, 39.

GOOD HEALTH.—The Wooing of Sleep; Biting the Nails; Temperament in the Negro, 39.

DOMESTIC ECONOMY.—Apparatus Omelet; Soup Stock; Strawberry Blanc Manger; Baked Codfish; Lamb à la Bordelaise; Cake Custards; Paste for Wall Paper; To Remove Paint Stains; Eggless Cake; Hominy Fritters; Cream Fritters, 39.

QUERIES AND REPLIES.—Early Peaches in Tulare County; The Incubator Discussion; Seedling Peaches, 40.

ENTOMOLOGICAL.—Treatment for Chafers; The Value of Bubach; The Peach Worm; Insect Display at the Mechanics' Fair, 40.

Business Announcements.

Sonoma Valley College, John F. Burris, Sonoma, Cal.
Langshans, Mrs. J. Raynor, San Francisco.
Commission Merchants, Nugent & O'Neal, S. F.
California's Exposition, H. M. Larue, Pres., Sacramento.
Eubach, Buhach Manufacturing Co., Stockton, Cal.
Economy Hay Press, Baker & Hamilton, S. F.
Separator for Sale, Ernest Wall & Co., S. F.

The Week.

The topic of all tongues is the war in Egypt. War at a safe distance, with all the advantages of special reporters and cable dispatches, seems to strike the average person as something rather desirable to vary the monotony of midsummer. The news of the bombardment of Alexandria is looked for with the greatest anxiety, and the destruction of the Suez canal, although it would be a piece of outrageous vandalism, would serve to gratify a taste for sensations. The excitement, however, does not promise to last long, unless it should be necessary to fight the Egyptians in their distant retreats and to patrol the desert for the Bedouin. For one day's work with the English gunboats laid low the fortifications and filled the city with conflagrations. At home the days go quietly, and agriculturists are busily employed. The harvest still needs more men. The canneries are full of material, and are stowing it away as rapidly as possible. Preparations for raisin making are being pushed forward. The large-fruit season is approaching its height, and the pavements of peach baskets along our produce streets may soon be seen. It is the time to revel in fruit. Pleasant are the tables which are covered with it.

Beef Supplies and Values.

Beef prices are maintained, and no immediate or considerable decline is anticipated. The scarcity of beef, as we have shown in former articles, rules throughout the extent of the country, and as the beef crop requires time to reach maturity it will be some months before the supply can be increased, although the disposition will be to raise more calves than heretofore. The causes which led to the reduction of our cattle supply has interfered with the progress of our export trade to Great Britain, and thus brought less money into the country at the same time that the American consumer's steaks have cost him almost twice as much as formerly. The falling off in the shipment of cattle to England is shown in the statistics gathered by the Veterinary Department of the British Privy Council, which we have before us in a reprint from their annual report for the year 1881. Thus appears the British imports of cattle for several years:

Cattle Imports into Great Britain.

	1878.	1879.	1880.	1881.
United States.....	68,540	76,117	154,814	103,683
Denmark.....	53,253	40,785	64,788	61,976
Netherlands.....	34,402	37,017	38,795	35,990
Schleswig-Holstein.....	31,413	24,557	25,889	28,896
Spain.....	22,379	16,775	23,450	16,096
Canada.....	17,989	25,155	48,103	44,389
Portugal.....	13,243	13,492	14,736	14,082
Sweden.....	7,846	8,880	10,616	15,718
France.....	4,221	1,831	1,572	2,503
Norway.....	91	898	1,031	716
Elsewhere.....	23	12	6	203
Total.....	249,511	244,501	384,400	319,892

These figures show that our cattle shipments declined in a marked degree from those of the previous year, and thus interrupted the progression in the business which has ruled since its beginning. When the cattle export business began in this country no one thought there would be bounds to our ability to supply the animals, for the broad pastures of the central territories seemed inexhaustible. They may indeed be thus, for the falling off in our cattle supply was owing to disaster which may not recur for a generation. Bradstreet's report says:

The first cause, a scarcity of beef cattle, is due to the hard winter of 1880 and 1881, during which thousands of two-year-old steers perished on the plains and plateaus of the west and northwest. These animals succumbed to combined hunger and exposure. In ordinary winters a very small quantity of hay suffices to keep a growing steer in the districts mentioned. Ranchmen generally make little provision for feeding, hoping for a mild winter. They out and cure very little hay; consequently during a severe season the herds are decimated, and the loss is felt throughout the United States, not immediately, but later, when the three-year-old steers are used and the next crop is due to arrive. Under the pressure of demand and the desire for rapid business transactions, few steers get to be four years old. Following the severe winter weather of 1880 and 1881 came the severe drouth of the summer of 1881. This burned the pastures of the great grazing regions of the country into arid wastes, and the herds grew lean and starved. Store cattle fell to low prices, at which they were purchased in large numbers by feeders, men in the cattle trade who annually fatten many thousands of beefs for the Eastern markets. The great feeders were restricted in their choice of keep. Maize was scarce and dear, so the herds destined for the butcher were chiefly fed on distillery refuse. Eastern prices for beef will probably continue to rule high until the grass-fed cattle from Virginia and the good pastures of Kentucky and of Ohio reach the Eastern markets.

Hop Crop.

The weather in England this summer has been quite unfavorable for the hop plant, and our English exchanges speak of the multitude of lice and prevalence of blight, both of which are most obtrusive in dark, damp weather. Such has been the character of the season, so far, in England. The *Mark Lane Express* says: "Altogether, with the inclement weather and the attack of the aphides, and other evils, the prospects of the English hop planters are gloomy enough." The unfavorable weather has already occasioned the English growers much labor and expenditure. We read:

A proportion of the planters, despairing of help from Jupiter, are putting their shoulders to the wheel and are washing the plants with soft soaped water to clear them from the aphides. This is done by means of garden engines fitted with rumps and lengths of hose, which are pushed along between the rows of plants by men. If this operation is well done, and repeated whenever fresh flies appear, it is usually efficacious, but it is very costly, and requires careful supervision. One large grower in Kent has 11 of these engines at work, entailing at least the services of 70 laborers and 10 horses to fetch water. Not more than one planter in 12 washes the hop plants. Some cultivate thoroughly and apply forcing manures. Others leave the ground alone and allow weeds to flourish unmolested, thinking thereby to check the growth of the plants, and starve out the aphides quickly.

In this State the hop business is apparently gaining new life and hope. Association among the growers of Russian River and those in the neighborhood of Sacramento, has already been mentioned. The quick demand which has cleaned up the remainder of last year's crop and the prospect of a good price for the new crop,

because of the possibility of shipment of American hops to England, to supply the deficiency, gives the industry more interest and may enable it to regain the place and profit of a few years ago.

QUERIES AND REPLIES.

Early Peaches in Tulare County.

EDITORS PRESS:—I send you 20 varieties of peaches now ripe in my orchard. This includes about all the extreme early peaches in the United States. I have been for the past four years getting them together. They ripened with me this season in the order named:

1. Callie Scaff, Ashby.
2. Brice, Red May.
3. Ansdan, Musser, Alexander.
4. Alpha, Vandemen, Baker.
5. Honeywell, Gov. Garland.
6. Dickerson, Waterloo, Beatrice, Wilder.
7. Williams, Blowers.
8. Rivers, Amelia.

There is only about 15 days time between the ripening of the first and last of all these varieties, and among some of the new varieties, I find some that are far superior to what we have had heretofore. The fruit crop here this season is good, including all varieties, but we are unfortunate, and do not happen to be at a competitive point, so our fruit has to rot, as the railroad company discriminates against us, so we cannot ship it as cheaply to the southern part of the State and Arizona as you can from San Francisco, though we are 240 miles on the road. Should this meet the eyes of the Hon. R. R. Commissioners, they will find out, by investigating, that it is true. These rates are so fixed that we have to pay one cent more per pound, express to Los Angeles than the fruit dealers do from San Francisco.—I. H. THOMAS, Visalia, July 3d.

These peaches were unfortunately shipped so that they arrived during the Fourth of July season, and were held so long that they were a mass of decay and mold when they reached us. It was, however, discernible that the peaches were unusually large, and some of them richly colored far beyond the custom with early peaches. Our correspondent's record of the time of ripening of so many early peaches is well worth noting.

The abuse of the transportation companies should be well sounded abroad. It is an outrage that people who can grow such fruit should be placed at such a disadvantage in the way of cost of shipment. The discrimination against the upper San Joaquin valley is a crying shame.

The Incubator Discussion.

EDITORS PRESS:—What has happened the champions of the incubator controversy? No doubt, many are waiting and watching for further developments. As a general thing, the people drink in with avidity all that may be said on a subject in which they are so deeply concerned. Shall we hear more, or has it received its grand finale?—L. C. B.

We suppose the subject is undergoing incubation, and something will hatch out if the heat does not run up too high.

Seedling Peaches.

EDITORS PRESS:—I send you to-day two sample peaches. They are a seedling from Hale's Early, and ripen 1st of July. The tree is a good bearer. Please give size and weight.—G. W. THIBBLE, Winters, Cal.

The peaches strike us as very valuable. The samples were almost 10 inches in circumference and the weight one-half pound each. The flesh only partially adheres to the stone, and is white from pit to peel. The color is a handsome, greenish yellow, with a slight blush. The flavor is excellent. The peach has many good points and should be propagated.

THE SCARCITY OF HARVEST HANDS.—The scarcity of harvest hands has been mentioned several times in recent issues of the PRESS. The trouble seems to be widespread. The *Woodland Democrat* says: Our farmers are greatly troubled on account of the scarcity of labor, and it is very difficult to get any help, although large prices for workmen are offered. Many farmers will be compelled to use Chinamen almost exclusively, white labor being unobtainable. Of the scarcity of farm help about Gridley, the last issue of the *Herald* says: "Ranchers have been greatly troubled the past week or two about obtaining the help necessary to harvest their crops. It is estimated that at least 50 men could get employment in the grain fields of this neighborhood now, as very few of the farmers have full crews. The main cause for this annoyance is stated by many ranchers to be the policy pursued by thrashers, who engaged their crews before they were needed, thus exhausting the supply ere the grain was ready for the header. Of course, the results will be felt more especially by the thrashers, as the grain cannot be thrashed before it is out, and the short-handed crews in the fields will not be able to keep the separators running steadily."

PREPARING FOR THE FRUIT GROWERS' CONVENTION.—The Santa Clara County Horticultural Society is at work preparing for the State Convention of fruit growers which will be held in San Jose. At the last meeting of the society Dr. Chapin said that while in Sacramento he had been interviewed in regard to holding the convention in San Jose, and he had promised that all necessary arrangements would be made. It is definitely determined that the Convention will be held on the second Tuesday in November. The convention will consist of between four and five hundred members. He had figured on the expense, and thought that \$150 would at any rate be needed. After some further discussion on motions and amendments, a motion was finally adopted that the Chair appoint an Executive Committee, whose duty it shall be to make all necessary arrangements for the State Horticultural Convention, and solicit funds to defray the expenses. The Chair appointed as such committee Messrs. Vestal, Holland, Haynes and Taylor. On motion the Chair was added to the committee.

ENTOMOLOGICAL.

Treatment for Chafers.

The May bugs or cockchafers are still doing damage in the orange orchards. J. W. Redway, of Los Angeles, writes that Mr. Cooke thinks the Los Angeles species may be the "sickly-leaf chafer"—one of the worst of the kind. It is now very late in the season to take the matter of their destruction in hand, as the larvae have probably begun going into the chrysalis or pupa stage, at which time they hide themselves securely in the ground. The grub or larva is a fat, white worm, which lives in the ground and makes excellent chicken feed; hence, a thorough cultivation of the soil about the tree, and a fair size brood of chickens will do ten times as much as an insecticide. The pupae or chrysalids are not easily destroyed. The best way to get rid of the perfect beetle is to place a sheet under the tree and give the tree a good shaking. The beetle easily tumbles off the leaves and twigs, and may then be destroyed.

A good application of salt or of copperas finely powdered, just before irrigation, is a fairly effective insecticide in case of the larvae; the beetle, which is a voracious leaf eater, must be picked or shaken off the tree and thrown into the fire, as they are generally distended with eggs. On this point one cannot be too particular.

The sickly-leaf chafer is not a difficult pest to get rid of if the orchardist goes about the work systematically and thoroughly. The insect usually drops off the leaves at night and remains in the ground until the sun is up next morning. Hence the work of destruction should take place during the sunny portion of the day.

The Value of Bubach.

The fame of the California insect powder known as bubach, which is now grown and manufactured on a large scale in the San Joaquin valley, is gaining a fine reputation at the East as well as on the Pacific coast. W. A. Henry, Professor of Agriculture at the Wisconsin University, writes to the *Rural World* as follows:

Having used the pyrethrum powder for several years, I unhesitatingly recommend it for the purpose claimed for it by its friends. It is harmless to the higher animal life, and death to insects. It is too expensive to be used in field operations, except on the higher-priced vegetables, as cabbage, cauliflower, etc. Mix the powder with 20 times its bulk of flour, letting it stand over night before using, or mix with cold water and apply with a sprinkler. Professor Cook, of the Michigan Agricultural College, found that one pound of the powder was effective in 200 gallons of water, when applied for killing the cabbage worm. The powder must touch the insect to be effective, and loses its value if left long exposed. Its power is due to a volatile oil. If used intelligently, it is a wonderful insecticide. My wife uses it for killing house flies, moths, etc., with entire satisfaction.

This experience is in accord with our own. Bubach is our standard remedy for house insects of all kinds, and is the neatest and readiest remedy for aphids on garden plants we know of. It is used in large quantities by our fruit driers in killing the flies and moths in their packing rooms. The new crop is now being ground, and we hope there will be more of it than last year, when the demand far exceeded the supply.

The Peach Worm.

The presence in the peach of a worm resembling the larva of the codlin moth was made prominent in the discussions before the Horticultural Society, which we printed last week. We have ourselves found plenty of them burrowing into the flesh of the peach, the specimens varying in size from one-quarter to one-half an inch in length. This pest is becoming noticeable everywhere, as the following item from the *Sacramento Bee* is evidence: "The peaches brought to market up to this time appear to be more or less wormy, and it would be well for persons to examine them before eating. But one or two varieties of this fruit have thus far been marketed, and it may be that those to come will be free from pests."

Insect Display at the Mechanics' Fair.

The *Record-Union* states that Chief Horticultural Officer M. Cooke, proposes to make an exhibition of the various diseases of the fruit trees of the State and of the insects injurious to fruit and fruit trees at the Mechanic's fair. His exhibition will be a complete success, as it was at the State fair last year. This feature of the fair will appeal directly to the practical fruit growers of the State, and will be an important school in which they can study with profit the difficulties they have got to meet and overcome to achieve success in their business. They will not only learn what these difficulties are, but will learn how to overcome them.

FINE CHERRIES.—There rests in our memory a deep impression of a box of superb cherries, assorted varieties, which came to our office from Dr. J. Strentzel, of Martinez. The Alhambra orchard is the source whence some of the finest fruit comes to the bay cities, and the generous impulses of its owner are a continual source of joy to his many friends.

A MAN known as French Joe was badly used up in an encounter with a bear, near Benson's Landing, M. T., last week. He was creeping up to some deer, when a bear sprang upon him from a clump of bushes. He managed to escape by feigning himself dead, but not until he had been badly mangled by the ferocious beast.

Wheat Values.

Aside from the chance of war, hardening the value of American wheat, there is reason enough in poor European crops to warrant a good price, even if peace should suddenly smile on the land of the Pharaohs. The wheat crop in England is passing through another season of unkindly skies and a larger deficiency is expected than existed last year. On the continent, too, there have been unfavorable conditions, and surpluses will be small and in poor condition unless a change comes speedily. As the subject is one of the greatest importance just at this time, we have collected such information as is available concerning the outlook for wheat at the beginning of the present month. The *Mark Lane Express* says: "The wave of cold, accompanied by a copious rainfall, which has swept across Europe, has given rise to complaints of the wheat crops having become lodged, and apprehensions in respect of the blossoming time. From France the reports have changed all at once, from confident expectation of an abundant yield, to doleful apprehensions of ruinous disaster. Most of the French wheat crops were in blossom during the inclement weather, and extensive injury may possibly have occurred."

The Russian crop seemed to be in a bad way. The *Odessa Zeitung* says that in the Crimea the prospect of the corn crops is very bad. In most places, until now, there has been no rain, or at most, nothing to speak of. The wheat is so bad that the farmers say the most they can get, by very favorable weather, is only double the seed sown. The same dreary prospect has the present appearances of the spring corn.

In the United States there will be a good crop, according to the latest reports of the Department at Washington. A dispatch, dated July 11th, says:

The condition of winter wheat averages higher than that of previous July returns, 104% against 83% for last July. The spring wheat average stands 100% instead of 90%, as in 1881. Unless the proportion of wheat to straw should be less than usual, or the grain be damaged after thrashing, the crop must prove one of the largest ever garnered in the country. The average condition of the principal winter wheat States is as follows: Ohio, 101%; Kentucky, 104%; Indiana, 104%; Michigan, 106%; Illinois, 105%; Missouri, 111%; Kansas, 116%; Pennsylvania and the Southern States each stand at 100% or above; California, 90%; Oregon, 105%. The spring wheat averages are as follows: Wisconsin, 94%; Minnesota, 98%; Iowa, 102%; Nebraska, 105%; Dakota, 98%; Colorado, 98%; Maine, 101%; New Hampshire, 103%; Vermont, 94%. The harvest of winter wheat on the 1st of July was completed in the South, and was in active progress in Kentucky and commencing north of the Ohio river. At this date it has reached the latitude of 40°, and will soon be completed. The condition of oats is very high, averaging 105%; rye, 101%; barley, 95%.

This report gives California too high a place, for the outlook for a crop this year is certainly not nine-tenths of what it was a year ago. It is true that some districts are turning out better than expected, but the immense areas which will not return the seed put in the ground, will reduce the aggregate to a much lower figure than that indicated.

The Fair Season.

The opening of the Mechanics' fair will usher in the season of fairs. For nearly three months there will be industrial expositions in progress at different points in the State. These exhibitions are in fact industrial academies, where all may gain information of the general progress of our industries, or the achievements of individual workers. It is a fortunate thing that the fairs embody also the spirit of entertainment, and visitors are pleased and instructed at the same time. There are some features of the fairs of to-day which we do not approve, and it is to be hoped that coming years may see improvements in the policies of those who manage them. In their present state they do much good, and if more of our best citizens and legitimate producers would manifest an interest in the work of the fair societies, the evils which attend them might be reduced or done away.

For the information of our readers, we give below a list of the coming exhibitions on this coast in the order of their occurrence:

Mechanics' Institute fair in the new pavilion, San Francisco, August 15th to September 22d.
California State fair at Sacramento, September 11th to September 16th.
Sonoma and Marin District fair at Petaluma, August 28th to September 21.
Golden Gate District fair at Oakland, September 4th to September 9th.
Butte District fair at Chico, September 5th to September 8th.
Eldorado District fair at Placerville, September 5th to September 8th.
San Joaquin District fair at Stockton, September 19th to September 23d.
San Mateo and Santa Clara District fair at San Jose, September 25th to September 30th.
Modoc, Plumas and Lassen District fair at Greenville, October 2d to October 5th.
Monterey District fair at Salinas City, October 2d to October 6th.
Humboldt and Mendocino District fair at Robnerville, September 19th to September 22d.
Shasta and Siskiyou District fair at Yreka, October 4th to October 8th.
Santa Cruz County fair at Santa Cruz, August 15th to August 19th.
Sonoma Park Association races at Santa Rosa, August 22d to August 26th.
Mendocino County fair at Willitsville, September 4th to September 16th.
Lake County fair at —, September 26th to September 29th.

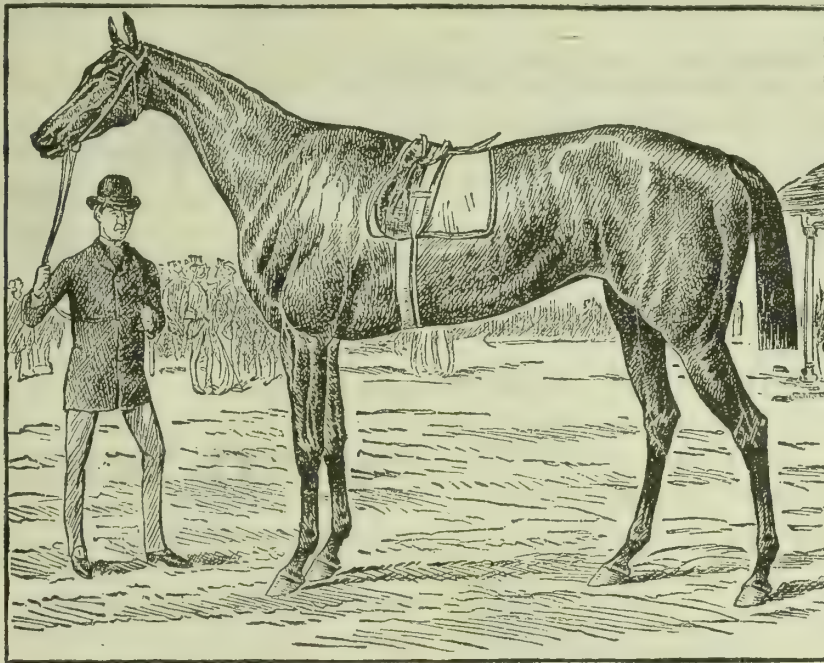
We shall be pleased to hear from all the societies, that our list may be complete in some future issue of our paper.

Two English Winners.

We give on this page, portraits of two English horses which have made themselves famous by their achievements at the two greatest occasions on the English turf—the Derby and the Oaks. We take the notes descriptive of the races from the *Rural New Yorker*:

Shotover, Winner of the Derby.

The greatest horse race in England—the greatest in the world—was run at Epsom, a dozen miles southwest of London, on Wednesday, May 24th, being the first Wednesday before Whitsuntide, the day always assigned to this grand contest of three-year-old colts and fillies. Owing to the day being also the Queen's birthday, the immense throng always in attend-



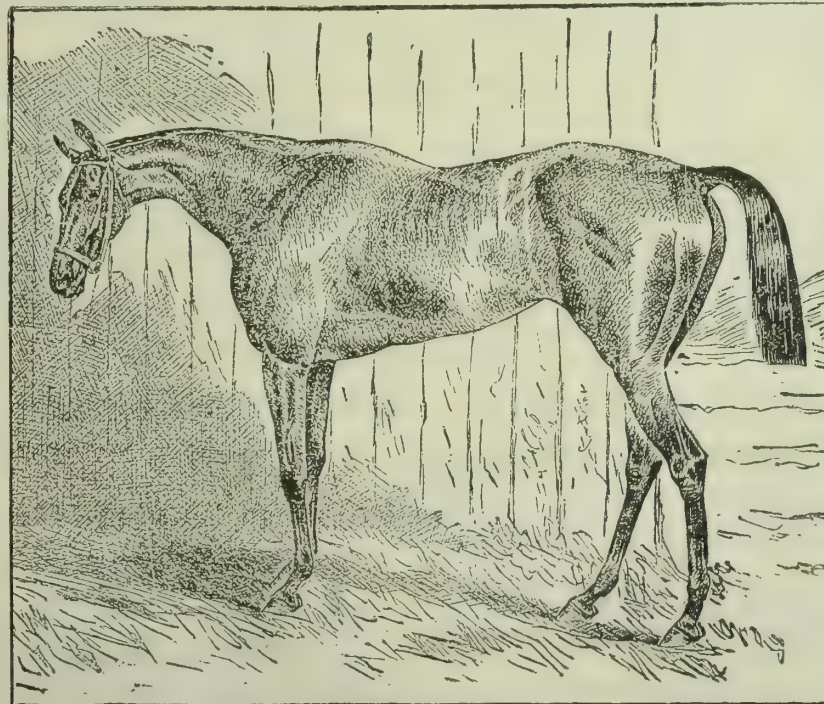
SHOTOVER—WINNER OF THE DERBY.

ance at the Derby, was even larger than usual. Just before the great race of the day the arrival of the Prince and Princess of Wales added to the hilarity and festivity of the occasion. The winning of the race by Iroquois last year—the first time the Blue Ribbon of the Turf was ever carried off by an American—gave an increased interest in the event this year not only

sale in July, 1880, having brought 1,480 guineas (about \$7,550). The chestnut filly was purchased for the Duke of Westminster, but although she started last year as a two-year-old in several races, she never got "placed," so that nobody dreamt of her as a possible Derby winner, until she won the 2,000 guineas in April last; and although two days later she was defeated by Marguerite for the 1,000 guineas, strong expectations have since been entertained that she would carry off the Blue Ribbon of the Turf.

Geheimniss, Winner of the Oaks.

Next to the Derby the great event of the Epsom summer meeting is the Oaks for three-year-old fillies, won this year, on Friday, May 26th, by Lord Stamford's Geheimniss, Marguerite coming in a good second. The Oaks is just as old a race as the Derby, the last having been



GEHEIMNISS—WINNER OF THE OAKS.

to American visitors in Europe, but also to thousands of Americans here at home, especially as two American horses—Sachem and Gerald—belonging to Mr. Pierre Lorillard, the owner of Iroquois, were also among the fourteen contestants this year.

Since the last "Derby" the betting on this race has varied greatly, as the chances of each of the contestants rose or fell by trials of speed or public rumor. At the start, however, the betting was 9 to 4 against Bruce; 5 to 1 against Shotover; 6 to 1 against Quicklime; 10 to 1 against Dutch Oven; 12 to 1 against Sachem, and heavier odds against the other nine runners. The three first horses at the winning post are said to have won "a place," and of these, none was at the head of the field until a couple of hundred yards from home. Then Quicklime shot ahead of all; but after a few strides, Cannon, the rider of Shotover, timing his efforts to a nicety, urged his horse ahead and won handsomely by three-quarters of a length.

The winner was the highest-priced of Mr. Henry Chaplin's yearlings at the Newmarket

prime favorite, the betting at the start being 3 to 4 on her. She won easily by two lengths, in 2:49, having been ridden by Cannon, who also rode the Derby winner. This jockey bought her as a yearling for 330 guineas, and after she had won several victories as a two-year-old, he sold her to Lord Stamford for 2,000 guineas, and a share of her future winnings. Her two-year-old career ended with an unbeaten record of 7 races won. For some time she has been considered by most good judges the fleetest filly on the English turf, and the opinion is freely expressed that the winner of the Oaks could beat the winner of the Derby, an opinion generally thought to be confirmed by the fact that the Derby winner was an absentee from the Oaks.

Our Wool at the East.

The reports of the Mendocino Wool Growers Association, which we have printed from week to week in our agricultural notes, show that the growers are determined to test the Eastern market on their own account. The action of the eastern buyers who visited us this spring was quite unsatisfactory and the market has been slow and prices low so that a considerable accumulation of wool occurred. It is of course impossible to say what will be the result of the eastern shipments, but the experiment is certainly one which ought to be tried when our best wools do not bring here the equivalent of the rate announced at the East. There is however no little risk attending the venture.

There are some indications that the wool growers' experiment is to be made at a time when the outlook is favorable for success. The wool market has been persistently talked down by the eastern authorities below what the facts seemed to warrant, and it can now be shown that the trade has been greater than was claimed and that the outlook is good for a substantial maintenance of values if no great advance is to be expected. The circular of Walter Brown & Co., of Boston, for July 1st, shows that a strong undertone of actual use has prevailed in spite of the cries of dullness. It says:

The volume of business this week has been larger than that of last, the sales aggregating 2,312,000 lbs of foreign and domestic, against a total of 1,637,700 for the previous week. The amount of the sales is, we think, a surprise to many, as the inquiry has been light and the general tone of the market quiet. Prices have been well maintained; we can quote no change in them, and the prevailing impression is that there will be no changes from current values during the next few weeks. Notwithstanding the dull market and unsatisfactory business which has been experienced this spring, the amount of business for the first six months of this year is slightly larger than for the corresponding time last year; and the *Boston Daily Advertiser*, which gives as reliable statistics as could be collated, reports the total amount of sales in this market for the first 6 months of this year at 52,142,886 lbs, against 50,905,459 lbs for the corresponding time last year, or an increase of 1,237,527 lbs, which shows the consumption of wool, judging by the sales, for there has been almost no speculation, and despite the extremely depressed state of the woolen goods market, has held its own, and has slightly increased. The demand still continued the best for fine wools, although there has been a little more inquiry for the finer grades of medium. In the delaine and fine combing wools nothing of consequence has been done, but these grades will sell freely when there is any selection of them in the market, the present stocks being mostly what has been left from last year's wools, and are therefore in small quantities. Fine washed wools are selling well, and their values are nominally unchanged, a few of the choice clips or extra condition bringing the highest quotations. The reports from the London auction sales continue favorable, and the prices on fine wools are higher at the close of these sales than they were at the opening. Woollen goods have maintained the improvement previously noted, and the prospects for the future are brighter, we think, than they were a few weeks ago.

This shows that the improvement and the promise lies in the line of the best fine wools, and this is just the commodity which our Mendocino growers propose to send forward. We trust their enterprise will be rewarded.

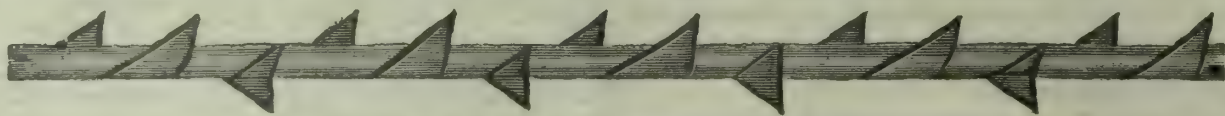
War and Wheat.

On Tuesday morning the guns of the British fleet opened fire upon the fortifications of Alexandria, and again war has been carried into Africa. The unruly Egyptians arose against the foreigners and committed many outrages. England could gain no surety that such outrages would cease, nor could she gain access to the country to restore peace by the presence of her forces. The result was that notice was given of the bombardment of the city, and on Tuesday morning all the foreign steamers, except the British, moved from their berths and steamed out of the harbor of Alexandria. The merchant steamers presented no regular order, but the war ships of the various nations steamed out in squadrons, saluting as they passed the British Admiral's flag. The band played national airs. Scarcely a breath of air was blowing. The various ensigns drooped against the masts. The bright eastern sky overhead, the deep blue sea, the white-clothed crews clustering on the rigging, and the knowledge of the change which would soon take place, rendered the stately procession of war ships extremely impressive. The merchant steamers were all crowded with refugees—those who had held on to the last in hopes that matters would not come to an extremity. Thus left alone with the defiant city, the streets of which had been stained by the blood of British citizens, the British Admiral opened fire, and thus declared war with Egypt. There is no reason to expect much of a contest, unless other powers should be engaged, but there is a chance that a general disturbance may result and a war of some magnitude, perhaps, ensue.

The chief interest which pertains to the occurrence at present is the prospective effect upon our produce markets. It will appreciate the value of our wheat in a marked degree and may yield us more money for a light crop than we might otherwise get for a heavy one. War always raises prices of food supplies and in the present case there are wide chances for fluctuation. The English home crop is rather light and is now experiencing very unfavorable weather. The uprising in Egypt will also result in the stoppage, if not the destruction of, the Suez Canal, unless peace is speedily achieved.

The close of the Suez Canal will hinder the transportation of Indian wheat, the supply of which has become a constant factor in English prices. It would seem that there is a good chance for a very satisfactory sale of our wheat and it is to be hoped that the benefit thereof will rebound to the growers rather than the speculators.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

Summer Resorts.

Highland Springs SANITARIUM.

This popular and healthful summer and winter resort for families, pleasure seekers and invalids, is situated in Lake County, 25 Miles from Cloverdale.

Seven miles south of Lakeport, four miles of Kelseyville, and in sight of Clear Lake, at an altitude of 1700 feet, and is sheltered from the cooling Coast Winds and Fogs by mountains 1600 feet in height, which for

Grandeur and Beauty of Scenery are unsurpassed on the Pacific Coast.

While the Beneficial Effects of its Mineral Waters are equal to any in the United States or Europe.

MAGIC SPRING.

Analysed by Prof. W. B. Rising, University of California.

TEMPERATURE.....	Grains per U. S. Gallon.
Chloride of Sodium.....	1.290
Bicarbonate of Potash.....	0.441
Bicarbonate of Soda.....	21.703
Bicarbonate of Lime.....	50.411
Bicarbonate of Magnesia.....	70.243
Bicarbonate of Iron.....	0.073
Bicarbonate of Manganese.....	trace
Silica.....	7.395
Alumina.....	0.169
Organic Matter.....	trace
Free Carbonic Acid.....	74.462
Total.....	237.262

W. B. RISING, Berkeley, April 3, 1882.

DR. C. M. BATES (formerly of San Francisco), having become sole proprietor, by purchase and lease, of these justly celebrated Springs, will devote all necessary time and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations. Carriages, Buggies and Saddle Horses Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily. Post Office and Telephone connected with hotel. Direct Route via San Rafael and Cloverdale 7:10 A. M., will arrive at Springs 5:30 P. M.

By steamer "DONAHUE," via Donahue Landing, 2:30 P. M., will remain over night in Cloverdale; and via Napa and Calistoga, 8:00 A. M.

On Tuesdays, Thursdays and Saturdays will be met at Kelseyville with private conveyance, if notified.

For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, - - Proprietors.

These Springs are particularly beneficial in purifying the blood, and are surpassed by any in the State for the cure of rheumatism, dropsy, scrofula, weak muscles, dyspepsia, constipation, catarrh, skin and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Board and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake, two and one-half miles from the Sugar Springs, two and one-half miles from "Bassett's" place, in Cobb Valley, only six miles from a good trail from the Hawaiian Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, 25 cts. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

HARBIN HOT SULPHUR SPRINGS,
LAKE COUNTY, CAL.

The Springs are now open for the reception of guests. Stages leave Calistoga daily, on arrival of morning trains from San Francisco and Sacramento. Stage Fare Reduced to 25 cts.

RICHARD WILLIAMS, Proprietor.

SODA BAY HOTEL, A NEW AND BEAUTIFUL SUMMER RESORT.

SODA BAY, on Clear Lake, Lake County, Cal., the favorite lacustrine resort, is justly regarded as combining greater advantages and affording more attractive and interesting natural features than any other watering place in the State. This estate, secluded from the weary winds of the coast, is invaluable for the health of children and delicate persons - indeed, for all requiring the change demanded annually by the residents of San Francisco. While entirely free from the fog, the wind and the chill of the sea coast, the climate is greatly modified from the heat of the interior by the proximity of the beautiful lake, upon the margin of which, for a distance of two miles the grounds are extended. A splendid grove of live oak, pine and manzanita trees, of great age and grand growth, affords the most delightful shade. A beautiful bathing beach offers the choicest facilities for aquatic pastime, far from the danger of the sea - surf or chill.

The Great Spring - Indian name, OMAK-ACH HAH BEE, emitting not less than a million gallons daily, of delicious effervescent soda water, is one of the most interesting natural curiosities of California, and the bath in its exhilarating fountain has an electrical effect that is as delightful as it is beautiful. Extraordinary sulfatic action around the shore of the bay, due to the presence of innumerable mineral springs and chemical action upon a vasty extended scale, has given the place the name by which it is known - Soda Bay.

Daily excursions are made to Borax Lake, Sulphur Banks, and other points of interest. A new trail leads to the summit of Uncle Sam, 4,400 ft. above the sea.

Ample provisions are made for the entertainment of the patrons of this popular resort. The Hotel and the cottages are furnished with comfort and taste. Among the diversions of the place are boating and sailing - yacht and steamer, bowling, billiards, croquet, equestrian exercise, fishing and hunting, and a beautiful pavilion for music and dancing; in short, nothing is lacking for the enjoyment of those who seek rest and recuperation or interesting and healthful recreation beneath the shady oaks and by the ever beautiful lake, in a climate which, for health and for comfort, is acknowledged to be unsurpassed. If, indeed, equaled in the world. Billiards, croquet, tennis, and bath, free.

To reach Soda Bay from San Francisco, go by train to Calistoga or Cloverdale, thence by stage to Kelseyville, at which place a carriage from the hotel will meet passengers. Through time, 11 hours. For further information address, A. K. GREGG, Uncle Sam P. O., Lake Co., Cal.

MAMMOTH GROVE HOTEL, Calaveras Big Trees, CALAVERAS COUNTY, CAL.

J. L. SPERRY, - - Proprietor.

Tourists can find at the Calaveras Group larger, taller and a greater number of Big Trees than can be found in all other groves of California combined.

THE MAMMOTH GROVE HOTEL is situated right in the Calaveras Grove. This grove contains 93 of these giants of the forest.

THE SOUTH PARK GROVE

Is six miles distant, and contains 1,350 Big Trees of immense size. This grove has been inaccessible to visitors until quite recently. A good horseback road now connects the two groves. There is the finest trout fishing and hunting in the immediate vicinity.

Those seeking health or pleasure can find the very best climate in California, and first-class hotel accommodations.

Fare from San Francisco, \$11; from Stockton, \$8. Leave Stockton at 8 o'clock A. M.; by rail to Milton. Thence by stage coach to Trees - same day.

Stage to and from Yosemite leaves and arrives daily.

No. 3 Montgomery St., S. F.

BARTLETT SPRINGS.

Situated 16 Miles Northeast of Clear Lake, in Lake County,

Forty miles West of Williams, Colusa county, on the main traveled road from Colusa to Mendocino.

Three Different Routes to the Springs,

One via WILLIAMS, one via CLOVERDALE, LAKEPORT and UPPER LAKE, one via CALISTOGA and LOWER LAKE, and all connecting with the train

LEAVING SAN FRANCISCO AT 8 A. M.

Fare will not exceed TWELVE Dollars either way. Daily Mail via LAKEPORT, RT. Semi-weekly mail via WILLIAMS. Post Office, Express Office and Telegraph Office here all the year through.

C. E. CLARKE,
J. C. CRIGLER, Proprietors.

ANDERSON'S SPRINGS, LAKE COUNTY, CAL.

Nineteen miles from Calistoga, Napa county. Five miles from Middleton, and ten miles from the GREAT GEYSERS, between which and Anderson Springs, there are good Wagon Roads.

Hot Sulphur and Steam Baths

For the Cure of Rheumatism, Paralysis, St. Vitus' Dance, Dropsy, Etc. Cold Sulphur for Dyspepsia, Diseases of the Stomach and Kidneys.

Scenery Unsurpassed. Climate Mild and Equable.

Consumptives generally improved in health, and asthmatics are invariably relieved. Trout Fishing in the grounds. Deer hunting in the immediate vicinity. New Cottages for the better accommodation of guests. Cooking good.

IMPORTANT RECOMMENDATIONS. Remarkable Cure of Dropsy.

VALLERIE, June, 1882.
I suffered intensely with dropsy, and was induced by Mr. Edgcomb to try Anderson's Springs, he having been cured there, after undergoing frightful agonies, being tapped three times before he reached there; and I am deeply grateful for taking his advice, for such a beneficial effect had the Springs on me, that I am now entirely cured, and advise all who may be suffering to try Anderson's Springs.

KATE MACKAY.

Sight Restored.

A candid and well-known gentleman of San Francisco certifies briefly as follows:

May 31, 1882.

"I was cured of inflammation of the eyes at Anderson's Springs, Lake County." M. J. DUNN, 425 Brannan St., S. F.

Many other cases of Dropsy and Paralysis, Rheumatism, Swelling of Limbs, and various other obstinate cases of chronic diseases have been cured from year to year, at the above-named springs, which are located in Lake County, 19 miles from Calistoga. Special regard is paid to the diet of guests, who are liberally furnished with good home cooking, etc. send for further information. Address

ANDERSON & PATRIQUIN.

Anderson's Springs, Lake Co., - - via Calistoga, Cal.

Pacific Congress Springs.

This Celebrated Resort for PLEASURE and HEALTH will be opened for the reception of guests

On and after April 15th.

Stage connections made at LOS GATOS with MORNING and AFTERNOON trains of the Narrow-gauge Railroad.

THROUGH TICKETS

Can be purchased at FERRY LANDING, foot of Market street, San Francisco, PRICE, \$2.75

ROOMS CAN BE SECURED

And arrangements made at any time by addressing

LEWIS A. SAGE,

Saratoga, Cal.

Proprietor.

Lane's Mineral Springs,

CALAVERAS COUNTY, CAL

Pine and Hemlock Chemical-Vapor and Electro-Thermal Baths.

Connected with these Springs are Hot and Cold Baths. The Water of these Springs is Cold, Clear and Palatable, having been used 20 years for Medical purposes.

These Fountains of Health are located 35 miles east of Stockton in the foothills of the Sierras, at an altitude of 1,000 feet above the level of the sea. Always ready, Winter and Summer, for the reception of patients, on account of the even temperature of this most genial climate.

The accommodations consist of a Hotel, Cottages, Camp Grounds and Stables.

Stage leaves Commercial Hotel, Stockton, at 7 A. M., Tuesdays and Saturdays.

P. O. Address, Knight's Ferry, Stanislaus Co., Cal.

JAMES HUTCHINS, Proprietor.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

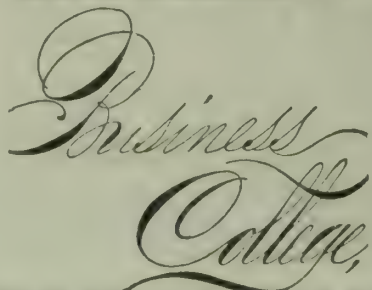
CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office - 318 California Street, Room 3.

Educational.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study. Full Business Course, Full-Normal Course, Review Course, Special Courses. Teachers Course, Preparatory Course, Telegraphy. Languages. The College Journal, containing full information, will be sent post paid to any address. F. R. CLARK, Principal.

HOPKINS ACADEMY, Oakland, Cal.

REV. H. E. JEWETT, Principal.

This Institution, heretofore known as Golden Gate Academy, will open Tuesday A. M., July 18, 1882. The building and grounds are undergoing extensive improvements. Classical, Literary and English courses. Telegraphy taught. Boys and young men received. Send for prospectus to H. E. JEWETT, Principal.

CLEAR LAKE

CALISTOGA STAGE LINE.

San Francisco

—TO—

LAKEPORT

In Eleven Hours.



Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays, stages leave Calistoga for Lakeport via Middleton, Glenbrook, Kelseyville and Soda Bay; Returning alternate days.

This is the Most Direct Line from San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegler, Howard Springs and Soda Bar. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middleton, Guenoc, Lower Lake, and Sulphur Banks; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!

Driven by the most skillful drivers on the coast. For full information and tickets apply to SAM. MILLER.

Tourist and Ticket Agt., 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50.

Lakeport office at W. W. Green's Hotel.

JOHN CLARK, Agent. W. F. FISHER, Proprietor.

THRESHING ENGINE.

A No. 3, 7x10 Ames Engine, in use only one season, in thorough repair, will be sold cheap.

H. P. GREGORY & CO.,

2 & 4 California St., S. F.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.**WILLIAM NILES**, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.**PETER SAXE & SON**, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.**COTATE RANCH BREEDING FARM**, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.**SYLVESTER SCOTT**, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.**ROBT. BECK**, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.**GEO. BEMENT**, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.**R. MCENESPY**, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.**B. F. FISH**, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.**HORSES.****E. A. SACKRIDER**, 325 Eleventh St., Oakland, Cal. Importer of Norman-Percheron horses. Horses on hand and for sale at reasonable terms.**SHEEP AND GOATS.****L. U. SHIPPEE**, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.**J. B. HOYT**, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.**E. W. WOOLSEY & SON**, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.**POULTRY.****TOULOUSE GEESE** at \$15 per pair; \$20 per trio; Eggs, \$5 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.**T. WAITE**, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Duck's Eggs \$3 per dozen.**MRS. M. E. NEWHALL**, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.**H. S. SARGENT**, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.**L. C. BYCE**, Petaluma, Cal. Breeder of Thoroughbred Poultry. Illustrated circular free.**J. M. HALSTED'S NEW INCUBATOR**. Price \$30. No. 1011 Broadway, Oakland. Send for circular.**I. L. DIAS**, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.**SWINE.****JOHN RIDER**, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.**TYLER BEACH**, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.**BEEES.****J. D. ENAS**, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.**LAUREL RANCH.**

Thoroughbred

Spanish Merino

SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled.

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FALKNER, BELL & CO.**, San Francisco**FOR SALE.**Twenty (20) head of Thoroughbred **BERKSHIRE PIGS** from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to **G. M.**, 39 Clay street, S. F.**To Fish Raisers.**

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address

J. A. POPPE, Sonoma, Cal.**CAUTION!!****THE MOST PALPABLE FRAUD!!!**

Unscrupulous Persons Envious of the Fame and World-wide Reputation Fairly Won by

THE IMPERIAL ECC FOOD

Are, by fraudulently imitating the style of packages even to forging the very Trade Mark of the Imperial, endeavoring to put upon the market

WORTHLESS STUFF OF NO VALUE WHATEVER TO FOWLS.

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud until the law has time to take the perpetrators into its own keeping. The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. Numerous preparations have from time to time appeared called "Egg Foods," but as they did not conflict in name or trademark, were perfectly allowable, and, after due time, failing in their purpose, passed out of the market, while the Imperial continued to gain favor everywhere. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and Testimonials.

RETAIL PRICES OF IMPERIAL EGG FOOD:1 Pound Package, 50 Cents. 6 Pound Box, \$2.00.
2 1/2 " " " \$1.00. 25 " " " 6.24.

Sold by the trade generally, or address,

G. G. WICKSON, 319 Market St., S. F.**IMPORTANT!!!**That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. **LICK HOUSE**, San Francisco, Cal., October 22, 1881 **PETER SAXE & SON****Oakland Poultry Yards.**

Cor. 17th and Castro Sts., Oakland, Cal.

**GEORGE B. BAYLEY,**

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.And the new fowl, **AMERICAN SEBRIGHT** or **EUREKA**.**AGENT FOR THE PACIFIC INCUBATOR,**

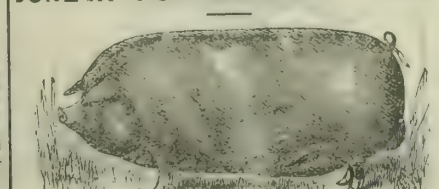
WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.**BERKSHIRES A SPECIALTY.**

My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

13th and A Streets, Sacramento City, Cal.

JONESA POLAND CHINA FARM.**ELIAS GALLUP**, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Boss, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.**ITALIAN SHEEP WASH.**

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the **Phylloxera and Garden Bugs** with Success.For particulars apply to **CHA. DUISENBERG & CO** Sole Agents, 314 Sacramento St., San Francisco.**50** LARGE SIZE New Chromos, with name, 10c. **TODD & CO.**, late Wise & Co., Clintonville, Conn.**MAKE HENS LAY.**An English Veterinary Surgeon and Chemist, now traveling in this country says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps **S. S. JOHNSON & CO.**, Boston, Mass., formerly Bangor, Me.**E. W. WOOLSEY & SON,**

Importers and Breeders of THOROUGHbred

**SPANISH MERINO SHEEP.**Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, **E. W. WOOLSEY & SON**, Fulton, Sonoma Co., Cal., or 418 California St., S. F.**Calvert's Carbolic SHEEP WASH.**
\$2 per Gallon.After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.**PURE BRED POULTRY.**

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock.

For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.**ONE HUNDRED****SPANISH MERINO BUCKS**

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

Cornwall Station, Contra Costa County.

BADEN FARM HERD.**R. ASHURNER,**

Baden Station, - - San Mateo Co.,

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

THE DAVIS**IRON WAGON.****E. A. SCOTT & CO.,**

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.**THE LA FRANCE STEAM FIRE ENGINE.** Circulars furnished on application.**GRANGERS' BANK**

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:**JOHN LEWELLING**.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary**DIRECTORS****JOHN LEWELLING**, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. McCONNELL.....Sacramento Co
C. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co**CURRENT ACCOUNTS** are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.**LOANS ON WHEAT** and country produce a specialty. **COLLECTIONS** throughout the Country are made promptly and proceeds remitted as directed.**GOLD and SILVER** deposits received **CERTIFICATES OF DEPOSIT** issued payable on demand.**TERM DEPOSITS** are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months. **BILLS OF EXCHANGE** of the Atlantic States bought and sold.**ALBERT MONTPELLIER**

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.**Fruit and Homestead Lands**

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars

Apply to **W. B. PARKER**,
Vacaville, Solano Co., Cal.**Good Crops Every Season Without Irrigation.**

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.

One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,
410 Montgomery St.**FOR SALE.**A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Re-reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place,
WM. C. PRINCE.**Stock Range.**Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,
EDWARD FRISBIE,
Anderson, Shasta Co., Cal.**STOCK RANCH FOR SALE.**

About 28,000 acres of the San Cristobal grant, located in Santa Fe county, New Mexico. Is one of the finest stock ranches in the Territory. It is well watered, and is only about six miles from a railroad station. It contains a large tract of irrigable land, a large house, thrifty orchard, etc. Price \$35,000, on easy terms. Title, U. S. Patent.

For further information call upon or address, **S. N. LAUGHLIN**, Castroville, Monterey County, Cal.

SAN FRANCISCO MARKET REPORT.

(CONTINUED FROM PAGE 37).

FRESH MEAT—The meat market moves along about as last week.

ONIONS—There has been a decline of 10c per cwt all around.

POTATOES—Potatoes are unchanged.

POULTRY—Hens are doing better, and Turkeys are 1c higher.

PROVISIONS—All Pork products are in the ascendant. Bacon and Hams are 1c higher per lb, and the trade is active.

VEGETABLES—Our table of prices shows a general cheapening.

WHEAT—Wheat is worth 5c more than last week, and the feeling is strong. Sales on the Produce Exchange were 200 tons No. 1 White, September, \$1.75, and 100 August, \$1.75. Bids and offers were: No. 1 White, July, \$1.71½ bid; October, \$1.73 bid, \$1.74 asked; November, \$1.73 bid; No. 2 White, July, \$1.68 bid; August, \$1.69 bid, \$1.70 asked; No. 1 Amber, July, \$1.70 bid. On the afternoon call sales were 250 extra choice, July, Port Costa, \$1.75, and 100 No. 1 White, September, \$1.75. For extra choice, spot, \$1.75 was bid. At the Grain Exchange the brokers did a rattling business of 4,250 tons, as follows: 300 No. 1, August, \$1.74½; 500, September, \$1.75; 200 Port Costa, \$1.74½; 100 No. 2, July, \$1.68; 450, September, \$1.68½; 700, \$1.63; 100, \$1.68½; 100, \$1.68½; 200, \$1.67½; 100, October, \$1.68; 600, \$1.68; 300, \$1.67½; 600, November, \$1.68.

WOOL—Dealers report a little more inquiry, but light transactions as yet. Prices are unchanged.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., July 12, 1882.

BEANS & PEAS.	
Bayo, cut.....	3 00 @ 3 25
Butter.....	3 75 @ 4 25
Castor.....	3 50 @ 4 00
Pea.....	4 00 @ 4 25
Red.....	2 50 @ 3 00
Pink.....	2 00 @ 2 50
Large White.....	3 25 @ 3 50
Small White.....	4 00 @ 4 25
Lima.....	4 00 @ 4 50
Field Peas, 1/2 eye.....	1 75 @ 2 00
do, green.....	2 00 @ 2 25

BROOM CORN.	
Southern.....	3 @ 3 1/2
Northern.....	4 @ 4 1/2

CHICORY.	
California.....	4 @ 4 1/2
German.....	6 @ 6 1/2

DAIRY PRODUCE, ETC.	
Butter.....	29 @ 30
Cal. Fresh Roll, lb.....	30 @ 31
do. Fancy Brands.....	30 @ 31
Pickle Roll.....	28 @ 29
Firkin, new.....	28 @ 29
Eastern.....	18 @ 20
New York.....	18 @ 20

EGGS.	
Cheese, Cal., lb.....	12 1/2 @ 14
Cal. Fresh, doz.....	27 1/2 @ 30
Ducks.....	27 @ 30
Oregon.....	27 @ 30
Eastern, by express.....	27 @ 30
Pickled here.....	27 @ 30
Utah.....	27 @ 30

FRESH MEAT.	
Beef, 1st qual, lb.....	7 1/2 @ 8
do, 2nd.....	6 1/2 @ 7
do, 3rd.....	5 1/2 @ 6
Mutton.....	5 1/2 @ 6
Spring Lamb.....	5 1/2 @ 6
Pork, unadressed.....	6 1/2 @ 7
Dressed.....	6 1/2 @ 7
Veal.....	6 1/2 @ 7
Milk Calves.....	6 1/2 @ 7
do, choice.....	6 1/2 @ 7

GRAIN, ETC.	
Barley, feed, cwt.....	1 70 @ 1 71 1/2
do, New.....	1 15 @ 1 16 1/2
do, Brewing.....	2 00 @ 2 01 1/2
Cheviater.....	1 40 @ 1 41 1/2
Buckwheat.....	1 35 @ 1 36 1/2
Corn, White.....	1 50 @ 1 51 1/2
Yellow.....	1 50 @ 1 51 1/2
Small Round.....	1 50 @ 1 51 1/2
Oats.....	1 30 @ 1 31 1/2
Milling.....	1 75 @ 1 76 1/2
Rye.....	1 75 @ 1 76 1/2
Wheat, No. 1.....	1 70 @ 1 71 1/2
do, No. 2.....	1 65 @ 1 66 1/2
do, No. 3.....	1 50 @ 1 51 1/2
Choice Milling.....	1 74 @ 1 75 1/2

HIDES.	
Hides, dry.....	19 @ 19 1/2
Wet, salted.....	9 1/2 @ 10

HONEY, ETC.	
Beeswax, lb.....	23 @ 25
Honey in comb.....	17 @ 18
Extracted, light.....	8 @ 9
do, dark.....	7 @ 8

NUTS.	
Walnuts, Cal.....	10 @ 11
do, Chile.....	10 @ 11
Almonds, hd sh lb.....	8 @ 9
do, shell.....	15 @ 16

Bags and Bagging.

(JOBBER PRICES.)

WEDNESDAY M., July 12, 1882.	
Eng Standrd Wheat.....	8 1/2 @ 9
Hand Manufacture.....	8 1/2 @ 9
Hand Sewed.....	8 1/2 @ 9
2x10.....	12 @ 13
24x10.....	12 @ 13
Machine Sewed.....	12 @ 13
Machine Sewed 22x36.....	8 1/2 @ 9
Flour Sks, halves.....	3 1/2 @ 4
Quarters.....	3 1/2 @ 4
Eightths.....	4 1/2 @ 5
Hessian, 60 inch.....	12 @ 13

Lumber.

WEDNESDAY M., July 12, 1882.

Redwood.	
Rough.....	@ 18 00
Su faced.....	@ 28 00
Floor and step.....	@ 27 50
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

CARGOES.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

FINE.	
Rough.....	@ 18 00
Surfaced.....	@ 28 00
Merchantable.....	@ 22 50
Surfaced, No. 1.....	@ 35 00
Tongued & Grooved.....	@ 35 00
Pickets, rough.....	@ 30 00
do, fancy.....	@ 37 50
do, square.....	@ 37 50

General Merchandise.

WHOLESALE.

WEDNESDAY M., July 12, 1882.

CANDLES.	
Crystal Wax.....	15 @ 18
Paraffine.....	20 @ 22
Patent Sperm.....	25 @ 28

CANNED GOODS.	
Assorted Pie Fruits.....	2 25
2 1/2 lb cans.....	3 50 @ 4
Jams and Jellies.....	3 75 @ 4
Pickles, 1/2 gal.....	3 25 @ 4
Sardines, qr box.....	1 67 @ 2
Hf Boxes.....	2 50 @ 3 90
Merry, Faulk & Co's.....	2 50 @ 3 90
Preserved Beef.....	3 25 @ 3 50
do 1/2 doz.....	6 50 @ 7
Preserved Mutton.....	3 25 @ 3 50
2 lb Tongue.....	5 75 @ 6 00
Preserved Ham.....	5 50 @ 6 00
Deviled Ham, 1 lb.....	5 50 @ 6 00
do 1/2 doz.....	3 00 @ 3 50
do Ham 1/2 doz.....	2 50 @ 3
Boneless Pigs Feet.....	3 50 @ 3 75
3 lbs.....	2 75 @ 3
Spiced Pickled Beef.....	3 50 @ 4
Head Cheese 1/2 lb.....	3 50 @ 4

COAL-JOBBER.	
Australian, ton.....	@ 8 50
Coos Bay.....	@ 6 50
Bellingham Bay.....	@ 6 50
Seattle.....	@ 13 00
Cumberland.....	@ 13 00
Mt Diablo.....	@ 13 00
Lehigh.....	@ 13 00
Liverpool.....	@ 8 50
West Hartley.....	@ 8 50
Scotch.....	@ 8 50
Seranton.....	@ 8 50
Vancouver Id.....	@ 9 00
Wellington.....	@ 9 00
Charcoal, sack.....	@ 8 50
Coke, bush.....	@ 8 50

COFFEE.	
Sandwich Id B.....	@ 14
Costa Rica.....	@ 12
Guatemala.....	@ 12
Jama.....	@ 18
Manilla.....	@ 15
Ground, in cs.....	@ 22 1/2

FISH.	
-------	--

GEO. W. MEADE & CO.,
Office and Warehouse, Nos. 416 and 418 Front Street, San Francisco, Cal.
WHOLESALE DEALERS IN
California and Oregon Sun Dried and Evaporated Fruits,
CALIFORNIA RAISINS AND FRENCH PRUNES.

CALIFORNIA COMB AND EXTRACTED HONEY, ALMONDS, WALNUTS, Etc., Etc.
As the LEADING HOUSE and HEADQUARTERS in all these products, we are ready to correspond with the producers with the view of purchase or contract for the coming crops. REMEMBER, that we purchase outright either at points of production, paying freights, etc., ourselves, or delivered in S. F., freight paid. Remember, also, that in dealing with us you are operating through strictly FIRST HANDS. NO COMMISSIONS charged. NO DELAYS in settlements.

Sonoma Valley College.

Has the most desirable location and the finest school building on the coast. The climate is warm and healthful. It is free equally from fogs and malaria during the summer. The school is sufficiently removed from the city to preserve regular habits on the part of pupils, and to protect them against contagious diseases. Only the best pupils from the best families are sought. The number of boarding students will be limited positively to twenty, and application for admission must be made in advance. To this limited number of pupils will be secured the best companionship, the best accommodations, the best care and the ablest instruction that can be procured in any first-class school of the East. The Principal is well known as an educator, being the FOUNDER OF THE BERKELEY GYMNASIUM. He will be supported by a Faculty composed of young men in the prime of life and recognized by the public as successful teachers. Students prepared for any American University. Special attention will also be given to the English and Commercial Department. The next term will begin on

Monday, July 31st.
Registered students can be admitted earlier if desired. For catalogues or particulars, address

JOHN F. BURRIS, Principal,
Sonoma, Cal.

The Harmon Seminary,
BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address
S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.

**EXCURSION
TO ALASKA.**

The August trip of the Steamship IDAHO to Alaska will be made a special feature of interest for tourists and pleasure seekers. In addition to her regular ports of call (Wrangell, Sitka, Harrisburg, etc.) it is intended she shall visit Glacier Bay and other points of special interest.

The trip from Puget Sound to Alaska, instead of being, as many imagine, rough and tempestuous, is made nearly the whole distance on inland waters, which are as smooth and unruffled as a mountain lake. The scenery is a magnificent panorama of wondrous grandeur. The noted and celebrated points of interest in California and other States dwarf into insignificance in comparison with the wonderful sights and towering mountains in this wonderful land of glaciers, icebergs, Aurora Borealis and nightless day. Only a limited number of passengers can be taken from San Francisco, as a large number of tourists have engaged to go from Portland, Victoria and other northern ports.

Those desiring to engage passage will please register their names at the Company's Ticket Office, 214 Montgomery street. No name accepted unless accompanied by a deposit of \$20 on account.

The fare for the round trip has been fixed at a low rate of \$115, which includes meals and a berth.

Passengers will take the DAKOTA, which leaves Broadway Wharf July 29th, at 2 P. M., and transfer to the IDAHO at Port Townsend about August 3d, reaching San Francisco on the return about August 25th.

GOODALL, PERKINS & CO.
General Agents.

DIVIDEND NOTICE.

The German Savings and Loan Society.
San Francisco, June 30, 1882.

For the half year ending this date, the Board of Directors of THE GERMAN SAVINGS AND LOAN SOCIETY has declared a dividend on Term Deposits at the rate of four and thirty-two one-hundredths (4 32-100) per cent. per annum, and on Ordinary Deposits at the rate of three and six-tenths (3 6-10) per cent. per annum, free from Federal Taxes, and payable on and after the 10th day of July, 1882. By order. **GEO. LETTE, Sec'y.**

Dewey & Co. { 252 } Patent Agt's
Market St.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES-HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

**CALIFORNIA'S
Exposition.**

The Twenty-ninth
Annual State Fair

Begins at
SACRAMENTO, CAL.

On the 11th, and ends on the 16th of September.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

LIVE STOCK, MACHINERY, IMPLEMENTS, ETC., TEXTILE FABRICS, MECHANICAL, AGRICULTURAL, HORTICULTURAL PRODUCTS, and FINE ARTS, ETC.

Any further information may be had upon application to the Secretary, from whom Premium Lists may be procured.
HUGH M. LARUE, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacramento, Cal.

NEW CATALOGUE

—OF—

SEWING MACHINE NEEDLES,

Oil and Other Supplies.

Just out. For Dealers only. Mailed free.

MARK SHELDON,

9 11 & 13 First St., - - San Francisco,

CALIFORNIA.

STEAM PLOWS.

For sale—Two sets Steam Plows, manufactured by the world-renowned firm of John Fowler & Co., of Leeds, England, with all latest improvements and duplicate accessories. These plows are capable of plowing from 15 to 50 acres per day per set, at a depth of from one inch to two feet, or more. The four powerful traction engines belonging to the outfit were expressly constructed for use on the Pacific Coast and colonies, with a view, not only to economy in fuel, but also for transportation purposes, and for all kinds of farm work where steam power is advantageous or requisite. Apply to

H. N. CHAUNCEY,
Room 10, No. 109 California St., S. F.

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co.

S. P. BAILEY, O. E. BADGLEY, JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Sts., Stockton, Cal.

Importers and Jobbers in

Agricultural Implements, Hardware, Etc.

Agents for the

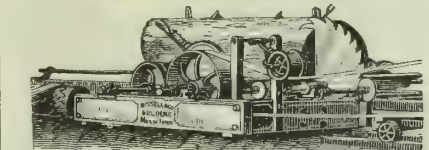
J. I. Case and Woods Headers, McCormick Harvesting Machine Co.'s Binders, Reapers and Mowers, the LaBelle Freight, Farm and Header Wagons, Althouse Vaneless Windmills, Minnesota Chief Thrashers, Engines and Horse Powers, San Leandro, Buford and Stockton Gang and Sulky Plows.

Also, State Agents for the Celebrated

AMERICAN HAY CARRIER and ELEVATOR.

Large Stock of Builders' Hardware and Carpenters' Tools. Orders Promptly Filled, and Goods sold at Bedrock Prices.

THE MASSILLON PONY MILL
STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO.,
Agents for the Pacific Coast.

COMPOUND OXYGEN
NEW TREATMENT BY INHALATION, for Consumption, Asthma, Bronchitis, Dyspepsia, Catarrh, Headache, Debility, Rheumatism, Neuralgia, and all Chronic and Nervous Disorders. Prepared by DR. STARKEY & PALLEN, Philadelphia, Pa. Package contains all directions, and is easily sent by express, ready for USE AT HOME. H. E. MATTHEWS, Forwarding Agent, 606 Montgomery street, San Francisco, Cal. Send for Free Pamphlets.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.,
SAN FRANCISCO, Cal.
OFFICE 5, Up-Stairs.

MUSIC

FOR LESS THAN

One Cent a Page.

IN ELEGANT BOUND VOLUMES.

Useful and Inexpensive for the Summer of all Grades and Styles of Sheet Music.

"GEMS OF ENGLISH SONG." 256 pages—over 80 choicest of songs.
"GEMS OF GERMAN SONG." 216 pages—100 of the best German songs.
"GEMS OF SCOTTISH SONG." 200 pages—over 150 best Scottish songs.
"BEAUTIES OF SACRED SONG." 208 pages—60 of the very best sacred songs.
"WORLD OF SONG." 248 pages—94 choicest songs of popular style.
"FRANZ'S ALBUM OF SONG." 277 pages—107 of Franz's best songs.
"NORWAY MUSIC ALBUM." 260 pages—132 of Norway's songs, melodies, etc.
"GEMS OF STRAUSS." 248 pages—89 choicest Strauss waltzes, galops, etc.
"GEMS OF THE DANCE." 232 pages—80 most popular dance pieces.
And many other collections. Price each, \$2 plain; \$2.50 cloth; \$3 full g't.

OLIVER DITSON & CO., BOSTON.

Established 1834.
C. H. Ditson & Co., 843 Broadway, N. Y.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.

Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)

LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency. **LINFORTH, RICE**

& CO., 323 & 325 Market St., S. F.

PACIFIC BRANCH.

THE LION
FIRE
INSURANCE COMPANY
OF LONDON, ENGLAND
CAPITAL
\$5,000,000.

GEO. D. DORNIN.....Manager.
WM. SEXTON.....Asst. Manager.

INSURES ON GROWING CROPS under a plain and easily understood Contract, also on Grain in Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Dorety 527 Commercial St., S. F.

SACRAMENTO.

SAN FRANCISCO.

HUNTINGTON, HOPKINS & CO.,

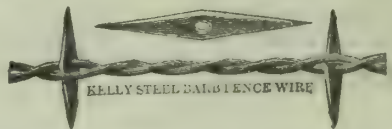
Hardware Merchants.

AGENTS FOR BRINKERHOFF GALVANIZED FENCING,



PLAIN AND BARBED.

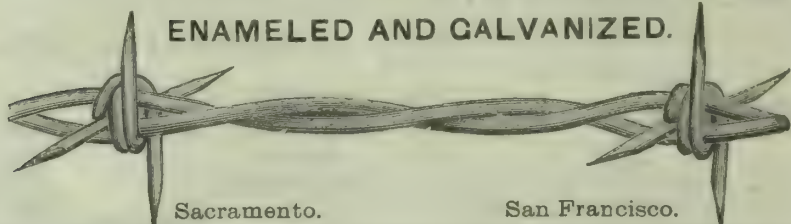
“Kelly” Barb Wire,



Enameled and Galvanized.

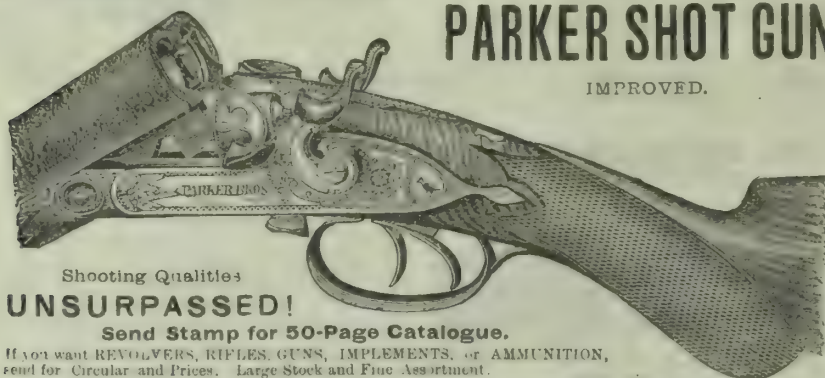
“RED STAR” (4-Pointed) Barb Wire,

ENAMELED AND GALVANIZED.



Sacramento.

San Francisco.



PARKER SHOT GUN.

IMPROVED.

Shooting Qualities

UNSURPASSED!

Send Stamp for 50-Page Catalogue.

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION, send for Circular and Prices. Large Stock and Fine Assortment.

E. T. ALLEN, Agent for the Pacific Coast.

NO 416 MARKET STREET.

SAN FRANCISCO, CAL.

NEW STORE AND LARGE STOCK!

AUSTIN BROTHERS,

IMPORTERS OF

HARDWARE, IRON, AND BLACKSMITH SUPPLIES.

Rope, Wire, Belting, Pumps, Pipe and Steam Fittings.

310 and 312 Main Street, Corner of America,
STOCKTON.

Agents Halladay Wind Mills.



Guaranteed to do better work and give better satisfaction than any in use. Sent ON TRIAL to responsible farmers. For circulars and terms to agents address
G. T. BROWN,
Stockton, Cal.

Engraving

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

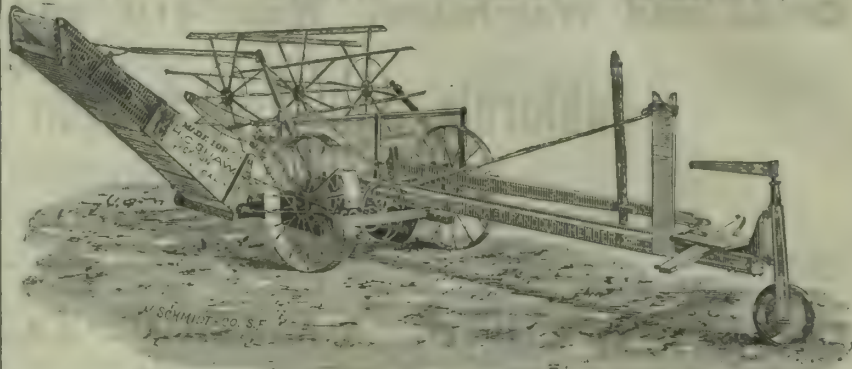
This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

JOHN JENNINGS.

Hooper's South End Grain Warehouses,
Cor. Japan and Townsend Sts., S. F.

First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the O. P. R. R. and S. P. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

H. C. SHAW PLOW WORKS.



GENERAL AGENTS

IMPROVED RANDOLPH HEADERS,

LIGHTEST DRAFT!! BEST ELEVATION!!!

Three Hundred Sold in Two Years.

Chieftain Sulky Hay Rakes,

H. C. SHAW Stockton Gang Plow,

ALSO, AGENTS FOR

WALTER A. WOODS' IRON MOWERS,

FISH BROTHERS' FARM AND SPRING WAGONS.

FURST & BRADLEY SINGLE AND SULKY FLOWS,

Powell's Electric Hay and Grain Elevator.

HEADER EXTRAS! MOWER EXTRAS!! PLOW EXTRAS!!!

(Send for Illustrated Catalogue and Price list.)

201-3 El Dorado Street,

Stockton, Cal.

NOTICE!

To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-raiser, once having used our medicines will ever be without them in the house. For sale everywhere.

Trade } H. H. H. { Mark Trade } H. H. H. { Mark Trade } H. H. H. { Mark

Hoof and Healing Ointment Horse Liniment Condition Powders.

For Brittle Hoofs,

Fever in Feet,

Founder,

Contracted Hoofs,

Sand Cracks,

Quarter Cracks,

Collar Galls,

Harness Galls,

Scratches,

Mud Fever,

Etc., Etc.

The most effectual
liniment ever used for

Ringbone,

Spavin,

Sweeney,

Callous Lumps,

Old Sores,

Sprains,

Stiff Joints,

Bruises,

Windgalls, Etc.

For Inward Strains,

Hide Bound,

Loss of Appetite,

Yellow Water,

Poll Evil,

Scratches,

Mange,

Rheumatism,

Epizootic,

Coughs,

Colds, Etc.

H. H. MOORE & SON,
Sole Proprietors.

H. H. MOORE & SON,
Sole Proprietors.

H. H. MOORE & SON,
Sole Proprietors.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House

O. F. BECKER, Proprietor

Seeds, Plants, Etc.

PEPPER'S NURSERIES.
Established in 1858.
For sale, all kinds of Fruit Trees, Vines and Fruiting Shrubs raised without irrigation. Also, a general assortment of Evergreen Trees and Shrubs, deciduous Flowering Shrubs; Roses in assortment. Conservatory and Bedding Plants in great variety. Send for Catalogue and List of Prices. Address **W. H. PEPPER,** Petaluma Sonoma County, Cal.

TURNER'S NURSERIES,
San Bernardino, - - - Cal.,
Box 275.
Fruit and Ornamental Trees
OF ALL KINDS.
True to name and reliable. Persons intending to plant JUNE BUDDED or other trees, next season, should **WRITE FOR MY TERMS**
JUNE BUDDED TREES A SPECIALTY.
Principal Nursery located just south of Colton. **DAVE TURNER.**

HIRAM SIBLEY & CO.
TURNIP SEED
NEW CROP
READY
IN JULY.
SEND FOR
CATALOGUE
AND
PRICE LIST, **HIRAM SIBLEY & CO**
179-183 MAIN STREET,
ROCHESTER, N. Y.
200-206 Randolph St. Chicago, Ill

BLISS SELECT GARDEN SEEDS

B. K. BLISS & SONS,
Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address **B. K. BLISS & SONS, 34 Barclay Street, N. Y.**

NEEDHAM'S RED CLOVER
Blossoms and extracts of blossoms, the greatest blood purifier known. A sure cure for Cancer, Salt Rheum, and all blood diseases if taken in time. Many also have been cured of Catarrh, Rheumatism, Poison Oak and other diseases. For full particulars, circulars and testimonials address, **W. C. NEEDHAM,** sole agent for Pacific Coast, P. O. Box 422, San Jose, Cal.

FOR SALE.
One half interest in a Deciduous Fruit Nursery, southern part of State. Over 250,000 trees. Apply to **D. TURNER,** Colton, Cal.

Moore's Prepared
SQUIRREL POISON.
The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.
Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.
Eureka! Found At Last!
A. W. LOCKHART'S
SEPARATOR ATTACHMENT.
To Threshers.
It is light, can be attached to any threshing machine, and will keep it in repair. By its use 500 bushels more per day can be threshed and cleaned, saving to the farmer enough to pay his threshing bill, also putting the grain into merchantable condition, saving time lost in rethreshing and cleaning over. Farmers and Threshers will please call and see for themselves, at No. 123, 15th street, between C and D streets, Sacramento. Also, my Feeder and Elevator Attachment, so well and favorably known as to need no comment. **A. W. LOCKHART.**

CEO. F. SILVESTER,
IMPORTER, WHOLESALE AND RETAIL DEALER IN
SEEDS,
Fruit and Evergreen Trees, Plants, Etc.
ALFALFA, GRASS AND CLOVER SEEDS
In Large Quantities and Offered in Lots to Suit Purchasers.
Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.
Seed Warehouse, 317 Washington St., San Francisco.

Berry & Place Machine Company,
PARKE & LACY, Proprietors.
No. 323 and 325 Market Street, - - - San Francisco, Cal.
Importers and Dealers in every Variety of
WOOD AND IRON WORKING MACHINERY,
Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,
Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.
Catalogues and Price Lists furnished on application.

Nathaniel Curry & Bro.,
113 Sansome Street, San Francisco,
AGENTS FOR
W. W. Greener's Celebrated Breech Loading Double Guns.
W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.
A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.
Ammunition in quantities to suit. A liberal discount to the trade. Price List on Application

CHEAPEST. BEST.
BOOTH'S SURE DEATH
To Squirrels, Gophers, Birds, Mice, Etc.
Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.
STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by
A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.
FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

DEWEY & CO.'S
Scientific Press Patent Agency.
(ESTABLISHED 1860.)
Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address **DEWEY & CO., Patent Agents, 252 Market St., S. F.**
A. T. DEWEY, W. B. EWER, GEO. H. STRONG.

EXTRA QUALITY RUBBER HOSE,
BELTING and PACKING, CRACK PROOF BOOTS.
GOODYEAR RUBBER CO.,
R. H. PEASE, Jr., } Agents.
S. M. RUNYON, }
Nos. 577 and 579 Market Street.

"THE DAIRY QUEEN"
Improved Churn and Butter-Worker.
Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.
It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.
GEO. W. FREEMAN,
Oakland, Cal.
Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.

CHEAP CASH GROCERIES
— AT —
NEUMAN'S.
All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,
323 to 331 Sixth St., 1307 Polk St.,
— AND —
1144 AND 1146 FOLSOM ST., S. F.
Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.
Country Orders Specially Solicited.
All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality.
Orders most respectfully solicited.

LEWIS' EMERGENCY SPRAY PUMP
CUTS ON BORDER SHOW THE THREE COMBINATIONS!
Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.
Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.
FOR ALE BY **JOHN H. WHEELER,**
111 Leidesdorff St., S. F.
P. S. A sample can be seen at this office.

M. COOKE R. J. COOKE
PIONEER BOX FACTORY,
Corner of Front and M Streets, Sacramento.
ALL KINDS OF
Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.
Communications Promptly Attended to.
COOKE & SONS, Successors to COOKE & GREGORY

The American Driven WELL WATER SUPPLY SYSTEM
FOR MINING, IRRIGATION, MECHANICAL DOMESTIC & MUNICIPAL PURPOSES
Send for Circulars.
BABCOCK & CO.,
40 Merchants' Exchange San Francisco, Cal.

YOUR NAME
On 50 large size CARDS. Remembrance, Sentiment, Hand Booklet, &c. No 24th, 10c, 14 pks, \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and reduced prices for 20 fine Gilt Bevel Edge Cards, turned corner, 10c.
Your Name in this lettering Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870, **NORTHBOROUGH CARD WORKS, Northford, Conn.**

Silos Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular.

MERRILL'S PATENT REIN HOLDER.
This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address **W. P. MERRILL, Florin, Sacramento Co., Cal.**

"ECONOMY,"

THE ERTEL

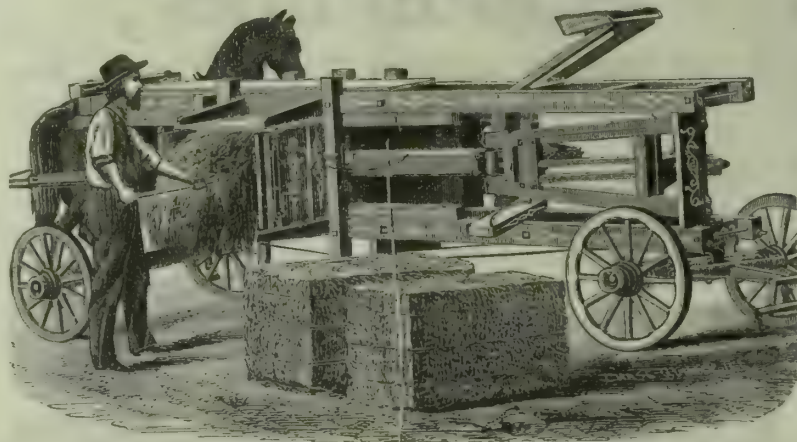
1,000 OF THESE PRESSES
NOW IN USE!

PATENTED

September 25, 1877,

AND

JANUARY 22, 1878.



STRICTLY
PORTABLE!

Press
AND
POWER
COMBINED.

PORTABLE HAY AND MOSS PRESS.

The Economy Hay Press, of which the above cut is a representation, has not only achieved a well-merited precedence over all other Hay Presses, but it also retains its world-wide reputation for pressing hay, etc., more compactly than any other press in the market, hence all kinds of railroad cars may be loaded with FULL WEIGHT OF HAY. The Economy is operated with but little force, and is sold at so low a price that any farmer can buy it, and more money is made in operating this Press than can be done by any of its competitors, which fact can be fully substantiated in any locality where the Economy has been introduced. Being in use in every State and Territory in the United States and Canada, and having received the first premium over all its numerous competitors in 1880, WITHOUT EXCEPTION, the claims of the Economy to superiority remain undisputed. For years, one of these Presses has been turned out daily, but such is the increasing demand that the works will be enlarged to accommodate the accumulation of orders. Parties desiring to purchase a machine for baling hay, straw, etc., would consult their own interests by investigating the merits of this Press thoroughly before contracting for any other.

MERITS AND CAPACITY OF THE ECONOMY.

This Press, if shipped knocked down, will be in 28 packages, with one box of fixtures. If so shipped, when it arrives at its destination, three men of ordinary knowledge of machinery, can easily put it together in two hours. It can then be drawn by two horses over any ordinary road and pass through such wagon gates as are found on farms. Upon reaching the hay-stack, the horses are detached from the tongue of the Press, and one is hitched to the power sweep on the side of it; the Press is then ready for service. Three men, with one horse, can press 80 bales of hay in a day, weighing from 190 to 250 lbs. per bale, including moving and making the wire ties as they need them. From 100 to 125 bales can be loaded in a railroad box car, weighing from 10 to 12 tons.

THE COMPLETE ECONOMY PRESS.

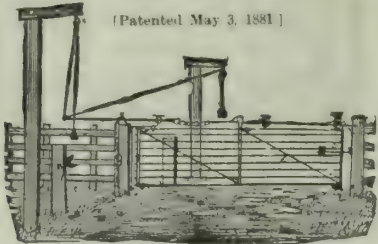
This Press, when called complete, consists of the main Press, with the Power, Tie-Making Machine, Trucks with Tongue, Double-Tree and Neck Yoke, Tie Stretcher, Hay Hook, and one good Wrench; and is generally shipped knocked down, especially to distant places, in 28 packages and one box with fixtures. It is also shipped mounted or set up, if so ordered. Weight of the Economy Press, 3,200 lbs. All persons are cautioned to give correct shipping directions, in order to avoid mistakes and delays.

Price of Press, Complete, at Sacramento or San Francisco, \$450. Address

BAKER & HAMILTON, Sole Agents,
San Francisco or Sacramento.

CAMPTON'S Self-Opening Iron Farm Gate.

(Patented May 3, 1881)



It is the Champion Gate of the World for its Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co., June 3, 1882.
A. P. CAMPTON, Esq., Dear Sir: The two Automatic Iron Gates of your patent one 12 and the other 10 ft. in width erected by you on my farm, two miles west of Davisville, have given me entire satisfaction. They are all you represent them to be, the most substantial, the neatest and the most easily operated of any gate that I know of. They are just the gate that every farmer should have; in fact, they cannot afford to do without them. Respectfully yours,

H. M. LARUE,
A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee;
John Aylward, manufacturer, P. O. Box, 88, Livermore, Alameda Co., Cal., and Jas Stanley, Mission San Jose, Cal., agents.

Excelsior Fruit Pitter.

Invented by A. Donatella.



This machine recommends itself by the following good qualities: Rapidity of work, one operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the riddle for the dryer. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Prunes, Apricots or Nectarines pitted with this machine—dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address, A. DONATELLA, Healdsburg, Cal.

LANGSHANS.



I guarantee a pure Langshan, Cross Strain, fine, healthy Chicks, not related, for sale of this magnificent breed, for September delivery.

MRS. J. RAYNOR,
1416 Folsom St., S. F.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipment, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Hill's Improved Horse Powers. Hill's Improved Plows. Hill's Improved Side Hill Gang. Hill's Improved Double Deep Plow. Hill's Improved Fresno Ditching and Grading Plow. Hill's Improved Headers. Hill's Improved Harrows, etc.

Remember that Water-Communication Insures Cheap Freight. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the latest practical improvements, which are necessarily adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.



THE "CALIFORNIA CHIEF."

The best Small Bale Hay Press made. Puts 10 tons of the Dryest Hay in a common box car. Capacity about one ton per hour.

Height 4 ft.; Width, 2 ft.; Length, 12 ft.; Weight, 2,800 lbs. Size of bale when out of press, 18x23 inches, and 3 ft., 6 inches long. Average weight, 175 lbs. One hundred and twenty-eight bales will go in a car. Bales as smooth and square as plugs of tobacco. Press strongly mounted. Can be moved anywhere, up canyons and over hills, with two horses. Requires no taking down. Ready for business as soon as it arrives at stack. Bale is pressed against an end door (which is opened after the bale is used) and is pushed out simply by putting in more hay. Horse works on a lever, 16 ft. long, walking half way round and back, pressing a charge when going either way. Follower goes back itself. No side doors. Bale tied through slots in the sides. Made of the toughest Eastern white oak. Iron work very heavy. MADE STRONGER THAN ANY PORTABLE PRESS EVER MADE BEFORE. Warranted not to break for one year. Giving best satisfaction wherever used. Price, \$550. Manufactured at the works of the San Leandro Plow Co., by

JACOB PRICE, San Leandro, Cal.,

Inventor and manufacturer of the Price or Petaluma Press, the Improved Eagle Press, the Eclipse Press, and importer and manufacturer of the CELEBRATED DEDERICK PRESSES, all styles. Send for illustrated catalogue and price list of the above-named Presses.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose. Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. N. Leish, Marysville; T. H. Wain, Salem, Or.; T. W. Antler, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

C. E. CASE, M. D.,

Consulting and Operating Physician,
1116 Broadway Oakland,
Will visit patients at a distance for consultation or to perform operations.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, JULY 22, 1882.

Number 4

The War in Egypt.

We made note last week of the little war in Egypt and its possible effects upon the grain markets. Since we wrote, the bombardment of Alexandria by the British fleet resulted in the routing of the forces under the command of the insurgent, Arabi Pasha, and the occupation of the city by the British and American marines—their object being to protect the city from plunder and restore order under the constituted authority of the Khedive. During the bombardment of the city and before the marines could land from the foreign men-of-war in the harbor, the city was pillaged by the Arabs and thieves generally, many people were murdered and many buildings burned, including the Consulates of Great Britain, the United States, and other nations. At the time of the present writing, order has been restored in Alexandria, the Khedive has been reinstated in his capital, but the hordes of Bedouins and other plunderers under Arabi Pasha are encamped at a distance and are now menacing Cairo, and the Suez canal is still in great danger.

The details of the war are given from day to day in the daily papers. We allude to the matter chiefly to give, by the aid of an engraving, a glimpse of the sort of people who are disturbing the peace of the old "granary of the world." Our picture is reproduced from a painting by Gerome, and gives a good idea of several classes who figure largely in the population of Egypt. Upon the right of the engraving is a dignified merchant of capital and pretensions. He is either a Turk or Persian; grave, sedate and dignified, and as dissimilar to the excitable and vivacious Arab as is a mastiff to a spaniel. His courtesy is as great as his gravity and his dignity. He does the honors of his stall like a prince, and his snowy turban, long *coftan* (gown) and venerable beard flowing down like floss-silk over his breast, cause him to resemble one. Yet, as you see, there is "speculation in his orbs," and the venerable man has actually converted himself into a walking bazaar, with Turkish cimeter from Damascus in silver sheath, dangling from his peaceful loins, an embroidered jacket thrown over his shoulder, and a silken scarf hanging from his left arm, all on exhibition to a small group of four customers, all of different nationalities, as shown by costume and countenance.

The cimeter, with hilt of rhinoceros-horn and curved blade, on which are inscribed verses from the Koran, has attracted the attention of the Turkish *cavass*, or mercenary soldier, who is apparently examining the temper of the blade, or the inscription thereupon. Armed to the teeth, with sword at side, and two pistols ostentatiously displayed in his sash, he is quite the ruffian he looks; equally ready for riot or crime, and as reckless of his own life as of that of others.

His companion, who is also eagerly examining the same cimeter, and whose costume is so dissimilar, is an Arnaout or Albanian soldier, whose semi-Greek costume and blood have not made him a whit less savage in nature or in habits than his Turkish confrere. In fact, he is apt to be the worse devil of the two, and his face indicates it unmistakably, though his gay, half-Greek costume, and long gun with crutch-like stock, make him the more picturesque vagabond of the two. The other two are evidently mere passers-by, attracted by curiosity and the love of seeing the progress of a trade, both strong passions with the native Egyptian. And

these are to the "manor born" Egyptians, *per sang*, which none of the others are. One is probably a neighboring trader, the other the servant of some rich bey or pasha.

In the distance you see the muffled figures of two women, carefully shrouded and veiled from the gaze of man, but whose costume is not suggestive of the symmetry of the fair forms it may or may not so effectually conceal. The latticed window above indicates that it is a harem they are entering, into which their sable guide and guardian, of neutral gender, has preceded them.

The face and attitude of the old merchant make a good study. He is watching with pen-

BERMUDA GRASS AND ALKALI SOIL.—Gen. Shields writes the experience of growers of Bermuda grass in the Compton region. He says: On the less intensely alkaline edges of the belt of saline surfert, plant Bermuda grass. Here it will root and send out runners, which will root at every joint, where not too alkaline, and will run without rooting where too alkaline. These runners will shade and shield the soil from the sun and wind, two active promoters of alkaline efflorescence. In the meantime rains and irrigations wash away prior alkali accumulations. In time the Bermuda runners root where they would not root before. In this way the Ber-

The Nurseryman's Services.

Nurserymen are rather modest people in print, although they sometimes tell you freely what they think of themselves and of each other, when you corner them on the shady side of the plant house. They do not crowd us with articles setting forth their resources; in fact, we often wish they would give us far more about their new plants, new fruits and new experiences, for the upright and intelligent nurseryman does a public service, while he gains his bread. As a promoter of the beautiful, he is no doubt an agent for the elevation of mankind; and as an industrial worker, his product lies at the foundation of many successes. We were ready to think well of him even before the honored Patrick Barry, at the last meeting of the Nurserymen's Association, gave his associates the following merited praise:

I have a pretty good knowledge of the nursery business in this country, for nearly half a century, and I can say that the nurseryman, on the whole, have conducted their business with a degree of enterprise, liberality and skill that entitle them to the admiration and gratitude of the American people. They have tilled our land from the Atlantic to the Pacific with the finest fruits. They have scattered broadcast, and brought within easy reach of all our people, ornamental shrubs and plants of every description. The parks, cemeteries, pleasure grounds, public and private, everywhere give evidence of the nurseryman's skill, industry and enterprise.

Mr. Barry proceeded to discuss the present condition and the outlook of Eastern nursery business, and found some cause for misgivings. We are not aware how far the unfavorable conditions prevail here, but we surmise that the business has a brighter financial side here than at the East, in some respects, at least. If we err, our nurserymen readers can set us right. We imagine that the horticultural mania which has prevailed for the last two or three years has resulted in some very profitable propagation, although it is true that planters have rushed after certain things only, so that much unfashionable stock has had to be sacrificed by the tree grower. However this may be, it seems that, at the East, the business has drifted into very shallow water, for Mr. Barry says:

How will the nurserymen do in the future? Will they do as well? I hope they will. They should do even better, and they will do better, provided the profits of their business will place in their hands the necessary means. I have some fears for the future, perhaps they are not well-founded. For several years past the profits have been small, if any—indeed, it has been, for many, hard work to keep their heads above water, in spite of hard work and rigid economy. The cost of labor and all the materials used by the nurseries have advanced with in 15 and 20 years from 20 to 50 per cent; while prices of trees and plants have declined in about the same ratio. This has produced a great change. I think that much stock has been sold below cost. In computing the cost of trees, a great many things must be taken into account besides the actual expense of growing the tree in the field, and I think it safe to say that most crops of trees cost at least double what they are supposed to do. It is necessary to look at the result of several years and several crops, the failures must be reckoned in as well as the successes. I think this is a matter of vital importance to the trade, and I trust it will receive due consideration.

We have no nurserymen's association here to discuss such matters, but our nurserymen have the *RURAL* through which they can discuss their business to their hearts' content, providing they do not act like measly Congressmen and call each other names. It is a good thing to discuss matters. The disputants and the people are instructed, and trade certainly drifts to the men who show public spirit and intelligence in the discussion of matters pertaining to plant growth and propagation. Let us hear about tree and plant growth, either from a business point of view or otherwise.

For the year ending June 30th, the total value of exports from the United States was, \$176,977,496.



GROUP OF EGYPTIAN SOLDIERS IN THE BAZAR IN CAIRO.

etrating eye and immovable *sang froid*, the intent faces of the prospective purchasers, whose whole armory of weapons cannot protect them against his superior craft and management. On his extended fingers he is indicating the price he will take for the coveted cimeter—300 piasters, probably, as his three fingers only are extended.

FORESTRY.—At the last session of the American Forestry Congress, held in Cincinnati, there was provision made for general representation by the selection of a Vice-President from each State and Territory in the United States. R. E. C. Stearns, Ph. D. of Berkeley, was chosen as Vice-President for California. The next meeting of the Congress will be held in Montreal, in August next.

Two artesian wells will be sunk in Colorado by Commissioner Loring as an experiment toward reclaiming the desert sections by irrigation.

muda grass will conquer, by gradually encroaching upon alkali, and encroach by conquering—will sweeten its way by spreading, and spread by sweetening its way. Thus the strongest alkali spots and streaks may be subdued and converted into valuable pastures. For further particulars, and for confirmation of what is here stated about Bermuda grass, visit the ranch of the Rev. Robert Strong, at Westminster.

THE Eureka Lake & Yuba Canal Company has commenced the construction of an immense dam in Grizzly canyon, near the Middle Yuba, to impound the tailings from their Columbia Hill mines. The owners of the American mine, which is located within a mile of San Juan, has a crew of men engaged in procuring timbers for the construction of a crib dam to impound tailings, to be built in the American ravine, near the Middle Yuba river.

THE Siamese Government is sending a representative to this country, for the first time.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

Scientific Names.

EDITORS PRESS:—Nearly every day some stranger passing our door inquires the name of a gorgeous blooming border plant, which, for more than two months, has been showing a bright band of color against the dark evergreens. "Me-sem-bry-an-the-mum," we reply, slowly pronouncing each syllable. A look of profound discouragement, not to say disgust, is usually the only reward of our painstaking; but sometimes this takes the form of an open remonstrance against the tyranny of botanists who have inflicted these dreadful jaw-breaking names upon the helpless plants. "Why not call it something which one can remember?" That is a hard question to answer during an ordinary call, and I want to make a little sermon of it to help out brother Matthew Cooke and the entomologists, as well as the physiologists who are hunting bacteria, and all kindred investigators.

I want to show how essential a part of science is its nomenclature. Without the use of special names, which can be recognized equally well by German, English, French, or students of any other progressive nation, no accurate information could possibly be accumulated or transmitted. Popular names in any language can never take the place of the Latin and Greek, which are, so to speak, the mother tongues of science. We know a little flower as pansy, or heart's-ease. In Germany they call it "dreifaltig-heits-blume," which, being interpreted, means "Trinity flower." They have a beautiful legend, which gives the pansy the same place among flowers which amethyst holds among gems. Its purple symbolizes the royal robe of God the Father, its red the love of the Holy Ghost, its deepest violet the humiliation of Christ, and the yellow, being like the light of the sun, shows the co-equal glory of all the divine persons before the incarnation. Now, in Germany, among the educated, there is a whole poem in this jaw-breaking name of their's for the dear little *pensee*, as the Frenchman calls it, his word meaning simply "a thought." Science sweeps all the poetry and prose of it into one boldly descriptive term, *viola tricolor*. The first part refers to the family or group, and includes all the wild white, yellow, purple or pied violets on the plant; and the second part of the term to this species or particular kind of violet, which has characters common to no other. If Monsieur reads out the close, clear description, his *pensee* comes at once to his mental vision, while to Mein Herr the Trinity flower, and to the Englishman his heart's-ease blooms afresh. And so with all the plants, animals and insects, we need to understand not only what they are, but what they are not before we can consider ourselves acquainted with them.

In the study of insects the greatest technical exactness is required. "Bug" means almost anything that has wings or can burrow, and "fly" may mean the turnip beetle, the herdsman's "gad," the hop growers' aphid, or some hundreds of American, European or Australian insects. As if this was not enough to create inextricable confusion of tongues in any attempt at description, what was a "worm" yesterday is very like a bug to-day, and to-morrow a gorgeous butterfly, or "flutterby," as the old Saxon hath it. The dispute over the shield was a trifle compared with the disputes which have arisen over the four-sided shields with which the entomologists have to deal. But not the entomologists alone—the farmer has to deal with them, and we are beginning to understand that the statesman, if worthy of the name, will see how large a part this entomological science is to play in the State craft of the future.

A Wisconsin farmer, who had been listening to a lively discussion between an agricultural professor and other farmers in a convention, rose to speak of the difficulties in the way of farmers obtaining any accurate knowledge of entomology, or other sciences pertaining to his pursuits. He said: "If you will allow a farmer to say something about these hard names, they are among the obstacles thrown in our way, not only in botany, but in law, medicine and even theology. Civilized names come from civilized nations. Now those names (pointing to the professor's charts) are Greek words, transplanted into Rome, and coming down to us with Roman terminations, and thence transplanted all over the civilized world. They spread just as those spores do (pointing to the chart again), and they stand right in the way of our acquiring knowledge. They find plenty of congenial soil. There is a craft about these things. We have what we call priestcraft, and we have lawyer's craft, and political craft, which prevents our getting laws made to suit us, and we have literary craft, and that is what is the matter with those words. You send a farmer's boy to the University to learn a particular thing, and the first thing he sees is those big words; and the professor says: 'You had better take up Latin and Greek, so as to understand them.' Now, what we farmers want, is to have

the school books so reorganized that we can get at the thing in pure English, so that our boys will not be dumfounded and confounded with this Latin and Greek that they have to spend three or four years learning."

This is the way that a great many farmers feel, and accounts for the lack of support by the farmers, of the agricultural colleges. Sufficient pains have not been taken to show that the study of Latin and Greek, as languages, is not at all necessary to a sufficient knowledge of the scientific terminology derived from those languages, to answer the specific purposes of an agricultural education. The Greek and Latin professors, knowing little or nothing of farming, cannot see over the edges of their ruts, and the farmer winks at his brother farmer in the rut beside him and says, "a bug's a bug for a' that."

What we want is rather strongly hinted at in the Wisconsin farmer's speech. Not the substitution of pure English for the scientific names now in use, but such reorganization of school books and studies as will bring the study of words and things together just at the age when the power of observation is quickened by the study of words in which the results of observation have been crystallized.

If a horde of barbarians were suddenly to appear on our borders, threatening to carry destruction like that of the Goths and Vandals in their train, all the rights of protection which inhere in good governments would be immediately extended. But the enemies to our prosperity as a State are not to be counted by millions even, and there are many calling themselves good citizens who begrudge the expenditures, and hesitate over the legislation which has attended the first feeble steps at repression.

Not only should these be increased tenfold, but a knowledge, accurate as far as it goes, at least of the distinction between beneficial and noxious insects, a general knowledge of insect depredations and preventives should be required in every public school. This is simply good policy in time of peace, but, as a war measure, much more might properly be required of our teachers.

Many reasons could be urged in behalf of making entomology a branch of public school education—one of the most urgent is the impossibility of adequately meeting the exigencies practically before us, with the small number of trained observers now in the field.

Prof. Riley, who was set to this work by the State of Missouri, in 1868, and who has made a world-wide reputation by his observations, was asked how many species of insects probably existed in the world. He estimated from published data that there are at least a million. Probably not half of these are injurious, but so dense is the popular ignorance concerning them, that the warfare includes alike beneficial and noxious species. Children should be taught to recognize the dragon fly as the farmers friend, and that Mr. Frog, who is so fat that he can hardly jump, has probably a belly full of the May beetles that in a larva state cut off the roots of grain and other crops; that a single skunk will destroy miriads of strawberry and other grubs; and all these should be known by their correct names.

Since I have urged the usefulness of scientific names, let me also recommend the substitution of the English descriptive names generally in use by scientific people instead of those which are essentially, vulgar as applied to most serviceable creatures. The insect which is vulgarly known as the "stink bug," but which deserves the name, "soldier bug," given it in books, from its incessant war upon out worms, is an example.

The right name for common things is important on higher grounds than I have touched. Before leaving the subject, I wish to acknowledge my appreciation of the services of Dr. Harkness in unraveling the secrets of the fungi, which form another class of rural enemies of which we have hitherto had little correct information. We will promise to master the little Latin and Greek which the Doctor may need in distinguishing their characters, if he will give us a practical pamphlet upon the most important species. These immense vineyards, spreading on every side, seem from their very magnitude to invite mildews and blights, and we must be forearmed by knowledge which is now the possession of a few scientific observers.

JEANNE C. CARR.

Pasadena, July 6, 1882.

Tuolumne Notes.

"Blow, winds! and wait through all the room
The snowflakes of the cherry blossoms!
Blow, winds! and bend within very reach
The fiery blossoms of the peach."

Longfellow.

Mildly blow, ye winds, only a zephyr's thrill!
Sing nature's Eolian song, the list'ning ear to fill;
Melodious fan the trembling leaves of trees,
So sweet at evening hour, when lulled by gentle breeze.

The above verse from Longfellow's very sweet poem, "A Day of Sunshine," made us perpetrate a verse to suit our very quiet and gentle foothill atmosphere. Seldom are we troubled by strong gales of wind, as are daily experienced on the great plains of the San Joaquin. Longfellow was truly a poet by nature. His rural subjects are treated with a grand flavor of poetic imagining. Surely, no true poet ever existed, but what was a lover of nature and a believer in nature's God.

Spring has gone and summer is here in its hottest element. The farmers are busy securing their medium harvest. Our county will have a crop fully up to the average. The fruit is abundant in some orchards, while in others

it suffered from frost and blight. The heat is taxing the strength of old and young trees and vines. A few of the very best conditioned will succumb to decay. Apricots have been in market for some time—retailing price, four cents per pound. Hugh Guinn has had a superior cling peach in market for three weeks. Bodie was treated on the Fourth with a very fine load of his best peaches, blackberries, etc. Mr. Guinn is very enterprising, and keeps his garden in first-class condition. At the last visit we made, not a weed was to be seen, the ground amongst his trees being plowed and rolled—all of which makes it pleasant to gather and handle the fruit. A large space of new ground has been planted to peach and choice pears—Bartlett, etc. The apple is on probation. The codlin moth seems to be partially conquered. Few have fallen so far. The crop is abundant. Pears will be scarce; plums and peaches, fully an average. Steadily the fruit area is extending. New orchards are planted and old ones cultivated and renewed. It is a never-failing source of remunerative industry. Health and wealth are found in a well-conducted garden. It is both pleasing to eye and profitable to pocket.

We fully appreciated your old-fashioned harvest scene. Our hands bear scars from the handling of the sickle. It was a sight to witness 40 or 50 women spread over a field of grain, the binders following, stacking the sheaves into small ricks or stacks, as termed in Scotland. Oh, it was back-breaking for the mothers and maidens. Sometimes the baby would sleep the time away, nestled amongst the young grain. A breathing spell would surely bring forth a swelling song from the tired throng to cheer the drooping spirits of the harvesters. Pay-day was a feature and an exciting ceremony; beer, rolls and *repartee* enlivened the scene. The last handful cut was saved to be dressed and hung up in a conspicuous place, commemorative of the event. But was there not a righteous opposition when the cradle superseded the sickle? The yearly pin-money of the cotter's wife and daughters was seen to pass away, and the progressive farmer who first dared the storm was long held in detestation and scorn. How the present system could have been introduced 50 or 60 years ago in rural districts is more than I can comprehend. But well do I remember the introduction of the cradle.

The world moves, but do happiness and quiet content move in the same ratio? With all our boasted machinery, do the poor enjoy its products? Man may create labor-saving machines, so as only to look on with will power and guiding hand, using the appliances for self-aggrandizement. With all our modern innovations, are not the rich getting richer and the poor poorer; forgetting that we are only almoners of Divine bounty, and will be strictly accountable for its use or abuse.

JOHN TAYLOR.

Mt. Pleasant, July 10, 1882.

HORTICULTURE.

Riverside Apricots.

The Riverside growers have had rather an exciting time with their apricots this year. The *Press* gives the following account of the crop and the disposition made of it:

San Bernardino county is getting a good reputation for an apricot country, and Riverside has at present the bulk of the crop of the county. Two years ago Mr. Wright established a branch of a San Jose cannery at Riverside, and put up about 60 tons of apricots. Last year he moved his cannery to Colton, and the crop, which amounted to 150 tons, was mostly used up by being dried, but some was taken to Colton and sold to Wright.

This year the Riverside Fruit Company was organized, and a large cannery was established. The fruit was quite late this season, on account of the cold weather, but during the latter part of June warm weather came on quite rapidly and evinced good staying qualities. The result was that the crop ripened up with unprecedented rapidity. During last week the fruit was delivered at the cannery at the rate of from 15 to 20 tons per day; hands were scarce, and the capacity of the cannery to can and dry fruit was not equal to the emergency.

Several weeks ago the Fruit Co. desired to contract for the fruit of the valley at \$2.75 per hundred pounds. Some entered into the contract and others did not. What made the matter unfortunate there appeared to be a misunderstanding between the company and some of the fruit growers as to whether the company was to take their fruit or not. The company took all the fruit offered as long as they could handle it, but on Tuesday morning of this week they decided not to take any more fruit except from those with whom they had contracts until the rush should be over. In this emergency many found a crop of fruit on their hands with no market. Some commenced taking their fruit to Colton, and others went to drying their crop. Many have been put to inconvenience and some hard feelings have been engendered, but there will be but little loss of fruit from inability to save it.

It is impossible to give a correct idea at present regarding the size of the apricot crop in Riverside this year, but it will be somewhere in the vicinity of 400 tons. As yet the orchards are but in their infancy. Few trees are in full bearing, and many large orchards are not in

bearing yet at all. With 400 tons this year, what will be the yield three years hence? It appears to be plain that the crop here in the interior ripens more rapidly than it does in the counties along the coast or around the bay of San Francisco. Mr. Stevens, superintendent of the Riverside cannery, is credited with saying that no two canneries in the State could handle the Riverside crop. The apricot campaign will here be short and vigorous. These facts must be looked squarely in the face, and more provisions must be made for another year.

The Fruit Interest.

J. W. C. writes to the *Petaluma Argus* the following radical remarks on the fruit growers' interests: Perhaps it is not generally known among orchardists that there is no longer competition among the leading fruit canneries of this State. For several years there was an unhealthy competition between canning establishments. This stimulated a widespread desire to embark in fruit culture. In fact, some became fruit crazy, and in their imaginations could see the limbs of their trees pendant with golden eagles. I would say, do not cherish these vain delusions any longer. The canners of the State, with a few exceptions, have formed a joint stock company, with a capital of \$1,250,000, for the purpose of self protection; as in the past they had to pay more for certain kinds of fruits than they could get for the same after it was canned. Now the canners have done away with this unhealthy condition of affairs, as one man, Mr. Wm. Jacobs, of the firm of Lusk & Co., sets the purchasing price on all fruits for this cannery combination, and W. T. Coleman, on the other hand, sets the price on all fruits canned, thus putting an end to competition in selling.

Thus the producers and consumers of fruit are virtually at the mercy of those two men. So far as I can see, we will have to endure this, so long as the combination lasts, and it is only limited to 10 years' duration. Thus it is that those with capital can enter into profitable combinations and hang together to fleece the producers. On the other hand, those who represent the real capital, the products of the soil and labor, are as helpless as a band of sheep, not seeming to care how often the wool is plucked from their backs. With the combination established among fruit canners at San Francisco to contend against, on one hand, and the vendors of patent fruit driers on the other, the future of our fruit growers is anything but encouraging. The stock in trade of the latter class of harpies generally consists in a patent on some fruit-drying apparatus, of no practical use to any one but the claimant of the same. To practical fruit drying devices there are but few distinguishing essentials, and these may be summarized: First, the generation of artificial heat; second, a rapid current of air; third, handling the fruit after being placed in the tower in the most expeditious manner.

Lumber and fuel are capital; therefore the loss of either is so much money thrown away. Now, when a vender of these patent machines comes along with what he declares to be the best machine in the country, it would be well to ascertain upon what grounds he founds his claim to manufacture and sell the same. I think that 9 times out of 10 it will be found that he only has a patent bolt, trap-door, curve in the flue, cog-wheel, crank or pinion, upon which to found his claim. Having had considerable experience in the patent business for over 30 years, I have reached the conclusion that there is not more than 1 patent out of 50 worth anything. About 15 years ago, having some plums to dry, I built, at the cost of less than \$50, a dryer, which, with the exception of several small trap-doors, is precisely the same that Plummer is now selling for \$200. In equity, Plummer has no right to sell fruit growers a drying machine, outside of his trap-doors, as I had constructed and used the same machines, in other respects, years before his patent was granted. Why the necessity of orchardists paying Plummer \$200 for a machine they can construct themselves at less than one-fourth the cost? The same is true of the Plummer pitting machine. They were used at San Lorenzo about nine years ago, and have been extensively used in this county some eight years. Some patent vendors make a specialty of a lyepot in connection with a dryer, and others have Mufford's process of treating their fruit before drying.

A Big Debris Dam.

One of the attaches of the Blue Tent Mining Co., reports that a mammoth dam, excelling anything ever before attempted in that line, will soon be commenced. A suitable site has been selected in what is known as Sailor ravine. Heretofore all the debris from this celebrated mine has been washed directly into the South Yuba river. The proposed structure will be ready to receive the debris from this mine in about 30 days. Nature has done about half the work at the place selected, and the company propose to do the other half. In a few days all of their mammoth giants will be brought into use to remove the immense boulders and cement to be conveyed to the place where the dam is to be erected. The foundation of the structure will be of solid rock, and built up to a height of 100 ft. Then another stone wall will be constructed of similar boulders, about 10 ft. from the main wall. The space between the two walls will be filled with bedrock and cement, making it perfectly water, debris and boulder-proof.

THE DAIRY.

Dairy Notes.

The following notes on dairy policies and methods are gleaned from the *National Live Stock Journal*, for July:

Milk Yields and Quality.

There must be a limit to the development of specialties for which cattle are bred, as the capacity for quantity of milk, quantity and quality of butter, and also of cheese. It may be a question whether the limit of capacity has not been already reached in some other directions than in the production of beef. There are some facts which seem to suggest that it is possible that the limit of excellence in butter, combined with quantity, may have been reached in the Channel islands cattle. The butter from these cattle has long been distinguished for its extraordinary quality and enormous yields, but it has not been our observation that the highest excellence has appeared in the largest productions. On the contrary, we have met with the most delicious samples of butter from cows giving not more than 10 to 15 pounds per week. Whenever the yield has reached, or approximated, three pounds per day, or much exceeded two pounds, while it has kept up or increased in color and firmness, it has often diminished in delicacy of flavor.

Since the flavor of butter varies with the quality of food the cow consumes, it is evident that it is derived from some of the constituents of her food, that the supply is limited, and that though bred to the production of flavor, a cow cannot exceed in her milk the flavor the constituents of her food can produce. If such constituents are fully availed of, the amount of flavor must, at best, be very small, and when applied to a small quantity of butter must be more intense than when applied to a larger mass. Butter is made up of different fats, hard, soft and volatile. The softer ones abound in flavor, and are most easily appropriated, and predominate in moderate yields. Hard fats are hard to digest. There is none more difficult for the human system to cope with than stearine, the hardest of them all. Stearine gives stiffness to butter—a quality which merchants, for obvious reasons, eulogize—but which, from its insipidity and difficult digestion, is the most undesirable food constituent butter contains.

CLEANLINESS IN THE DAIRY.—The sides and udder of every cow should, before milking, be cleansed of everything that can fall into the milk pail. The farmer should place over the can which is to convey his milk, two cloth strainers, of unequal thickness, the thicker one being below the other. The lower one is best made of thick woolen flannel. A woolen strainer will often take out a good deal of foreign matter that a linen or a cotton one would let through. As often as matter accumulates upon them, they should be turned over and rinsed till they are clean. This would be but a small item for each dairyman to do, and it would make a material difference in the quality of the butter or cheese that is to be made from it. This little attention to cleanliness would, like every other tidy act connected with the dairy, pay well in the long run, because it would make the goods so much more satisfactory and desirable. It would not remove entirely the necessity for straining at the factory, because flies and other objects which it is impossible to avoid, are always liable to drop into milk while being handled, that must be got out, but it would keep out so much soluble matter that now goes in, as to make a material improvement in the products of the factories.

STRAINING MILK.—The purpose in straining milk is to make it cleaner than it was before straining, but the object is often poorly accomplished. In private dairies this work is usually better performed than when it goes to factories. When a large number of persons are all putting milk into one common reservoir, the weight of personal accountability loses much of its force from the increased difficulty of tracing home faults to their origin. On this account, the patrons of factories sometimes omit entirely to strain milk at the farm at all. They leave this operation to be performed at the factory. All the hairs and dust and dirt, and the crystallized accumulations from insensible perspiration, which are all the time forming upon the udder, as well as the rest of the surface of cows, and which are always working off during the process of milking, and finding their way especially into broad-topped pails, remain in the warm milk to soak and become soluble by the time the milk reaches the factory. No matter how neat the factory man may be, he cannot get out what has been already dissolved by the agitation of the milk on its journey to the factory, often several miles distant.

THE EASTERN DAIRY SEASON.—Reports from the large markets show receipts of butter and cheese up to the beginning of the month to be considerably less than for the corresponding time last year. This is evidently due to the smaller quantity and inferior character of food the producers have had to offer their cows, owing largely to the backwardness of the season, and to the cold and uncomfortable weather to which cows have been exposed. Comfort, as well as good food, is necessary to the most active secretion of milk. The diminished supply

will doubtless continue to do so till the excellent stand of grass the frequent rains have established is developed into a greater luxuriance by favorable weather. Unless the season takes an unusual turn, the yield of pasturage and meadow must be large, and the production of milk greatly in excess of that of the last half of the season last year.

POULTRY YARD.

The Best Breeds.

EDITORS PRESS:—In the little boy's composition is to be found the following: "There is a good many breeds of hens;" but the Directors of our State fair, judging from the premium list, would have us think that there is but one variety of worth, viz.: Bantams. Fortunately, all do not think so. In taking up the subject, "The Best Breeds," it is not my purpose to endeavor to show that any one single breed of fowls is absolutely the best, as all the excellencies cannot be combined in one, and what may be best for one locality may not be for another; as, for instance, Leghorns, Spanish, etc., with large combs and wattles, and scant body feathering, are not so well calculated to stand the rigors of a cold northern climate as some of the sitting varieties with less prominent head appendages.

In deciding which are the best varieties, two specially important features must be considered, viz.: the kind best adapted to the locality, and the object for which fowls are kept. Having been engaged in poultry rearing almost since childhood, and on a scale far from insignificant, both in the far East and on this coast, may I not be indulged in the opinion that I know whereof I write? Here, in our beautiful climate, where we are not subjected to a frigid temperature for five to six months in the year, the adaptability is a matter very easily settled, and as to the object, no one would think of keeping the masterly Cochins or Brahmas if eggs are wanted solely, nor the small, non-sitting varieties for meat. So that, to get the highest and best results, it becomes an absolute necessity to select varieties noted as the best in each of these two separate departments.

Let us suppose that fowls are kept for eggs solely: Choose then, the variety that lays the largest number of eggs per annum. All breeders acknowledge, and no one raises a question, that the Leghorns stand at the head of the list; so, Leghorns will be our choice until the palm has been fairly wrested from them, and I can assure any one who would have a well-filled basket at the end of his egg-gathering rounds, that he should not be dilatory in introducing this sprightly, active fowl, and he will cease to wonder why they have been called "laying machines." On the other hand, if chickens are desired for the early markets, or broilers, size being a prerequisite, we, in consequence, turn to the large varieties.

I have no eulogium to make on any one variety of Asiatics, for, as the boy said, "All of them is the best. That's what every one that has 'em says." My own experience has been that, as a mere source of profit, there is little, if any choice—being more a matter of fancy—and, by the way, that involves one of the grand secrets of successful poultry breeding. No man can keep a dozen or more varieties and breed all alike successfully, for the simple reason that he cannot fancy all alike. He who keeps but one variety, or two, at most, who sees in them some characteristics more pleasing to him than that of any others, and who persistently adheres to his choice, will rise as far above his competitors who expend their efforts on a great many varieties, as the specialist in medicine, or any of the sciences.

The Cochins and Brahmas being found too stinky, lank and lean at the proper age for broilers, breeders at once concentrated their efforts in originating a variety that would fill the bill, and for a time the coming fowl was talked of as one that would not only have size with early maturity, but in a large measure the good features of the small varieties. When a want is created the skill of the American breeder is not long in responding, and in this case, as the result, we have that most excellent variety, the Plymouth Rock, a purely American fowl, of New England origin, coming to us with no high-sounding name, as though imported from some foreign country; a fowl that has gained the place it now occupies solely upon its own merits. The following, from a gentleman who has done as much, or perhaps more than any other man, to perfect this variety, and who, though an ardent admirer, is no enthusiast, exactly meets my views:

"The real merit of this variety is unquestioned. Their reputation is established. They are, without doubt, in the lead of all varieties of pure-bred poultry. They are receiving more attention than any variety of pure-bred poultry in America, and, I may safely say, in the whole world, as they have more good qualities and fewer defects than any other established breed. They are quiet in disposition, bear confinement, thrifty under all circumstances, excellent foragers, hardy and vigorous, and, by all odds, the most profitable, as they mature very fast, producing more pounds of flesh, with the same amount of food, than any other breed known; are excellent egg producers, laying well during the whole year. With all these valuable qualities they are the fancy fowl—beautiful feathers, being a bluish-gray, prettily penciled with darker blue, making them very attractive in appearance."

As "figures won't lie" I shall present some in the next, from which readers can draw their own deductions. L. C. BYCE.

FORESTRY.

Forest Trees of California—No. 5.*

California Myrtle, or Sweet-gale Tree.
(*Myrica Californica*.)

"Sitting in a pleasant shade,
Which a grove of myrtles made."—Bannerfield.

A tree 30 to 40 ft. high, 1 to 3 ft. in diameter; always a large shrub of 10 to 20 ft., emulating trees. These dark evergreen, densely leafy shrubs or trees are covered with balsamic glands that yield their sweet aroma to the breeze, and when bruised in the hand emit a strong but refreshing, resinous, or rather balsamic odor, as observed, that greatly reminds you of the Eastern little sweet-fern shrub (*Comptonia asplenifolia*), to which it is allied. To the European, however, it recalls the delightfully fragrant sweet gale (*Myrica Gale*), of his home beyond the waves; and, by the way, it should be noted that the true sweet gale is also a native of California, found in the canyons in the vicinity of Yosemite, where we collected it many years ago. These myrtle leaves are rather narrow, one-half inch or less, lance-shaped, about three inches long, somewhat saw-toothed on the margins, chiefly above, moderately wedged toward the base, alternate, and when young, of a bright, lively, yellowish-green tint, slightly varnished, the color nearly alike on both surfaces. This cheerful hue is very pleasing to the eye, seen against the darker background of the old and denser foliage itself. In all the earlier periods of growth, even well nigh unto old age, the habit is mainly more strict and erect than much spreading; bark, dark, iron-hued, not very rough, often smoothish; aments, or tags, very short and crowded, not conspicuous; the granular-surfaced berries of the size of peas, clusters situated along the twigs near the end of the previous year's growth. They are dark purple, staining the fingers on pressure. The very thin pellicle of wax is so obscure, one is apt to overlook it altogether unless special attention is called to solve the question.

The largest myrtle ever seen here, so far as I am aware, flourished in the heart of the city of San Francisco many years ago. This was renowned for its massive proportions, consisting of three large, tree-like trunks, each about a foot in diameter, from a short base, or main body, nine feet in circumference. This grand sentinel stood guard by a spring on the eastern slope of Russian hill, under whose shadows the early emigrant of '49 camped. Groves of them hid the marshes of the lower portions of the city; but they are gone, as perhaps most of their companions soon will be, forever. So, also, along the banks of Lobos creek, and elsewhere, it was no unusual sight to see trees one to one and one-half feet in diameter, and 35 to 40 ft. or more high; yet even these, which any tolerably enlightened self interest would have preserved, a wanton water company cut away; nevertheless, we have an abiding faith that it will not always be so. Let us turn our eyes from the pit of our own and others' errors. Full of the charm that fascinates, in communion with nature, is not the gay flower, the handsome leaf, nor any symmetry of form in outline, mass or detail, nor grace of motion, waving with the wind nor rustling in sympathy when astir and softly pillowed by the gentle zephyr; nay, but whatsoever hath paramount power to move most deeply the affections which underlie all the blandished arts and airs—and these are those sweet aromas that wake the soul to love. They come down anon with overwhelming power in our inspirations of ethereal autumn airs, when all the landscape is brown and bare, when the cloud curtain of the faded year is ready to drop on all that was beautiful and fair to view without, overshadowed the divinely human, transfigured, we feel that it is good to be there—are ready to pitch the tents of peace and dwell therein forever. But, returning, are there not thousands of similar kindred mysteries to myrtle odors in every one's personal experience, that commend them and their like to culture, or what else is it that hallows and charms our affections but sweetness of spirit and other mental quality within, that so blinds us to irregular forms and features of friends, objective or individual, with whom we hold such pleasant converse? Is it not the real soul, or something like it, on the other side beaming through? Or, let us reconsider the ground of our esteem for numberless pets of the garden, field and forest. True, one of a thousand may possibly be fairer to us than the rose or the lily, and altogether lovely; if so, we have indeed found at least one of the real trees of natural life, perchance of foliage, flowers and fruits of honor, trees of renown, the planting of Jehovah, that he may be glorified, glorified in man, in that only paradise of the soul, wherein is found celestial joy and gladness and the voice of melody.

As these myrtles abound in benzoic and tannic acids, resinous matters and fragrant volatile oils, the bark and leaves are esteemed in the arts and for medicine. The wood is used as fuel.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau, State Printing Office, Sacramento, 1882.

ESPARTO GRASS PAPER.—The first works for manufacturing paper from esparto on the Continent are being erected at Barnburg, Germany, by a company of French and Hamburg capital.

THE STABLE.

The State Fair Speed Programme.

The speed programme for the State Fair is published below. The purses and stakes amount to \$12,500. There will be six days' racing, commencing Sept. 11th, and the number of races 23. Some of the prizes are large and will cause some good horses to take part. There have been many nominations, and plenty of assurance is given that the racing season will be an interesting and successful one. Entries for certain events for 1883 will also close with these races. The trotting and pacing races are for the best three in five, except the two-year-old trot, unless otherwise specified; five to enter and three to start. Entrance fee, 10% on purse, to accompany nomination. Purses divided at the rate of 60% to first horse, 30% to second, 10% to third. National Association rules to govern trotting; but the Board reserves the right to trot heats of any two classes alternately, if necessary to finish any day's racing, or to trot a special race between heats. To fill running races, three or more subscribers are necessary. All two-year-olds, when running in their classes, shall carry 100 lbs., with the usual allowance for mares and geldings. All three-year-olds, when running in their classes, to carry 110 lbs., with the usual allowance as above. Pacific Coast Blood Horse Association rules will govern running races. It will be required that riders have uniforms easily recognized. Entries to the races close August 1st:

THE PROGRAMME.

First Day—Monday, September 11th.

No. 1.—Running. Introduction stake—for all ages; three-quarters of a mile dash; \$50 entrance, \$15 forfeit; \$200 added; second to save stake.
No. 2.—Running. Breeders' stake—for foals of 1879; one and one-half mile dash; \$50 entrance, p. p.; \$300 added. Closed March 1st with 19 nominations.
No. 3.—Running. Selling race; purse, \$250. Free for all; one mile and repeat; second horse to receive \$75; entrance 5% to third horse. Horses entered to be sold for \$1,500 to carry entitled weight; one pound off for each \$100 under fixed valuation.
No. 4.—Trotting. 2:40 class; purse \$1,000.

Second Day—Tuesday.

No. 5.—Trotting. 2:25 class; purse, \$1,200.
No. 6.—Trotting. Purse, \$600; for three-year-olds and under.
No. 7.—Trotting. Purse, \$500; mile heats for two-year-olds.

Third Day—Wednesday.

No. 8.—Running. Filly stake for two-year-old fillies; five-eighths of a mile; \$50 entrance, \$15 forfeit; \$200 added; second horse to receive \$75; third, \$25.
No. 9.—Running. California Derby stake; for three-year-olds; one and one-half mile dash; \$100 entrance; \$25 forfeit; \$250 added; second horse, \$100; third, \$50.
No. 10.—Running. Jennie B. stake; for all ages; dash of one mile; \$50 entrance, \$15 forfeit; \$200 added; second horse, \$75; third, \$25. Stake to be named after the winner, if Jennie B.'s time, 1:42½, is beaten.
No. 11.—Running. Selling race; purse, \$250; one and one eighth miles; second horse, \$100; entrance 5% to third horse. Horses entered to be sold for \$1,000 to carry entitled weight; two pounds off for each \$100 under fixed valuation.
No. 12.—Trotting. 2:30 class; purse, \$1,200.

Fourth Day—Thursday.

No. 13.—Trotting. 2:22 class; purse, \$1,200.
No. 14.—Pacing. 2:25 class; purse, \$500.
No. 15.—Trotting. Two miles and repeat; 2:40 horses; purse, \$300.

Fifth Day—Friday.

No. 16.—Running. Colt and filly stake; for two-year-olds; dash of one mile; \$50 entrance, \$15 forfeit; \$200 added; second horse, \$50; third, \$25.
No. 17.—Running. Selling race; purse, \$300; for all ages; dash of one and a quarter miles; \$100 to second horse; entrance 5% to third. Horses entered to be sold for \$1,500 to carry full weight; for \$1,200, three pounds off; for \$500, 10 pounds off.
No. 18.—Running. Post stake; dash of three miles; free for all; \$100 entrance; \$500 added; weight, 100 pounds; three-year-olds, 90 pounds; second horse to receive \$150; third, \$100. Starters to be named to the Secretary Wednesday evening, at or before eight o'clock.
No. 19.—Running. Consolation purse; \$250 for beaten horses; one mile and repeat; entrance free; second horse to receive \$50.

Sixth Day—Saturday.

No. 20.—Trotting. 2:10 class; purse, \$1,200.
No. 21.—Trotting. Purse, \$800; for double teams of 2:30 horses.
No. 22.—Trotting. Occident stake for 1882; closed in 1881 with 12 nominations.
No. 23.—Special trot against time; \$250 in plate will be awarded to any stallion that beats Santa Claus' time (2:17½).

Entries for the following events for 1883-'84 were ordered to be closed with the above races:

No. 1.—Running. California Derby stake; for foals of 1880, to be run at the State fair of 1883. One and one-half miles dash; \$50 entrance, p. p.; \$300 added; second horse, \$100; third, \$50.
No. 2.—Same stake, for foals of 1881, to be run at State fair of 1884. Same conditions.
No. 3.—Running. Maturity stake; three-mile dash for four-year-olds, in 1883; \$100 entrance; \$25 forfeit; \$500 added; second horse, \$150; third horse, \$100. To be run at the State fair of 1883.
No. 4.—Running. California annual stake; for two-year-olds, foals of 1881. Dash of one mile; \$100 entrance; \$25 forfeit; \$250 added; second horse, \$100; third, \$50. To be run at the fair of 1883.

COPPER BEARINGS.—Mr. A. Getchell, of Boston, Mass., claims that he can harden copper and convert it into anti-frictional metal by the following process: The copper is first heated to about redness in a crucible, and a composition is then added which, for 25 lbs of copper, consists of 1½ lbs of potash or soda, 1 lb of alum, ½ lb bone dust or other phosphate, and ½ lb of tin or zinc. After melting this mixture of copper and composition, and removing the slag, the whole is ready to pour, and may be run into molds. After having removed the slag, and while pouring, the metal should be covered with charcoal to prevent oxidation. The resulting metal is said to be especially useful for bearings in machinery.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 4.

[Written for RURAL PRESS by CLARA DEMING.]

Grange Progress.

The National Grange, at its last session adopted the following resolution:

Resolved: That it shall be the duty of Masters of Subordinate Granges to report to the Master of the National Grange at the annual meeting the standing of their respective Granges, their general work, experience in cooperation, and other facts as may tend to show their real standing, and the causes that have contributed to their present position. And Masters of Subordinate Granges to report to the Master of the National Grange at the annual meeting the standing of their respective Granges, their general work, experience in cooperation, and other facts as may tend to show their real standing, and the causes that have contributed to their present position. And Masters of Subordinate Granges to report to the Master of the National Grange at the annual meeting the standing of their respective Granges, their general work, experience in cooperation, and other facts as may tend to show their real standing, and the causes that have contributed to their present position.

In compliance with this resolution, the W. M. of the National Grange has received reports from many of the States. It is a matter for congratulation to us to find the Order slowly, but steadily advancing in most of the States reported; some are simply holding their position and organizing their forces for earnest work during the next year. Poor Louisiana has met with so many reverses, caused by drouth and the devastations of the terrible overflow of the mighty river emptying its waters upon her shores, we do not wonder that she reports a slow progress in Grange matters. The report from New Jersey says, among other remarks, that the Granges are the most prosperous who meet often and have the most young people in their ranks; "whose officers endeavor to give each something to do to awaken an interest in each Grange meeting, by which a larger attendance is obtained, and much greater results from co-operation." The word comes from Indiana that good results were brought about by "hard and zealous work and a liberal distribution of Grange literature." The Master of the Michigan State Grange says: "The light of our education received within the gates is telling for good."

The report of the Wisconsin Grange standing ends up with the following pertinent remark, "We are being educated to do our own business faster than a good many think." New Hampshire wheels into line by saying, "Great good has been accomplished by the Grange press, by enlightening and instructing our members in the true principles and purposes of the Order, showing farmers that it is an organization working for their best interests, in many ways." The causes of success in Texas may be summed up as follows: "First: Active, live, progressive officers and members. Second: Live, active county and district lecturers, fully discharging their duties. Third: First-class Grange and agricultural journals, read by the members. Fourth: Commercial co-operation, carried out on the true co-operative plan." In Maryland "The Order may be put down as a fixed fact. Its weakest point is its want of progressive-ness."

The report from North Carolina says: "We are holding our own. In one section there is considerable life, zeal and co-operation, and there the Order has increased and strengthened during the past quarter. In other parts of the State I fear this gain has been counter balanced by indifference, inattention and indolence." The Master in Pennsylvania, after speaking of the bright prospects for the Order in the State, says: "I feel satisfied that half the delinquencies are caused by confused accounts in Subordinate Granges."

We have made these quotations showing some of the causes of success and decline in other States, because they seem to correspond very nearly with the standing in our own State. Many farmers think the Grange is doing them no good, because the dollars and cents do not jingle in their pockets every time they attend a meeting. Their first ideas of the benefits to be given them by the Order of Patrons of Husbandry were like those of many who came to California in the early days of the gold fever, expecting to find the precious metal scattered broadcast upon the surface of the earth, and all they would have to do would be to stoop down and gather an immense fortune in a very short time. But the fortune which the Order brings to the Patron is not of a metallic nature, but a kind which no man can steal or creditor take; when once acquired it is his forever, and that is knowledge, which is far more precious than gold or silver. It is like other fortunes in one respect; it cannot be had without labor and trouble.

This fortune is also an increase of intelligence in business and social intercourse. Brotherly love, and confidence in one another, which certainly did not exist to any extent before the era of the Grange movement.

A general improvement of homes and home-life is noticeable everywhere; the farmer finds others respecting him, and he begins to feel some respect for himself. Grange debates are educating members to take part in and understand the legislatures of our land, where we need a fairer representation of the farming community than we now have.

If there are only two or three in a neighborhood who appreciate these advantages and have to do most of the work, how are they going to revive Grange work or keep up a Grange? The

only way to make a success of the Order is for all farmers to co-operate and help one another. When one member shirks his or her duty the burden falls upon the shoulders of those least able to bear it.

The farmers will have no one but themselves to blame if the Order is not a success in this State, for the Worthy State Master is doing all in his power, and the other State officers are doing their best. If the farmers will not take time to improve themselves, how can the Grange benefit them? And I think no State can boast of a better Grange paper and agricultural papers (the RURAL PRESS and others) than California. All they need is plenty of readers who are willing to pay the subscription price promptly.

Contra Costa Grangers' Association.

According to a report published in the *Gazette*, of July 15th, the meeting of the stockholders of the newly-incorporated "Contra Costa County Grangers' Warehousing and Business Association," was held on Monday last, pursuant to published call, for the purpose of adopting by-laws. A meeting of the stockholders of the "Grangers' Warehousing and Business Association of Contra Costa County," was held coincidentally, pursuant to adjournment. A resolution transferring the old association to the new was adopted.

In the meeting of the stockholders of the new incorporation, after adoption of the by-laws, an order was made, on motion of S. C. Whitcomb, postponing the election of directors to date of the annual meeting in May next, leaving the directors named in the articles of incorporation to serve until those then elected are qualified. Following are the by-laws adopted, which we publish in full, as they may serve as a guide for those desiring to form similar associations elsewhere:

By-Laws of the Contra Costa County Grangers' Warehousing and Business Association, Adopted July 10, 1882.

ART. 1. The name of this corporation shall be: The Contra Costa County Grangers' Warehousing and Business Association.

ART. 2. The said corporation shall have a capital stock of \$50,000, gold coin of the United States, divided into 2,000 shares of \$25 each.

ART. 3. The principal place of business of said corporation shall be at the town of Martinez, Contra Costa county, State of California.

ART. 4. Stockholders of this corporation shall be such persons as may have, or shall execute a subscription to the capital stock in such form as shall be prescribed by the board of directors, and shall pay to the said corporation all duty levied and called assessments on their subscribed stock.

ART. 5. The powers of the corporation shall be vested in a board of nine directors, who shall have been elected, and who shall hold office for the term of one year, or until their successors shall have been elected and entered upon the discharge of their duties.

ART. 6. The directors shall be citizens of the United States, Patrons of Husbandry, and stockholders in the corporation.

ART. 7. A majority of the whole number of directors shall constitute a quorum for the transaction of business, and every decision of a majority of the persons duly assembled as a board (not in conflict with these by-laws) shall be valid, as an act of this corporation.

ART. 8. Regular meetings of the board of directors shall be held at the office of the corporation, at least once in every three months—on the first Monday of January, the first Monday of April, the first Monday of July, and the first Monday of October, in each year, and at such other times as the board of directors may prescribe. Special meetings of the board of directors shall be held at the same place upon the call of the President or Vice-President. It shall be the duty of the President or Vice-President, in case from any cause the President cannot act, to call special meetings, either of the board of directors or of the stockholders, upon the written request of five of the directors, or upon the written request of stockholders representing one-tenth of the stock issued. Due notice of such requested meeting of the stockholders shall be given by mail, and all business which could be transacted at a regular meeting of the stockholders may be done at such requested and specially called meeting. No notice of the regular meetings of the board of directors shall be requisite, other than that prescribed herein; but of all special meetings of the President or Vice-President shall cause all directors to be notified by mail, or personally.

ART. 9. The corporation shall have power to deal, as factor or principal, in all kinds of agricultural implements, products and general merchandise; to ship grain and other merchandise to and from foreign and domestic ports; to own, charter and load vessels for foreign and domestic ports; to construct and maintain wharves and warehouses at or near the town of Martinez for the landing, shipping and storage of agricultural products and merchandise; to acquire and hold land for such purposes, and to borrow and loan money as the necessity of the business may require.

ART. 10. Whenever a vacancy shall occur in the board of directors, by death, resignation or otherwise, the board of directors shall fill the same by appointing a successor for the unexpired term.

ART. 11. Whenever any director shall cease to be a stockholder, his office shall become *ipso facto* vacant; and such vacancy shall be filled as provided for in Article 10.

ART. 12. The board of directors shall elect from their number a President and Vice-President. They shall also elect a Secretary and Treasurer, who shall be stockholders in the association, and who, together with the President and Vice-President, shall hold their offices for one year, or until their successors shall have been elected and have entered upon the discharge of their official duties.

ART. 13. The President or Vice-President, or either of them, may be removed from office at any time on the vote of five directors in favor of such removal.

ART. 14. The President, Vice-President, Treasurer and Secretary, shall give bonds for the faithful discharge of their respective duties, in such sum as may be prescribed by the board of directors; and for their services shall receive such remuneration as may be fixed by said board.

ART. 15. The board of directors shall have power to appoint such officers, agents, clerks and servants as the business of the corporation may require, define their power and prescribe their duties; and shall fix their salaries and other compensations to be paid to them; and, by order, may require bonds to be given by employees for the faithful discharge of their duties.

ART. 16. The President and Vice-President shall have charge and custody of the funds, property, books, papers and other matters of the corporation, under such rules, regulations and restrictions as provided by these by-laws, or as the board of directors may prescribe by resolutions duly passed and entered upon the minutes of said board.

ART. 17. The President and Vice-President shall not both be absent from the State at the same time, and in case of the absence of either, his duties and powers shall devolve upon and be performed by the other.

ART. 18. It shall be the duty of the President, and in his absence, of the Vice-President, to preside at all meetings of the board of directors, and at all meetings of the stockholders of the corporation.

ART. 19. It shall be the duty of the Secretary to record correctly all the proceedings of the stockholders at their meetings, and of the board of directors.

ART. 20. The board of directors shall, from their number, appoint an Auditing Committee of three, who shall be sworn to count the cash, examine the books, vouchers, documents, papers and other assets of the corporation; to report upon the same to the stockholders at their annual meetings, and to the board of directors from time to time, as they may direct.

ART. 21. The annual meetings of the stockholders for

the election of directors shall be held at the office of the corporation on the first Wednesday of May in each year, at 10 o'clock A. M.

ART. 22. The call for the annual meeting of stockholders, and for the annual election of directors shall be signed by the President or Vice-President, and be attested by the Secretary, and be published once a week for four consecutive weeks preceding the day of meeting, in one newspaper of general circulation in the county. If, from any cause, no quorum shall be present, the meeting may be adjourned from time to time without further notice.

ART. 23. All transfers of stock shall be subject to all debts and equities in favor of the corporation against the persons or corporations making such transfers, and existing or arising prior to the regular transfer thereof.

ART. 24. The board of directors shall have power to deposit all money or other assets in some bank, banks, or other safe places, as they, in their discretion, may see fit, for the proper safety thereof.

AGRICULTURAL NOTES.

CALIFORNIA.

COLUSA.

THE NORTH WIND.—*Colusa Cor.* Marysville *Appeal*, July 12: The north wind blew very hard on Saturday morning last, doing considerable damage to wheat fields by whipping out the grain. One farmer lost by the wind about \$1,000 worth of wheat. The fruit trees suffered, especially pear, plum and apple trees. The trees were broken off by the wind in some instances.

LOS ANGELES.

ANOTHER CANNERY.—*Times*, July 14: C. V. Hall, the commission merchant, has now in operation at his ranch on Adams street, a successful cannery, where 15 hands are employed. They are now working mainly on apricots and peaches, but, to some extent, on pickles and vegetables also, all the canned goods being put up to fill orders previously received. Mr. Hall has purchased the fruit on 150 trees in Mrs. H. Shaw's orchard on San Pedro street. As the business demands, Mr. Hall will enlarge his capacity and number of employees.

MENDOCINO.

WOOL ASSOCIATION.—*Press*, July 14: The Wool Association has finished grading and baling, and the press lies idle for want of orders. About 50 tons were graded and baled for Messrs. Angle, White and McGarvey. But one of these gentlemen had determined to ship through the association at last accounts. The disappearance of wool day, which has been a feature of the local market for years, is a noticeable loss. There has been no meeting of the mass of producers with local and Eastern buyers, and the results of those days of emulation are missed by sellers.

MERCED.

POTATOES.—*Stockton Independent*, July 14: The potato crop in Merced county is better as to quantity and quality than in any former year. In past years it was generally considered that potatoes could not be successfully raised here, but the proper varieties and necessary cultivation are generally understood now, and the market is fully supplied with the best quality of early potatoes, at moderate prices. Cool weather in the spring and early summer insures good potato crops in this part of the country.

MONTEREY.

BEE FARMS.—*Democrat*, July 15: The sand-hills enveloping the San Miguel Canada are covered with shrubbery containing quantities of wild sage and they are the seat of several bee-farms that are in prosperous condition, yielding honey that for purity and delicacy of flavor can not be surpassed. Mr. Wycoff carries on one of them, he employing the "extracting" process mentioned, and Mr. Adcock, who has been long in the business, has carried the fame of San Miguel far and wide.

SANTA CRUZ.

RASPBERRIES.—*Courier*: Mr. Calvin Gault's ground covered by red raspberry canes measures nearly one-third of an acre, and from this plant he is now picking from 60 to 90 one-pound boxes of raspberries per day. On the week prior to the fourth his receipts from raspberries were \$32.50, last week \$50, and this week he anticipates an income of \$40 from the same source. A long row of Kittaning blackberries in the same garden are just ripening.

WHEAT.—*Watsonville Pojaronian*, July 13: Crops are looking well in this valley. Men who were bemoaning their loss after the heavy frost in May, are now feeling jubilant over their prospects. We have heard of one man, who at that time sold his wheat for \$15 per acre, who now mourns his scare. His wheat is now looking first-class.

SOLANO.

NORTH WIND AND GRAIN FIRES.—*Suisun Republican*, July 14: Saturday, July 8th, was one of the hottest days of the year, and the heat in the greater part of the Sacramento valley was rendered more unbearable by the prevalence of a strong north wind. In the forenoon, an extensive fire occurred about five miles northeast of Vacaville, upon the ranches of D. Brown and F. Miller. We have not learned the exact amount of damage done, but it is above \$1,000. In the afternoon the wheat field of Mr. W. Jepson, a few miles north of Cannon's station, was burned, the loss being about \$2,000. Nearly 200 men were on the ground fighting the flames. But for their exertions the fire would have extended to adjoining fields and destroyed wheat to the amount of \$10,000. It is generally believed that the fire in Mr. Jepson's field was caused by two boys dropping lighted cigarettes in the dry grass by the side of the road. The Babcock extinguisher, from

Vacaville, did effectual service in retarding the progress of the flames.

SONOMA.

A GOOD YEAR.—*Petaluma Courier*, July 12: Farmers' prospects around here were never better. The season could not have been more auspicious. Grain is ripening rapidly and the reaper and thrasher can both be seen at work from our office. Wheat is turning out finely, better, in fact, than was anticipated a few weeks since. The season has not been so favorable for years for the potato crop. Corn and other vegetable crops are also doing well. The fruit crop is very promising and will be abundant. Some varieties of plums have not done well in certain localities, but take one orchard with another throughout the country and we shall have more fruit than we can possibly dispose of. The cherry crop was never so large or fine, and this year brought many thousands of dollars into the county. The grape crop is promising, though by the heavy frosts of May last, some of the vineyards will be cut down in their yield. About Petaluma the yield will be fully up to the average of other years. The dairy season is over, and, though the yield of butter per cow has been generally less than last year, owing to better prices for butter, dairymen are well satisfied with the result. It has truly been a profitable year with them. Hay is abundant and of good quality. Stock of all kinds are in fine condition. We have no sickness of consequence, and our people are contented and happy. This is truly a year of plenty with the people of Sonoma and Marin counties, for which they should feel very grateful.

SUTTER.

WHEAT CLEANING.—We understand it costs but little, it any more to re-clean the wheat as it comes from the separator, and is run over the cleaner all with one operation, than it does the old way of sacking as it comes from the thrashing machine. We hope this system will be generally adopted, as it is manifestly to the interest of every farmer to put his wheat in the best possible condition for the market. We have been intimately connected with the California harvests for more than a quarter of a century, and while our farmers have made wonderful progress in speed of harvesting and thrashing, we have made little or no progress in the quality of the work performed. While Sutter Co. has never been excelled in the quality of her product, her wheat has fallen in value behind some of her sister counties simply because of the slovenly manner of cleaning. We shall now step to the front rank of counties with quantity and quality. For the trifling extra expense no man can afford to offer on the market wheat that is foul with chaff, oats, barley or chaff. There is one advantage we had not thought of before in re-cleaning. When it is not re-cleaned the thrasher must necessarily turn on more wind and cleaning motion to make the wheat passable with one operation than he otherwise does. This extra motion carries over and into the straw much oats, chaff, broken wheat, and broken wheat, which if there is two operations, is saved and sacked up separately. This material if unsalable, is of considerable value to the farmers as feed for chickens, pigs or even horses when ground and mixed with barley. In fact we believe the extra amount saved will fully repay the extra expense incurred, leaving the crop in a condition to be sought after by all wheat buyers, and that means an extra price of from 2½c to 10c per 100 pounds. So far as we know all our thrashers carry the extra cleaners, and we hope all farmers will see it to their advantage to use them.—*Sutter Farmer*.

YOLO.

WHEAT.—*Mail* July 13: As the greater portion of the wheat in Yolo county has been already headed, and thrashing is well under way, the size and quality of the crop can be estimated with some degree of certainty. From all parts of the county, we hear of large yields and plump wheat. The Adobe land in the Willow Slough district has probably made the best average, and many pieces of wheat are turning out from 40 to 50 bushels to the acre. Mr. Kincheloe, who lives five miles northwest of Woodland has finished thrashing and his crop has averaged 20 sacks to the acre. The crop in Hungry Hollow was better than usual this year, and in Capay valley the result is the same. The crop of Yolo county will be considerably in excess of what it was last year. Competent judges place it at 65,000 tons.

VENTURA.

EDITORS PRESS.—Every one is hard at work gathering their grain just now. In the Ojai there will be about three-fourths of a crop, and we have every reason to be thankful for it, as the crops in the county are well nigh a failure, as a general thing. Barley has done much better than wheat in the Santa Clara valley. The wheat is of a superior quality this year, and those who have the precious article will no doubt secure first-class prices and make as much, if not more, than they did last year.—*"SAILOR."*

SANTA BARBARA.

A FAIR.—*Press*, July 15: The joint committee of the Agricultural and Horticultural Society of Santa Barbara has decided to hold a joint exhibition on Wednesday, Thursday and Friday, September 27, 28 and 29, 1882. This is about the time of the full moon, and the most favorable season of the year for holding the fair. The premium list will be published at an early day, and will be sent to every tax payer of the county. It is thought the stock show will be

very large. It will include much valuable stock from other counties, many owners living at a distance having already signified an intention to be represented.

NEVADA.

THE WAYS OF THE COWBOYS.—Cor. *Silver State*: I hardly ever see anything about our stock men or cowboys. I do not wish to couple the word "cowboy" with that term as used in Arizona or New Mexico, because the sins of our cowboys, with few exceptions, are trifling, compared with those of the genus in Arizona and New Mexico. Stockmen are not a well-organized body, as their interests have been much mixed, yet, as their operations may interest somebody, I propose to give you a sketch of the rodeo. On the evening of May 19th, at Golconda, the dust could have been seen flying and bells could have been heard jangling in every direction, as each stockman's "caballero" dashed into camp, to be ready for work next morning. At daybreak on the 20th, the "cavarrango" was up and the men off for their horses. The "cavarrango" consists, generally, of green hands, boys and Indians. As it is beneath the dignity of the accomplished vaquero to run with the "cavarrango," he eats his breakfast and waits, with his riata in hand, as the horses are corralled for the "round up." He generally selects a colt or a green horse for this purpose. After several hours' riding, the cattle are brought in from all directions to the rodeo, and the vaquero rides to camp, gets his dinner, changes his colt for a well-reined horse, to part out his cattle, the colt being too nervous and skittish for this part of the work. The vaquero takes pride in his silver-mounted bridle and well-reined horse, as he rides up and calmly surveys the "bunch" of two or three thousand head belonging to many owners. Some hold the rodeo, while others ride in to select their cattle. The practiced hand selects an old cow to start his "parada." He returns and sees a wild steer he wants to take out. This affords him an opportunity to display his horsemanship and skill, as the steer and horse watch each other and dodge each other with as much dexterity as two pugilists, until the steer is finally driven to the "parada." Sometimes a light fellow dashes into the rodeo and selects a cow near the center, and as she moves slowly he becomes anxious to display his horsemanship, crowds her until, with the agility of a cat, she dashes by him and back into the rodeo, while he sinks the riata into his horse's flanks and imagines his companions will think it was the fault of the horse. When the cattle belonging to different owners are separated, all go to camp, the horses are turned over to the "cavarrango," and the cowboys' work is done. A desire to appropriate "oreans" or long-eared yearlings is characteristic of the Nevada cowboy. He will look with cool indifference at cattle dying of hunger or disease, but he cannot bear the thought of seeing an "oreana," that is, an unbranded yearling, running at large. These ownerless waifs secrete themselves in secluded nooks when young, and elude the scalping knife and searing iron until a year old, when they unexpectedly cross the cowboy's path, and are mutilated and branded. Sometimes mistakes are made in branding oreanas, and the mistake is not discovered until the animal is branded, when it runs to its mother, which bears a different brand. This leads to animated discussions, when it is discovered that one man owns the calf and another the cow; but, as a rule, the veteran and not over-scrupulous cowboy is fertile in excuses, and explanations follow, the brand is vented and all is well. A cowboy who has the reputation of being a good "repeater," was closely cornered one day, when a calf bearing his brand followed another man's cow into the rodeo. "Jack," said the owner of the cow, "I see a calf of your's following my cow. How does that happen?" Jack braced up and said: "You see, I have a \$15 riata here on my saddle, and as I was riding one day in the hills, swinging it, as I often do, that calf ran his head into the loop, and I couldn't let him run away with it." The owner of the cow smiled.

A Victory for the California Spring-Tooth Harrow.

The courts recently rendered a decision concerning the validity of patents pertaining to spring-tooth harrows, which awards the rights to the "California spring tooth harrow, cultivator and seeder," manufactured by Batchelor & Wylie, of 31 Market street, San Francisco. The case was tried in the United States Court, at Grand Rapids, Mich, Judge Stanley Matthews rendering the decision. This is the decision of the Supreme Court sustaining a similar decision of the lower court. The following is an extract from the decision; the complainants being the owners of the patent under which the California spring-tooth harrow is made:

The complainants are the exclusive owners of the patent, and are entitled to the exclusive right to use the same and to sue for and receive all profits and damages arising out of, and accruing from infringements thereof. That said complainants are entitled to have a perpetual injunction to restrain said defendants, their agents, servants, and all claiming or holding or operating through or under them, from making, vending or using, or in any manner disposing of any harrow, or harrows, or analogous implement or implements, embodying either or any of the inventions described and claimed in said re-issued letters patent.

THE Land Commissioner of the Kansas Pacific gives it as his opinion that prohibition has no effect in deterring immigration.

Work of the Anti-Debris Association.

The Executive Committee of the Anti-Debris Association met in Sacramento last week and transacted important business. At the Friday afternoon session it was unanimously determined to hold a convention at Sacramento, Tuesday, September 26th, to be composed of 205 delegates, apportioned to the different counties, as follows: Sacramento, 25; Yuba, 25; Yolo, 25; San Joaquin, 25; Sutter, 25; Colusa, 25; Butte, 25; Solano, 10; Tehama, 10; certain revenue districts in Placer county, 10. It was ordered that an address be prepared calling for the convention, and setting forth its purposes. The committee some weeks ago employed County Surveyor J. C. Pierson and City Surveyor L. F. Bassett to inspect the hydraulic mines along the American and Cosumnes rivers and their tributaries. These gentlemen were present at the meeting of the committee, and submitted written reports of observations, which were printed in the *Sacramento Bee* of Saturday afternoon.

At the Saturday morning session there was an informal discussion of matters pertaining to the suppression of hydraulic mining, lasting for an hour or more.

S. D. Wood, of Yuba county, submitted the following resolution, which was, on motion, unanimously adopted:

Resolved, That an appropriation of \$100 be made by each county of the Anti-Debris Association, to defray the expense of making surveys of the bar of San Francisco harbor and the bays of San Francisco and San Pablo; and the river approaches thereto.

On motion, E. R. Graham was appointed to visit the county seat of Tehama county, with a view to arranging for a representation from that locality in the convention to be held in Sacramento on Sept. 26th. For a like purpose, P. R. Beekley was delegated to visit Solano county.

After a general discussion as to details in connection with the proposed convention, an adjournment was had till Thursday, July 27th, at 2 P. M., after adopting the address and call published below.

Call for an Anti-Debris Convention.

There will be held at the city of Sacramento, on the 26th day of September, 1882, an Anti-Debris Convention of 205 members, composed of 25 delegates from each of the counties of San Joaquin, Sacramento, Yuba, Sutter, Butte, Colusa and Yolo; 10 delegates from each of the counties of Solano and Tehama, and 2 delegates from those revenue districts embracing the towns of Sheridan, Lincoln, Rocklin and Roseville, in Placer county. In such revenue districts the appointment of these delegates is confined to Thomas R. Chamberlain and Jacob Mariner. In the counties named, with the exception of Butte, the appointment of delegates is confined respectively to the supervisors thereof or a majority of each board. In the county of Butte the appointment of the delegates assigned to that county is confined to the supervisors of supervisor districts Nos. 2, 3 and 4 thereof, or to a majority of them. Supervisors of all the above named counties shall be ex-officio members of said convention.

In the appointment of delegates great care must be taken to see that none but sound and responsible anti-debris men (willing to attend the convention) are selected, and that partisan politics shall not govern, or in any manner control, in the selection of delegates.

The object for which the convention is called is the organization of the residents and property holders of the Sacramento valley into a compact body, in order that complete protection may be afforded to all persons, property and water courses therein from further injury by the vicious and now judicially condemned system of hydraulic mining.

In the subjoined address we have endeavored to set forth the great necessity existing for the proposed convention.

P. R. BECKLEY, Supervisor, Sacramento.

R. W. MEGOWAN, Supervisor, Yolo Co.

S. D. WOOD, Supervisor, Yuba Co.

B. A. GRAY, Supervisor, Butte Co.

I. N. BROCK, Supervisor, Sutter Co.

E. R. GRAHAM, Supervisor, Colusa Co.

Address to the Public.

We acknowledge vast advances in public opinion in our favor and against the almost indescribable spoils of the hydraulic mining system. We thank to the uttermost all who have stood by our cause in its hours of greatest need, and with pleasure view the near approach of the end, which will restore to the great Sacramento valley and its navigable water courses that degree of prosperity and usefulness to them rightfully and inherently belonging. We reiterate that with the quartz and the drift miners we have no quarrel and propose to have no law suits. We glory in their success and take pride in the flourishing mountain towns and settlements which their industry planted and now sustains. We are, nevertheless, admonished that a large and by far the most unscrupulous part of the hydraulic mining operators propose to continue their law-defying practice of using the lands and water-courses in this valley as places for the permanent lodgment of the damaging and disgusting debris of their mines, and are pained to declare that for the accomplishment of such an unjust purpose our wily adversaries constantly maintain in our midst packs of spies and informers, pledged and often, as we believe, paid, to sow dissensions among our adherents, and by the black arts of

prevarication, cajolery, intimidation and fraud to prevent us, as far as they can, from resorting to our Courts of justice for the redress of our great and overshadowing grievances, and whose practices, logically considered are, simple demands that hydraulic mining shall not be interfered with, and that no expenditures of money shall be made for the protection of this valley, except for the construction of the already tried and condemned system of inefficient and calamitous dams, and we are daily advised that attempts will be made at the coming November election to foist upon us State and county officials not in sympathy with our cause, and who are but little better (if at all) than the hired agents of that Goth and Vandal interest which has already inflicted damage in our seven counties to the extent of \$23,000,000 without embracing the untold injuries caused by it to the navigation and commercial interests of the State at large.

"Self-preservation is the first law of nature," and in our opinion the time has now arrived for the dropping of partisan considerations and prejudices, and throwing into the scale of right the weight of our aggregated population of 118,785 for the preservation of our accumulated wealth of \$77,548,709, and the rescue of our homes and firesides from the desolating flood of sand slickens, and which threatens their destruction. Further toleration of the great evils attendant upon hydraulic mining we hold to be shameful disloyalty to the localities in which we reside. One pull, a long pull and a pull altogether will relieve us once and forever, and for this purpose we have called the friends of the great anti-debris cause—by far the greatest now before the people of this State—to meet in convention at the designated time and place, and there, after due deliberation, to adopt such measures of relief as may be deemed adequate and necessary.

BERKSHIRES FOR BRITISH COLUMBIA.—Wm. Niles, of this city, who makes a specialty of fine cattle, hogs and poultry, shipped three Berkshire pigs yesterday by express, to British Columbia. Mr. Niles has frequent orders from a distance.—*Los Angeles Express*.

News in Brief.

FRANCE will join with England in protecting the Suez canal.

The widow of Abraham Lincoln died at Springfield, Ill., after a long illness.

The pension appropriation bill (appropriating \$100,000,000) was passed by the Senate Saturday.

The majority for the prohibition amendment in Iowa was 29,751; total number of votes cast, 281,381.

A DISTRICT governor was beheaded, and 25 soldiers of his escort killed by Montenegrin insurgents.

THE Mayor and City Council of Leadville, Col., have been arrested, fined and imprisoned for contempt of court.

THE transfer of Gen. Crook to the Department of Arizona gives great satisfaction to the people of that Territory.

THE corner-stone of the new Catholic seminary at Mission San Jose, for the education of priests, was laid Sunday.

JOHN RINGGOLD, "king of the cowboys," killed himself at Morse's canyon, in the Chihuashua mountains, Arizona, Friday.

THE British rifle team, to take part in the International shooting match at Creedmoor, will leave England for New York August 26th.

THE Secretary of the Treasury estimates that the pending bill will reduce the revenue from sugar and steel nearly \$10,000,000 per annum.

THE Marin county court-room presented the singular spectacle the other day of a woman arraigned for murder, who had a six months' old infant in her arms.

FISH COMMISSIONER PARKER has been very successful in planting fish in Washoe Lake. He has introduced into that body of water the Sacramento river perch and catfish.

In boring a well at Cloverdale, the auger, at a depth of 30 feet, passed through a white pine log, and six inches farther struck a tree standing on end, and had to cease operations.

THE tunnel of the Eberhardt mine, at White Pine, is now over 7,000 ft. in length, and there are several drifts running in different directions, some of which are 500 or 600 ft. in length.

PANAMA advices to July 8th, say: The revolution in Ecuador continues to progress. Alfars, the revolutionary leader, has declared he will shoot all officers he may capture who fight for Veintemala, the actual President.

In the Manzanita hydraulic mine, near Nevada City, for several days the heat from the sun was so great that the employees could not work outside the line of spray from the monitors, and several of them who tried it were stricken down.

In Buenos Ayres, during the celebration of the funeral of Garibaldi, the curtain in one of the churches caught fire. The edifice was crowded and the wall fell down, burying many people. Twenty bodies were dug out and ten persons seriously wounded.

A CORRESPONDENT of the *Territorial Enterprise*, writing from Querobarle, Sonora, Mexico, under date of July 1st, states that Frns White, Richard Lewis and William Reed, three Nevada miners, while out prospecting in Sinaloa, were surrounded by a band of Apaches, sixteen in number, four of whom they killed before they were themselves overcome and murdered by the savages.

S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, July 19, 1882.

There is still quite a difference between sellers and buyers as to the value of Wheat. Holders are firm, but sales are made at a slight concession by those who desire to realize on the Grain. The latest from abroad is the following:

LIVERPOOL, July 18.—Wheat: California spot lots are dull and lower, at 10s 2d@10s 5d. Cargo lots are 48s 6d for just shipped, 49s 6d for nearly due and 50s for off coast. Cargoes are rather easier.

The Foreign Review.

LONDON, July 17.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Very heavy rains and want of sunshine have retarded crops, and all cereals are badly rusted. Wheat was in small supply, and advanced 2d. Foreign advanced 1@2s, partly owing to Egyptian troubles, which the trade think may occasion some months' delay in Indian supplies. The off coast market is firm. There were 14 arrivals and 8 sales. A large business was done in American Red Winter for July and August shipments at an improvement. In Barley, foreign was dearer; Oats, 6d better; Corn, dearer, but irregular. Sales of English wheat during the week amounted to 14,522 quarters at 44s 5d @ quarter, against 14,275 quarters at 46s 2d @ quarter during the corresponding week last year.

Freights and Charters.

The following is a summary of the engaged and disengaged Wheat tonnage in port and to arrive, according to the latest advices:

In port.	1882.	1881.
Engaged, tons.....	37,200	38,900
Disengaged, tons.....	27,800	1,900
To arrive, tons.....	293,600	360,700
Total.....	358,600	401,500
Decrease for 1882.....		42,900

The amount of tonnage under engagement yesterday to load Wheat was 36,800 tons, against 33,300 tons for the corresponding date last year, showing an increase of 3,500 tons. There were 26 vessels under engagement yesterday morning at this port to load Wheat. The engaged and disengaged tonnage in port has a Wheat-carrying capacity for 97,500 short tons, against a capacity for 61,200 tons on the corresponding date last year, being an increase of 36,300 tons. The last charter rates reported were at 55s for wooden vessels to Liverpool direct, and 60s for iron, Cork, U. K.

Eastern Wool Markets.

BOSTON, July 14.—The demand for domestic Wool is good. Full prices have been realized, but there is no prospect of any improvement. Sales aggregated 2,380,000 lbs of all kinds.

NEW YORK, July 16.—On the market for domestic Wools the situation of affairs has been much the same as noted from time to time for five or six weeks past. All classes of buyers move with much caution, if not positive indifference, and while occasionally business appears to be swelling into pretty full proportions, the increase proves only temporary, buyers withdrawing the moment they have met the limit of the purchase intended when they came upon the market. To meet the outlet the supply and assortment prove ample, and holders in pretty much all cases are ready to negotiate on a basis of about former rates, but no further concessions have of late been offered, as prices now current barely show a margin, and, indeed, in some instances it would be difficult to repurchase in the interior and come out even. The manufacturers who make their appearance upon the market are in very indifferent humor, and seem only to be looking around in a great many instances, and especially those who have stopped their machinery for the present. Advances from the country and by mail, and through operators who have returned from somewhat extended trips, show about former rates ruling, with a considerable portion of the clip out of farmers' hands, though the latter are offering somewhat less freely, owing to the commencement of harvesting. The sales have been in part to manufacturers and Eastern dealers, but the principal buyers were local dealers, and, between the latter and the consumers, the contest must eventually take place. In foreign Wools the movement is moderate and values slightly nominal. Sales included 4,000 lbs of Spring California at 32@34 cents; 14,000 lbs choice scored at 84 cents.

BOSTON, July 18.—The market for Wool is unchanged, with a steady demand for all desirable grades, and a steady market is looked for, at least for the present. Ohio and Pennsylvania fleeces range from 40c to 42c for X and XX, and choice Michigan Wool is in favor with manufacturers, on account of its excellent condition. Unwashed fleeces are in demand and firm. Fine and medium grades are quoted at 25@38c; low and coarse, 17@23c. Combing and delaine selections are in good demand, and meet with ready sale at 43@47c for fine delaine and fine No. 1 combing. California Wool is quiet, and very little has been done in it. Pulled Wools are in fair demand and have been selling at 45@47c for choice Eastern and Maine supers, and 28@42c for common and good supers. In foreign Wool nothing of any consequence has been done for some days. Stocks of all kinds are small.

PHILADELPHIA, July 18.—Wool is in improved demand and unchanged.

Eastern Grain and Provision Markets.

CHICAGO, July 18.—Wheat weaker and lower; Spring, \$1.26 cash and July, \$1.06 for August; regular, \$1.06 for July, \$1.03 for August, \$1.02 for September. Corn, weak and lower, at 75¢ cash, 75¢ bid for August, 74¢ for September. Pork, steady, at \$21.80 cash, \$20.98 for September. Lard, firmer, at \$12.40 cash, \$12.52 for August.

BAGS—Bags are higher and supplies are said to be "concentrated," which means perhaps "cornered." Produce Exchange morning call sales of 50,000 Calcutta, buyer July, \$9.62, and 50,000, \$9.60. For seller July, \$9.65 was asked; no bids. For Oakland, spot, \$9.30 was asked; buyer July, \$9.10 bid, \$9.25 asked. On the 3 o'clock call, sales were: 50,000 Calcutta, buyer July, \$9.75, and 50,000, buyer July or August, \$9.85. No sales on the Grain Exchange. For buyer July, \$9.55 was bid, \$9.75 asked.

BARLEY—Feed Barley is still doing well, while brewing is slack, and Chevalier neglected. Sales on the Produce Exchange were 775 tons, all feed, as follows: 25 No. 1 spot, \$1.30; 250 July, \$1.26; 200, \$1.26; 200, \$1.26; 100 No. 2, seller 1882, \$1.15; 300 No. 1 feed, August, \$1.23; 50, \$1.23; 200 No. 2 feed, August, \$1.20; 200, \$1.10; 100, \$1.10; 100, October, \$1.20; 100, November, \$1.22; 400, December, \$1.22. For No. 3 Chevalier, July, \$1.25 was asked.

(CONTINUED ON PAGE 60.)



The Child and the Judge.

[Written for the RURAL PRESS by M. W.]

A bright little boy, with ragged clothes,
And shoes that scarce kept out the snows,
Approached the judge in his high-backed chair,
And, bashful, paused a moment there.

"Judge, your honor," he said with a sigh,
As he slowly raised his childish eyes,
"I haven't done nothing that's wrong, I vow,
I always tried to be good, but now

"I want to give myself up like a thief,
Because, I think, 'twill be a relief,
For I don't want to live, as the rest, in the street,
And learn to swear, to lie and to cheat.

"No sir, my mother and father are dead;
They died when I was a babe, it is said,
So I live with my aunt, who drinks a great deal,
And beats me because I will not steal.

"To-day she drove me away from the door,
And told me never to come back more;
And now nobody 'll take me in,
Because my clothes is ragged and thin.

"I can't get work, and I've nothing to eat,
Unless I beg it, or steal in the street;
Isn't there a place where I can go,
Where they'll treat me kindly and I can grow

"To be a good, a great and learned man?
Oh! please, Judge, send me there if you can."
The Judge removes his tear-dimmed glasses,
While o'er his eyes his hand he passes.

"I will see, my boy," he kindly said,
"That you want not for learning nor bread,
'Tis a cold, hard world, but there's room for you,
There's work for honest hands and true."

July 11, 1882.

Circumstantial Evidence.

Mr. Pritchard lifted him out of the wagon and set him down on the door-step. What a little fellow he was, and what a wondering, pleased look there was in his eyes! He had on coarse shoes, a check apron, and his pretty brown hair was cropped close under the shabby cap. It was almost too cold a day for such a little fellow to be out without a coat. Mrs. Pritchard took him by the hand to lead him in, and the little hand clung confidently to hers.

"What's your name, dear?" she asked, pleasantly.

"Tommy Bobbitt," he answered, readily. "Am I going to stay here?"

"Folks all dead," said Mr. Pritchard. "Mother went a month or so back. I told them over to the county house we'd take him and try him; and if he suited, we'd keep him and do well by him. We don't know what kind of stock he is yet; but if I find any mean, dishonest tricks in him, back he goes. We don't want to adopt a boy and set by him, and have him sting us like a serpent in our old age."

"Oh! I know Tommy will be a nice little boy," said the wife, kindly.

The Pritchards were farming people and well-to-do. They had never had a child of their own, and, after much consideration, had decided to adopt a boy when a suitable one could be found. Word reached them that a child four years old had recently been left upon the town, and Mr. Pritchard, on driving over to see about it, had brought the little fellow home on trial.

Nobody knew how dreary and forlorn a life it had been in the county house for a little four-year-old boy, suddenly left friendless. He had wandered, shivering, in the yard, sometimes picking up here and there a red leaf to play with. He had hung around in the big, cheerless room, where a few decrepit old women sat, because in the men's room there was a loutish, half-witted fellow, who frightened him. Nights he slept with a dreadful boy, years older than himself, who said things to scare him, and who pulled all the bed-clothes away and kicked in his sleep. And nobody knew how his little heart had ached for the dear mother, who, though very poor and unfortunate, had sheltered him to the last.

But now, in his warm new home, he had brightened into a rosy, pretty boy. He had new shoes and stockings, and Mrs. Pritchard made him the little coat, with a motherly instinct growing in her heart with every stitch. He learned the different rooms, and ran about them fearlessly; he made funny little speeches; he jumped and laughed like other happy boys, and climbed boldly upon farmer Pritchard's knee when that good man sat down to take his ease after supper.

"He's got meat in him," said the farmer, nodding approvingly; "but I don't know whether he's honest yet. That's the thing, to my mind."

Tommy had been there a week—had one week of sunshine—when the black cloud came down upon him.

Farmer Pritchard had a cough, which was apt to trouble him at night, and on the bureau near the head of his bed he kept a few gum-drops, which he could reach out and get to soothe his throat when the coughing came on. One afternoon, chancing to go into the bedroom, his eye fell upon the little paper bag, and he saw there was not a single gum-drop there.

"That rogue, Tommy, has been here," he

said to himself. "I know there were 5 or 6 when I went to bed last night, and, for a wonder, I did not have to take a single one. Tommy! Tommy! Look here! Have you been getting my gum-drops?"

Tommy, who was playing in the door-yard, looked up brightly, and said: "No, I did not get any."

"Did you take them, Lucy?" asked the farmer, turning to his wife.

Mrs. Pritchard had not touched them, and her heart sank as she said so; for who was there left to do so but little Tommy? Her husband's face grew grave.

"Tommy," he said, "you need not be afraid to tell the truth. Didn't you take the gum-drops?"

"No, I didn't," replied Tommy, readily. "Oh, yes, you did, Tommy. Now tell the truth."

"No, I didn't."

"This is bad, very bad, indeed," said Mr. Pritchard, sternly. "This is what I have been afraid of."

"O, Tommy," pleaded Mrs. Pritchard, "if you took them, do say so."

"If he took them!" repeated her husband. "Why, it is as clear as daylight. He has been running in and out of the room all the morning."

But Tommy still denied the deed, though the farmer commanded and his wife implored. But Mr. Pritchard's face grew ominous.

"I'll give you till noon to tell the truth," he said, "and then, if you don't confess—why, I'll have nothing to do with a boy that lies. We'll ride back to the poor-house this very afternoon."

"O, Joseph," said Mrs. Pritchard, following her husband into the entry, "he is so little! Give him one more trial."

"Lucy," he said, firmly, "when a youngster can tell a falsehood like that with so calm a face, he is ready to tell them by the dozen. I tell you its in the blood. I'll have nothing to do with a boy that lies. Perhaps the fear of going back may bring him to his senses."

He went out to his work and Mrs. Pritchard returned to Tommy and talked with him a long time, very kindly and persuasively, but all to no effect. He replied as often as she asked him, that he had not touched the gum drops. At last she gave it up, and with sad misgivings resumed her occupations; while Tommy went to playing with the cat upon the floor.

At noon, Farmer Pritchard came into the house and had dinner. After dinner he called Tommy to him.

"Tommy," he asked, "did you take the gum-drops?"

"No; I didn't," said Tommy.

"Very well," said the farmer, "my horse is harnessed. Lucy, put the boy's cap on. I shall carry him back to the poor-house because he will not tell the truth."

"Why, I don't want to go back," said Tommy very soberly.

But still he denied taking the gum-drops. Mr. Pritchard told his wife to get the boy ready. She cried as she brought out his little warm coat and cap and put them on him. But Tommy did not cry. He felt that an injustice had been done him, and he knit his baby brow and held his little lips tight. The horse was brought around; Mr. Pritchard came in for the boy. I think he believed up to the last moment that Tommy would confess, but the little fellow stood steadfast.

He was lifted into the wagon. Such a little boy he looked as they drove away. The wind blew cold, and he had to hold on to his cap. Nothing was said as they drove along, though Farmer Pritchard really felt a little sorry that he had gone so far. But Tommy had no hope to bear him up. He only knew that all the happy life of the past few days was over—snatched from him suddenly. He thought of the cold, forlorn house to which he was returning, and shuddered. The helpless old women, the jeering boys, the nights of terror; all these he thought of, when, with pale face and blue lips, he was taken from the wagon and sent up to the house. Farmer Pritchard watched him as he went up the steps, a slow, forlorn little boy. He went in. The matron came out for an explanation. It was given, and the farmer drove away.

He drove home. It was not a pleasant ride. He missed his little companion; but he reasoned obdurately with himself, that he had done all for the best. His wife met him tenderly at the door. The kitchen looked lonely as they went into it together. A top lay in one corner, a primer was on the footstool. Mrs. Pritchard put them out of sight. The farmer laid a fresh lot of gum-drops on his bureau at night, and thought grimly that these were safe. He retired early, not knowing what else to do; but his sleep was broken.

Mrs. Pritchard could not sleep at all. The tears stole through her closed eyelids long after the candle was put out and the house still. She was thinking of the poor little boy, even then, perhaps, cowering in his cold bed with terror.

Suddenly a curious, small sound attracted her attention. It was repeated again and again, and now and then there was a tiny rustle of paper. The sound came from the bureau. She listened intently, and her heart beat loud with excitement. She knew that sound well.

"Joseph!" she whispered. "Joseph!"

"What, Lucy," said her husband, in a voice that sounded as if he, too, had been lying awake. "Do you hear that noise, Joseph? It's mice!"

"I know it. What of it?"

It's mice, Joseph, and they're after your gum-drops."

"Good gracious, Lucy!" groaned Farmer Pritchard upon his pillow. It flashed upon him instantly. He, and not Tommy, was the sinner. The noise stopped. The little depredators were frightened, but soon began again; and a rare feast they made of it.

It seemed as if that night would never end. The farmer heard every hour the clock struck, and at five he got up and made a fire in the kitchen. His wife arose at the same time and began to get breakfast.

"I won't wait for breakfast," he said. "You can have it hot and ready when we get back. I'll harness up and start now, so as to get over there by dawn."

In a few moments the wheels rolled noiselessly over the frozen ground out on the road, and away drove Mr. Pritchard in the morning starlight.

Mrs. Pritchard brought out the top and the primer again, and made the kitchen look its very cheerfulest. Then she got breakfast. She baked potatoes, and broiled a chicken, and made fritters. She put the nicest syrup on the table, and a plate of jelly tarts. She laid Tommy's plate and fork in their place, and set up his chair. The sun had risen, and the bright beams fell across the table. She went to the door and looked up the road.

Yes, they are coming! They drove into the yard; they stopped at the door; and the wondering, smiling little Tommy was lifted down into Mrs. Pritchard's eager arms. She held him very tight.

"Oh! my lamb! my blessing!" she murmured, woman-like.

"Come, let's have breakfast now," said the farmer cheerfully. "This little chap's hungry. He's our own little boy now, Lucy. He's never going from us again."—Selected.

Help for the Helpless.

The Boys' and Girls' Aid Society, which meets at 68 Clementina street, San Francisco, closed its eighth year of service in June, 1882. The aim of the society is to aid boys and girls in every possible way; to rescue homeless, neglected, or abused children. It provides in its own quarters temporarily for such, furnishes homes and employment, maintains reading-rooms, a library, a gymnasium, classes for instruction, lectures and entertainment, and encourages industry, frugality and the saving of earnings among its boys and girls.

In a letter from the Superintendent, Edmond T. Dooley, of July 15th, he states that since May 1st, more than a score have been rescued directly from the courts and the prisons, and twice as many beside have been started on more hopeful careers. Certainly, if the good results of the society for six weeks are such as this, it should receive practical encouragement.

For the coming year, there is to be a new departure, which is outlined in the superintendent's address. It is, to supplant, as far as possible, the institutional methods of dealing with juvenile delinquents by family care and discipline. Normal development in the child can only be effected by the family circle. This work, stated in a general way, is, in a peculiar sense, to oppose true home life to that of the street, institution, and every other sort of existence, in rescuing the wayward and neglected, and encouraging the lowly who are struggling, among the boys and girls, wherever they can be reached.

Boys and girls who must work for a living, should be given the advantages of the swimming baths, the library, reading-rooms and gymnasium. They should also be taught the value of money and encouraged in saving their earnings, and should be given talks on every-day subjects of practical importance to them. A sewing-school should be organized, for which additional teachers will be needed. A school for instruction in cooking would also be of value. The superintendent states that boys who are employed during the day can be lodged for about ten cents per night, and given all the privileges of the society. A competent lady has volunteered to take charge of a singing-school, which is to be started during the present month. There are a number of children on hand for adoption, and many needing employment or homes, without legal adoption. Ladies and gentlemen who will volunteer to be correspondents of the society are needed in every district; persons who would give information in regard to applicants for children and through whom children placed in their vicinity, or children in distress, might appeal to the society. Funds are always needed for the progress of the good work, and donations of clothing for both sexes will further the noble undertaking.

CHINESE IMMIGRANTS.—Since January 1st, 1882, to date, and including the Chinese who arrived Tuesday, the following were the arrivals by months: January, 1,373; February, 3,542; March, 3,840; April, 2,762; May, 5,176; June, 4,667; July, 2,135; total, 23,495. The vessels which brought this horde of Chinese to this city numbered 20. The *Gaelic*, in 3 trips, brought 2,595; the *City of Tokio*, in 2, 2,211; the *Belgic*, in 3, 1,175; the *Oceanic*, in 2, 2,199; and the *Anjer Head*, in 2, 1,590. It is stated that the fine of Captain Penwick, of the British steamer *Strathairly*, for overcrowding his vessel, has been reduced to \$10,500.

Science Club.—No. 11.

[All communications for this department should be addressed "RURAL PRESS Science Club," Berkeley, Cal.]

Rocks.

[By Prof. Keep, Principal of the Alameda High School.]

The world is made of rocks. In many places they come quite to the surface, and we call them ledges. Everybody has seen these ledges cropping out on the sides of mountains and hills. Sometimes they are covered by a little earth, with a few trees and bushes growing in the cracks, and seeming to hold on with all their roots lest they should be blown away. In other places the ledge is quite bare, and the brown, or gray, or white rock looks cold and hard, though in some spots the little drab mosses cover it and make it look more social.

Year after year the rains beat on the surface of these ledges and wash away all the dust; sometimes the sun shines on them and makes them hot, and in winter the frost cracks them, and they begin to crumble. Pieces break off and roll down the hillside and are carried away by the swollen streams of winter, or buried in the rubbish at the foot of the mountain.

If you live near the sea coast, you know how the big waves come dashing against the shore, wearing away the rocks and leaving steep, jagged cliffs which, in turn, must themselves crumble. So, year after year the earth is being torn to pieces by the force of water; on the land, by the rain and the rivers; on the coast, by the dashing of the waves and the rush of the tides. This process was going on just the same when our grandfathers were boys, when Columbus discovered America, when Mathusalem was a baby, and even long before Adam was created and placed in the garden of Eden.

How much the earth must have changed during these long ages! Hills have been torn down and washed away; great ravines and canyons have been cut by the rivers; the cliffs along the sea shore have been pounded into sand, and the ocean now rolls over places where once were hills and plains covered with grass and trees.

Now, if you were to take a piece of stone and break it up very fine with a hammer, you would have a kind of gravel; and if you should put this gravel into a bowl of water and stir it up, the larger pieces would settle to the bottom and leave the water muddy. Now, if you turn this muddy water into a second bowl and let it stand, you will find a kind of clay at the bottom of the bowl; if you mold this clay into the form of a brick, and carry it to the brick kiln and heat it a long time, it will become hard, and you can throw it or pound with it just as if it were a stone.

Now, think what has been going on all over the world for thousands and thousands of years. The rains and the sea have been grinding the rocks into sand and clay. The rivers take up this mud and spread it out in times of freshet, making great plains, over which you can walk for miles and not find a stone as big as an egg. Gradually a good deal of this fine soil gets carried to the sea and is washed and washed by the waves, the coarser parts being thrown up as sandbanks, and the finer part of it being laid down as beds of clay. Sometimes the bones of a dead fish fall to the bottom, or a family of clams make their home in this clay and leave their shells there.

This world is a restless old giant. It is getting aged now, and the fire of its youth is cooling off, and it is rather stiff and slow in its motions. But even now, if we go down half a mile in some deep mine, we find the rocks very warm, and if we could go down five miles, we would probably find them red-hot. Some parts of the earth's surface are rising, and other parts are slowly sinking; and these changes probably went on much faster in old times than at present.

Now, think what would happen if some part of our sea coast should get more than its usual share of the earth's heat for a few hundred years. It might get it by sinking down for awhile, or by being terribly squeezed by the weight of neighboring mountains, or by being covered up by deep deposits of new clay and sand. Doubtless the mud which is now at the bottom of the ocean would be hardened into rock, while the sand and pebbles and shells would all be cemented together and look like pudding-stone. And if, after long ages, this rock should be pressed up by the hot earth, and should rise out of the water and form an island or a hill, its sides would seem to be composed of solid rock, and perhaps some future geologist would break off a piece with his hammer and find the old fish bones or clam shells perfectly preserved.

This is the way most of our rocks have been formed. Almost all of them have, at some time, been under the sea in the form of beds of gravel, sand, or clay. By the slow processes of nature, they have been heated, hardened and raised up into hills and mountains. In many of them we find old shells or fossils; others, like the granites, have been melted so thoroughly that no trace of these fossils remain; some, as the slate rocks, were made from beds of clay, while in others, like the sandstones and conglomerates, we can plainly see the pebbles and grains of sand of which they were composed. We should add that there are some rocks, mostly black, hard and solid ones, which consist of the cooled lava, thrown out from ancient volcanoes.

Exchanges.

Mrs. E. O. Wood, residing near Tahoe, El Dorado Co., sent us a number of *Sarcodes sanguinea* (snow flowers)

lately, in exchange for Keef's "Common Sea Shells of California." We have exchanged 32 of these books with subscribers—generally collectors and teachers. The specimens we have received in return represent many counties: E. O. Pelton, Brownsville, Yuba county, will exchange a quantity of pressed plants for the latest edition of Rattan's "West Coast Flora."

W. A. Tracy, Westminster, Cal., has shells for exchange. He sent us 30 specimens of various kinds to identify, but, as we feel sorry for the printers when we give them so much Latin, we forbear, and reply by letter. The corals and sponges he sent, indigenous to our coast, have no named duplicates in the "Geological Survey," and the nearest specialist who can determine our petrified wood (such quantities as our State possesses and is noted for) resides in Denver, Colorado. We will try, however, to find some named private collections outside of the State museums.

Miss P. L. Parker, Rio Dell, Humboldt Co., Cal., sends us in exchange a rare collection of pressed wild flowers and ferns. This lady is trying to furnish a cabinet for her school, and we hope the "Club" will assist her.

Another teacher writes: "I do not know the names of the plants, and I have not time to try to analyze and classify them." Send us a leaf and flower of each of your plants and we will have them named for you. Over 100 pressed plants came to us from Mendocino county for 20 cents postage, and 50 from Placer county for the large sum of eight cents.

Crittenden Hampton, Big Pine, Inyo Co., Cal., can furnish specimens of silver, lead and copper ore, also volcanic productions.

"Collector," Shedd P. O., Linn Co., Oregon, has a large collection of ores, fossils and shells.

Miss Alice C. Owen, Guadalupe, Santa Barbara Co., has pressed plants, minerals and shells for exchange.

Harry E. Dore, publisher, 512 Sacramento street, San Francisco, prints labels to order. He furnished us a quantity, with which we are well pleased.

The Life Spirit.

[Written for RURAL PRESS by JULIA M. GOODLET.]

What causes the balmy winds to gently fan the earth until she arouses from the long slumber into which, during dreary winter, she had fallen, and sends up countless plants and flowers, and makes the bleak forest kings to put forth buds and leaves, changing the wilds to a scene of enchantment, grand in its immensity? 'Tis this mighty sovereign, the life spirit. Who has not gone forth in spring and marked his kingly away over all the earth? Not only in spring, but throughout the passing year his rule is absolute. Think not, when in summer's parching droughts, dreary autumn or icy winter, death seems to be over all, that it reigns supreme. No. Life is still there, the predominant power, and is only preparing ere long to burst forth in renewed splendor. The gurgling brook, the swift, flowing river, the placid lake, the roaring cataract, the boundless ocean, with its broad, warm currents, flowing from continent to continent, are but his bassals, dispersing moisture throughout his rassals, dispersing moisture throughout his realm. The all-reviving spirit rules throughout nature's wild domain, and all her forces are but his agents.

Even the mighty atmospheric currents traveling from east to west, unite their power with that of earth's gigantic mountain chains, and the lightning's vivid blast, to obey his behests and awaken new life throughout his immeasurable domain. Yea, the mighty sun himself is but the servant of this wonderful spirit, ever dispensing, at his command, warmth and light to his numberless subjects.

Who has not seen this mighty monarch in all his glory, for nature's broad domain is ruled by him. Where can man look or go and not find this wonderful all-pervading spirit? Though he climb to the summit of the most lofty peak of the snow-capped Himalayas, or descend into the deepest recess of Aetna's fiery crater—he is there. Though he roam from zone to zone, or sound the deepest caves of ocean's huge caverns—he is there.

Yea, let his search begin in the darkest corner of Pluto's sunless domain, then on through earth's remotest lands, then onward through boundless space, follow each planet as it moves in its shining orbit, or chase the dazzling comet in its mad career, and he will find no spot where this sublime spirit rules not. For since the morning stars first sang together, and, methinks, this music of the spheres was but the glad song in which they acknowledged his sovereignty, has this viewless spirit reigned supreme. In the beginning, he sprang from the throne of a loving God, and from thence he has reigned and will ever rule over all.

And man—though the change we call death come over him, though we fold the wearied hands and lay him within the bosom of mother earth, though worms devour the decaying flesh which we were wont to love—why should we mourn and call him dead, since all nature teaches us the wondrous fact that it is but the change which precedes a glorious immortality; that even in that decaying frame the life spirit rules supreme. So plainly is this taught throughout all nature, the more we investigate her laws, it seems scarcely necessary that to the reflecting mind a special revelation should be made. The shock of being separated from the dearest ones of earth seems often more than the human heart can bear; but with calmness comes the knowledge that the separation is not necessarily permanent, and that they are beyond all care or pain. Beyond all pain! Do we ever fully realize how much that means?

"There is no death! An angel form
Walks o'er the earth with silent tread;
He bears our best loved things away,
And then we call them 'dead.'"

"Ah! ever near us, though unseen,
The dear immortal spirits tread—
For all the boundless universe
Is life! There is no dead!"

San Bernardino, June 14, 1882.

Young Folks' Column.

Our Puzzle Box.

Numerical Enigma.

I am a word of fourteen letters:
My 4, 3, 2, 12 is to talk wildly;
My 6, 3, 4 is a vehicle for transporting passengers and freight;
My 13, 7, 11 is a wickedness;
My 14, 3, 9, is a French coin;
My 10, 5, 4, is a title of respect;
My 1 is a vowel;
My whole signifies cupidity.

UNCLE CLAUDE.

Phonetic Spelling.

Example—A girl's name. Ans.—L. C. (Elsie).
1. Full of seeds.
2. A city in South America.
3. A boy's nickname.
4. Not difficult.
5. A number.
6. A kind of bird.
7. To fall to pieces.
8. The same as whatsoever.
9. Very cold.

J. L. C.

Added and Subtracted Fractions.

To one-sixth of a plant add one-fourth of a vehicle, two-fifths of a fruit, and one-fifth of a vagabond, and the sum will be a very useful article. From this sum subtract two-tenths of a city and the difference will be an animal.

Hidden Towns.

1. Hand over your tickets, please.
2. You know Ryson was at home, John.
3. Well, if I am it, you must not intrude upon me.
4. I looked over the placid scene.
5. "Papa rises at five," said the little boy.

MELANCHTHON.

Reversals.

1. Reverse a negative adverb and form a heavy weight.
2. Reverse a masculine nickname and form a lair.
3. Reverse to exist and form wickedness.
4. Reverse a number and form a covering for the hair.
5. Reverse a plural verb and form an epoch.
6. Reverse duration and form to send forth.

UNCLE CLAUDE.

Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Sharks.
DECAPITATIONS.—1. Jaunt, aunt. 2. Knit, nit. 3. Lever, ever. 4. Steak, teak.
BLANKS.—1. Ware, wear. 2. Vial, viol. 3. Day, day.
4. Cite, sight, site.
METAGRAM.—Soup, sou, so, o.
SQUARE WORD.—
O R A L
D O M E
O M E N
R E N T

A Sunny Day.

EDITORS PRESS:—Seeing in your paper a poem written by a girl of 14 years, I thought I would send you one as well, though it is not nearly so good as her's:

Come out, for the sun is shining,
Why should thy heart be sad?
Why sit in the house repining?
Come out in the sun and be glad.
Birds are singing,
Flowers are springing,
And all things seem to say
"Away with thy tears
And foolish fears,
Come out in the sun and be gay."

Come out, soft breezes are blowing
From the not far distant sea;
Near by a streamlet is flowing,
Come sit on its banks with me.
Its murmuring song,
As it hurries along,
Shall charm away our fears;
And as it glideth slow,
With music low,
It shall carry away our tears.

Thus the stream of life is flowing,
Carrying our sorrows into the past;
They float away without our knowing,
Till, beyond our reach, they seem joys at last.
But the sun is shining
And all repining;
Before it fades away
We will leave all sorrow
Until to-morrow
And be merry and glad to-day.

"Gem's" poem is better than this, I am sure.
PHYLLIS, aged 14 years.

Santa Cruz.

Zoological.

[Written for the RURAL PRESS by D.]

N. C. relates: The two Mott boys had recently purchased a new "bull dog," and were out hunting with him. The dog found and attacked a skunk, and, as is usual in such cases, received a liberal showering. When the boys came up to where he was, they found him rolling himself on the ground and in the dust, in vain endeavors to rid himself of the unwholesome odor, whereupon one of the boys, observing his distress, burst forth laughing at him. This so enraged "Bull" that he was about to make the young man understand it was no laughing matter, and it was with much difficulty that he was induced to desist.

P. C. relates that he was in the barn after dark, working among his horses, when it happened that the barn being alive with rats, one of the horses stepped on one of the rats, and it began to squeal. No sooner did this occur than he was surrounded by a thousand of the infuriated pests, coming to the rescue of their distressed comrade, and obliged to beat a hasty retreat.

D. relates: Having seen what at first appeared to him to be a snake with two tails, but on being disturbed, the anomaly dispersed in two different directions. It proved to be one snake swallowing another. The process had almost been concluded when they were disturbed. The snake which had been swallowed seemed to be as lively as usual afterwards.

The bite of a skunk is said to be as poisonous as that of a rattlesnake.

It is said that rats may be driven away from a place by tying a string about the neck of one.

Mother.

[Written for RURAL PRESS by L. S.]

What a world of love is shown in that one word! How lightly we look upon that loving care with which she guides our erring feet and watches, with feeling, which none but a mother can know, the expansion of our youth to years of discretion! How little do we, in the youthful sound of pleasure and folly, heed her wise advice! We may not think of it in youth, but it will be recalled to us in after years, when the dark grave has placed her beyond our reach and we hear her gentle voice no more. How deeply, then, we regret the many deeds we have done, contrary to her loving advice! How we long for her back again, that we may do over what we have done amiss! But, alas! when once gone, we can never call her back, and our hearts become sad with the mournful reflection.

GOOD HEALTH.

The Removal of Scars and Cicatrices.

The *Journal of Pharmacy* furnishes from good sources the following hints on this topic: The cicatrices, scars, or marks left by various diseases, burns, or wounds of divers kinds, are often less obstinately permanent than is generally supposed; and from some facts which have lately come under our notice, we are inclined to think that their prevention or removal in many cases may be accomplished by some mild but effectual antiseptic.

Among the exemplifications of the efficacy of the formula we are enabled to lay before our readers is the case of a gentleman of our acquaintance, whose face was so severely burned by the violent spurring of a quantity of melted lead (owing to a workman having incautiously dropped a wet pipe into it), that his eyes were only saved by pebble spectacles from utter destruction.

At first, of course, carron oil was the sole application; and, as for weeks afterward particles of the granulated metal had literally to be dug out of the flesh, a deeply-scarred countenance was naturally predicted by all, except the patient himself. One mark, of an almost imperceptible character, alone remained after the expiration of 6 months, owing, as our friend says, to the whole face being bathed 2 or 3 times a day, as soon as the oil treatment could be discontinued, with a lotion of the simplest character, as is seen by glancing at its constituents.

Lint soaked in the same solution, and allowed to remain on some little time, will frequently mitigate the visible results of small-pox, and we have known one case of ringworm treated in this way to leave no scar whatever, while a sister of the latter patient, who had had the same disease in a lesser degree, but had not employed this lotion, still retains the evidences of the fact. The following is a convenient formula for a wash: Borax, $\frac{1}{2}$ ounce; salicylic acid, 12 grains; glycerine, 3 drachms; rose water, 6 ounces.

Rare-done Meat Injurious.

There are no indications that the mania for undercooked beefsteaks is on the decline; in restaurants only such are served. This refers to robust people, but weakly persons continue to patronize pounded raw chops and steaks, and the juice of undercooked meat. M. Toussaint exposes the grave dangers of patronizing such a dietary, *et*, if the meat is unsound, the germs of disease will inevitably pass into the system. He states a contagious malady possesses greater virulence than tubercular affections, or consumption, and that is the form of the disease most to be encountered in meat sent to the market. In the slaughter-houses, an ox, etc., is not rejected as unfit for food, unless the lung be entirely affected, but gray granulations may still exist and produce infection.

M. Toussaint took the lung of a cow not very much affected with consumption; he placed it under a press and collected the juice; he inoculated rabbits and young pigs with the liquid as it came from the press, and after he had heated another portion to 114° Fahr., the result was, all the subjects died within a very short period. He extracted the juice in the same manner from the thigh of a pig, dead from consumption, previously cooking the flesh, to correspond with that served in hotels, etc., according to the latest fashion. Then he inoculated rabbits with such grilled juice, and they invariably died of consumption. There are cases where the consumption of raw meat is necessary; here duty suggests to ascertain well the origin of such meat; in all other cases it is prudent to only eat meats suitably cooked; that is, meat whose interior has been acted upon by a temperature of 150° or 160°.—*Kansas City Science Review.*

THE BEST FOODS.—Wholesome, nutritious foods—those that supply the system most readily with what is required to give it vigor and endurance—are those foods that are cheapest and most generally distributed over the earth. These are the cereals and other direct products of vegetation. There is as much nutriment in one pound of beans, wheat or rice as there is in three pounds of beef, mutton or poultry.

DOMESTIC ECONOMY.

Cherry Preserves.

EDS. PRESS:—The bright red ones are the best. Wash the cherries, but keep on the stems; drain in a colander; weigh them, and to one pound of cherries allow three-quarters of a pound of honey; put these into wide-mouthed bottles; cork them tightly; lay the bottles into a kettle of cold water; place straw between the bottles to keep them from striking; then set the kettle containing the bottles in a hot place and let it slowly heat, and boil for three hours; renewing the water as it evaporates; then let the bottles cool a little, and cement the corks closely; keep them in a cool, dry place.

Another.—To eight pounds of cherries, six pounds of honey; stone the cherries; put the juice with the honey; boil and scum it well; then put in your fruit and boil that three hours, take up the cherries, and boil the syrup fifteen minutes longer. To candy any kind of fruit when cooked in the syrup lay them in a sieve to drain, a single layer at a time; dip them very quickly into hot water, to remove any syrup which may adhere to them, then drain them, and lay them on a cloth before the fire to dry. When all the fruit is thus dried, sift thickly over finely-pounded loaf-sugar while the fruit is warm, then lay the fruit on dishes in a moderately-heated oven; turn them and drain all moisture from them. The fruit must not become cold until perfectly dry. If done properly they present a beautiful appearance.

MRS. L. WRIGHT.

Monterey, Cal.

JENNY LIND CAKE.—One pound of pulverized sugar, one pound flour, seven ounces butter, five eggs, one teacup sweet milk, one even teacup soda, three of cream of tartar. Stir butter and sugar to a cream, then add the yolks of the eggs well beaten, next the milk, and then the flour in which the cream of tartar has been sifted; after this the whites of the eggs, beaten to a stiff froth, and last the soda, dissolved in a teaspoon of cold water. Three even teaspoons of baking powder may be used in place of the soda and cream of tartar, and should be sifted in the flour. This recipe makes excellent layer cake, and will make two loaves of nice cake. For a chocolate cake make an icing not quite as thick as plain icing. Flavor with vanilla and stir in grated chocolate.

OLD-FASHIONED LOAF CAKE.—Take three quarts of sifted (and well-heaped) flour, a pint of soft butter, one quart of sugar, five gills of new milk, half a pint of yeast, three eggs, two pounds of raisins, a teaspoonful of soda, a gill of brandy or wine, two teaspoons cinnamon and two of nutmeg. Scald the milk, cool to blood-warm, add the yeast, then the flour, to which all the butter and half the sugar have been added; then mix together and let rise until light. It is better to set this sponge over night, and in the morning add the ingredients (flour and raisins) and let rise again. When light, fill the baking pans and let it rise again. Bake in a moderate oven. This recipe makes three large loaves, and is a standard, economical loaf cake.

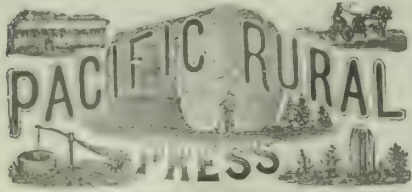
REMEDY FOR SUNBURN.—Bruise and then squeeze out the juice from the stalks and leaves of the common chickweed, and add to it three times as much rain-water. Bathe the skin with this for a few minutes morning, noon and night, and wash it off with pure water. Elder flowers can be similarly treated and applied, or they can be steeped in milk and the face and hands washed in it. Sour cream applied at night and washed off in the morning will allay smarting sunburn.

BREWS.—Take stale bread and break or cut into small pieces; put a quart of the pieces into a frying-pan; pour over it one pint of fresh milk, and cover light; put on the stove for about 10 minutes, when it is not too hot, then remove the cover and break in one egg; add a piece of butter the size of a nut, a little salt and pepper; stir with a fork for a minute or two, and serve. This, with scrambled or poached eggs, makes a nice dish for breakfast.

HATTIE'S LOAF CAKE.—Two cups of sugar, one cup of butter, three and a half cups of flour, one scant cup of sweet milk, five eggs, one heaping teaspoonful of baking powder; beat the whites of two eggs to a stiff froth, add half a cup of pulverized sugar, six tablespoonfuls of grated chocolate, two teaspoonfuls of vanilla. After putting this on the top of the cake, set it in the oven to harden.

OX-TAIL SOUP.—Take two tails, wash and put into a kettle with about one gallon of cold water and a little salt. Skim off the broth. When the meat is well cooked, take out the bones and add a little onion, carrot and tomatoes. It is better made the day before using, so that the fat can be taken from the top. Add vegetables next day, and boil an hour and a half longer.

HINTS ON CANNING.—In canning fruit, if you hold your glass can in a wet towel it will not break when the boiling fruit is put into it. It need not be previously heated, but you must have the towel as high as the neck of the can and over the bottom. You can gather the ends of the towel in your hand to hold it by.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Three months extra will be added to the above for EACH THREE MONTHS DELAY* which may be made in the payment of any subscription to this paper. *No new names received without payment for some period in advance.* We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.
Per line25 .80 \$2.20 \$5.00
Half line (1 square) .15 .50 1.00 2.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 22, 1882.

TABLE OF CONTENTS.

EDITORIALS.—The War in Egypt; The Nurseryman's So Vices, 49; The Week; Importing Butter, 56; The Peanut Product; In the Forest; Wheat Abroad; Gathering Crop Reports; California Cheese Factories, 57.

ILLUSTRATIONS.—Group of Egyptian Soldiers in the Bazaar in Cairo, 49; Aphides of Plant Lice, 56; Monarch in the Forest, 57.

CORRESPONDENCE.—Scientific Names; Tuolumne Notes, 50.

HORTICULTURE.—Riverside Apricots; The Fruit Interest, 50.

THE DAIRY.—Dairy Preeds, 51.

FOREST & WOOD.—Forest Trees of California—No. 5, 51.

THE STABLE.—The State Fair Programme, 51.

PATRONS OF HUSBANDRY.—Grape Leaflets, No. 4; Contra Costa Grangers' Association, 52.

AGRICULTURAL NOTES.—from the various counties of California and Nevada, 52-53.

HOME CIRCLE.—The Child and the Judge, (Poetry); Circumstantial Evidence; Help for the Helpless; Science Club—No. 11, 54; The Life Spirit, 54.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; A Sunny Day; Zoologist; Mother, 55.

GOOD HEALTH.—The Removal of Scars and Clearing; Rare-dine Meat is Jurious, 55.

DOMESTIC ECONOMY.—Cherry Preserves; Jenny Lind Cake; Old-fashioned Loaf Cake; Remedy for Sunburn; Brewis; Hattie's Loaf Cake; Ox-tail Soup; Hits on Canning, 55.

ENTOMOLOGICAL.—Aphides and Lady Birds; The Crickets; The Los Angeles Chafers, 56.

QUERIES AND REPLIES.—Cotswolds Wanted; Oil Meal for Fowls; Pits and Dormant Buds, 56.

Business Announcements.

Wagon, A. W. Sanborn & Co., San Francisco.
Economy Hay Press, Baker & Hamilton, S. F.
Improved Egg Food, B. F. Wellington, S. F.

The Week.

The U. S. Signal Service on the Pacific coast has run a week with dry buckets. Sergt. Gorom reports to us to-day that for a week not a drop of rain has fallen at any signal station from Olympia to San Diego, a stretch of 1,300 miles—without a sprinkle for a week. Can the world show better harvest weather? Meantime the cable says England is dripping and soaking, and with all the machinery of hay-drying kilns and stacks, pierced with flues for the admission of drying air from fans, she cannot save her grain from germination or her hay from mold. We can well bear the dust for such a boon as a clear sky when the harvest presses.

There is, however, one drawback which would be indeed a fatal one, if it were not for the dry days and the long harvest season. There is a lack of harvest hands in all districts where there is grain to gather. Even the coast ranchers near the city are losing their hay hands and their milkers, they being lured away by the hope of high wages in the interior. It is reported from Butte county that the farmers are resorting to a sort of "shanghaiing" to entice the loafers away from the village saloons to the fields. A local paper describes the method to be setting forth free whisky in the saloons until the loafers get so drunk that they do not know enough to refuse work, and then they are hustled into wagons and started for the ranch to sober off. Such is the story which comes to us, but we imagine the writer was drawing largely upon his fancy, for no farmer would care to have such laborers, nor could he restrain them after they sobered, even if he desired to.

Importing Butter.

Three refrigerator cars, loaded with fresh butter, have, within the past three days, been replenished with ice by Warner & Co., of E. Co. Three thousand pounds of the frigid was distributed in each car, and, as only 20 minutes was allowed for the purpose, the process was very lively. The butter is shipped by Frank W. Yale, of Atchison, Kansas to Watson & Luhrs, San Francisco. This would seem very much like sending coals to Newcastle, but it must pay, or business men would not engage in the enterprise.—*Elko Independent.*

It would seem that unusual efforts are being made this year to bring in Eastern butter in good condition, and it seems quite likely that the running in of this material would act as a brake upon the California butter market, and prevent our own producers from gaining the full reward for their labor by gaining the good prices which alone can compensate them for the lesser production which is to be expected this year. This importation of Eastern butter is, of course, an enterprising and legitimate business, and will be of service to the butter consumers of the State. There is only one thing which can be said at all derogatory to men who are engaged in it, and that is that all the importing firms are no doubt receiving consignments of California butter from our dairymen, and receiving the support of our dairymen in the shape of commissions for the sale of the butter. At the same time, they are bringing in large amounts of Eastern butter, which reduce the price of Californian, and thus, while selling as producers' agents, they are, at the same time, speculating in an article which is in direct competition with it. It seems to us a sort of divided loyalty, which may be profitable to the agent, but is injurious to the principal. We have nothing against the firm mentioned in the item which we quote from an exchange, more than we have against all firms which are both commission merchants and speculators. We have no doubt there are many doing the same kind of trade. We object to the method, not the men.

The ideal commission merchant is one who gives his undivided attention and interest to the producers who favor him with their products, and we should think he would be morally



APHIDES OR PLANT LICE.

bound not to engage in business which was in direct conflict with that interest. All kinds of speculation are foreign to the proper conduct of a commission house. There are houses in New York, and, we presume, in this and other cities, which do not "deal" in the commodities they sell, except as agents, and all their sharpness and skill in trade goes to the advantage of their consigners. These houses are not tempted to push aside the interests of their patrons to sell something of their own, which they bought on speculation. It is an old truth, that one cannot well serve two masters; and if a man has conflicting interests in his charge, it is inevitable that he will serve best that which brings most to his own pocket. Those who enjoy the patronage of California butter makers should have an eye single to the promotion of the California article. The same conflict of interest prevails in the cheese trade, and must be regarded in the same light.

Inasmuch as this Eastern or "Western" butter is coming forward in large quantities, and with all the advantage of refrigerator cars, it will be of interest to see what the price is in the markets near the source of these supplies. We have secured the following quotations for July 13th in the places named:

	Chicago.	St. Louis
Creamery	22@24	22@26
Dairy	18@22	18@22
Inferior	14@15	12@16

Farther west, say in Kansas, where the supplies are being gathered up for shipment to California, no doubt somewhat lower rates prevail. It is doubtful whether more than 20¢/22 cents is paid for the stock sent here, as good selections from dairy butter could be had at such rates. With good butter selling here at 30 cents, there is apparently a good margin for profit, and so long as this remains, as may be expected during the summer months, it will act as a clog to a proper advance in the California made article. The subject of butter and cheese selling is one which the dairy men of California should consider and act upon as the producers of other States do, but here there is no organization and apparently no disposition to organize, and there being no avenue for the exertion of producers, influence, none is felt. The dairy producers of California have it in their own hands to do or to forbear.

THE Stanislaus Wheat Grower denies the story circulated that the crops of that county have failed, and says Stanislaus never had a failure. It adds that the yield will be little less than an average one.

ENTOMOLOGICAL.

Aphides and Lady Birds.

EDITORS PRESS:—I send you some watermelon leaves covered with eggs and insects similar in appearance and depredations to cabbage lice, but of a darker green. Some of them have wings.

I also send you two round-shaped bugs of a reddish color, one having spots on each wing, the other without spots; also some worms from the same vines, that appear to be an offspring of the bug, as I have seen some of them with a shell on their back in front, and appeared to be half bug and half worm. When the bugs first made their appearance on the vines, the leaves became crisped, and the soil under the vines looked dark, as if it had been greased. Wasps and a kind of bumble-bee seem to be busy where the vines are affected. Can you tell me what produces the small insect, and suggest a remedy for them and the bugs?

I have frequently noticed a good many dead birds on the ground under telegraph wires. Might not this suggest to some one to try the battery on the linnet?—W. P. DALE, Red Bluff, Cal.

The insects first mentioned are aphides, or plant lice. They are, as our correspondent surmises, similar to the cabbage lice, being another species of the same genus. As there are more than 300 species of aphides described, and no one knows how many undescribed, it may be seen that the family is a large one. The main characteristics of the aphids are easily recognizable, and when one learns them he can tell at once that he is troubled with an aphid, whether he sees it on his orchard trees, in his flower garden, on his vegetables or in his grain fields. They infest all kinds of plants, and their work is always attended by a shriveling of the growth, accompanied by a dirty appearance, which the inelegant adjective "lousy" best describes. We give on this page an engraving showing aphides as they appear with a good hand magnifying glass. These insects increase in a most marvelous manner, and one is often surprised to see a plant or bush upon which a few have located, quickly covered with them. It was formerly a great puzzle to understand, or to account for, the rapid increase of the plant lice, and the question has been carefully entertained by some of the most distinguished naturalists and physiologists

neat and clean antidote to use in the flower garden. On a large scale, the suds or tobacco water will be cheaper.

The Crickets.

Eastern people have no idea of the crickets which operate in the northern half of the Pacific coast. The chirpers of the Eastern States are but feeble representatives of their Western cousins. The *Lassen County Advocate* has an item which may show the quality of the Pacific coast crickets. It says:

On the Long ranch they passed through a wheat field, and where they went not a spear was left. In a field of timothy through which they passed it looked like a field of sheep had been through—stalks of dead grass strewn the ground. Mowers were set to work trying to save some of the hay. At Mrs. Armstrong's ranch they invaded her wheat field, and the wheat is now being cut for hay. Fire and smoke can be seen for miles down the north side of the valley, occasioned by the ranchers burning the sagebrush, by which means they are turned or held in check somewhat, and thousands are also burned to death. What the outcome of this invasion will be it is hard to predict, as it is evident that we are as yet only contending with the skirmishers, the main body being far north. J. N. White informs us that a few days ago he rode from Horse Lake to Surprise Valley, a distance of over 40 miles, and not a foot of the road but was covered with crickets. Our latest reports from those in this immediate neighborhood are to the purport that a large band has crossed Plute creek and threatens to flank the town.

The Los Angeles Chafers.

We made recent reference to some chafers, or "May bugs," sent to Mr. Cooke from Los Angeles county. It seems that the article from which we quoted was incorrect, in some respects. The insect is nocturnal in its activity and a recluse during the day time, instead of the reverse, as was stated. They are also quite fleet of wing, and whether they would be content to drop on a sheet under the trees, in any considerable numbers, would have to be ascertained before relying upon this mode of capture. We had specimens of this insect from Los Angeles, two or three years ago. They are much smaller than the bustling "May beetle" of the East. The chafers do immense damage in Europe, sometimes laying waste whole neighborhoods. They do not seem to have been so destructive in this State.

QUERIES AND REPLIES.

Cotswolds Wanted.

EDITORS PRESS:—I want to get a thoroughbred Cotswold ram and ewe, and I see no advertisement of any breeders of them in your paper. If you could write me the address of some breeders of them you would oblige me.—ALEX. WASHINGTON, Ferndale, Humboldt Co., Cal.

Some of our readers can answer our correspondent. Our "Breeder's Directory" should include the announcements of all well-bred animals. Breeders consult their own interests by advertising their stock.

Oil Meal for Fowls.

EDITORS PRESS:—In Mr. Damon's article in the last number of the PRESS, "Do Chickens Pay?" he recommends oil meal cake as a substitute for meat. Will he please inform an amateur how to use it?—MRS. J. H. SMYTH, Oakland.

Pits and Dormant Buds.

EDITORS PRESS:—Will some reader tell how to preserve apricot and peach pits until the planting season? How would it do to put them in a box mixed with wet sand, the sand to be kept wet by frequent watering. What percentage of trees die when planted in dormant bud?—M. C. H., S. F.

Will some one answer?

THE COMBINED HEADERS AND THRASHERS.

We have not heard much of the combined harvesters, as yet, this year, but many have been put into the fields, and reports will, no doubt, come in due time. The *Stockton Independent* says that near that city, on L. U. Shippee's ranch, two—one the Hawser and the other the Young machine—are in use. The yield of grain is 30 bushels to the acre, and each machine has a capacity for heading and thrashing 30 acres per day. Twenty mules are used on each, the Young machine requiring five men, and the Hawser machine four men. A 16-ft. header is used for heavy grain, and a 20-ft. knife for a lighter stand. The combined machine, atonestep, revolutionizes harvest operations. It moves along as if it were a huge thing of life and possessed a conscious power and pride. The sacks, as fast as they are filled and sewed, are dumped in the field, and teams follow after, and as fast as they are loaded, go directly to the warehouse or wherever the storing place may be, thus requiring handling but once. In fact, it may be said that the grain does not stop from the time it is cut until it is in a warehouse waiting for transportation to Europe or some other distant point.

AGRICULTURAL SCIENCE.—The third annual meeting of the Society for the Promotion of Agricultural Science will be held at Montreal, Canada, August 21st and 22d, 1882, commencing at 9 A. M., at the rooms of the Natural History Society. The meetings will be open to the public, and a reasonable time will be granted for the discussion of subjects presented, by all who desire, under the rules, to take part. A long list of papers is published, among them one by C. H. Dwinelle, on "Horticultural Quarantine."

NEXT month President Arthur and members of the Cabinet will visit the Denver (Colorado) exposition. It is understood that the Presidential party will afterward extend their tour to San Francisco, coming here by the Atchison, Topeka & Santa Fe and the Southern Pacific railroads.

The Peanut Product.

California peanut-growers will be interested in some notes on the peanut crop of the United States, which we find in a New York paper. It seems that in 1880, 2,120,000 bushels of these nuts were raised in Virginia, North Carolina and Tennessee. In 1880, owing to the plentiful supply of peanuts, the prices were very low—from three to five cents per pound. In 1881 a terrible drouth was experienced in the peanut-raising districts of the South. The consequences were that the crop fell below 50% of what it was during the 12 previous months. The result was a large increase in prices. Peanuts advanced rapidly, and the lower grades, which had a few months previously sold at three cents per pound, are now realizing seven cents, and those which had brought five cents are sold in bulk at ten cents per pound. The crop for last year was but one-half of that gathered in 1880.

The present outlook for a plentiful supply for the forthcoming season, which commences on the 15th of October next, is very flattering. It is unlikely that prices will be as low as in 1880, when the choicest Virginia nuts were sold at 4 3/4 cts. A similar article is now bringing 10 cts. per pound.

Two years or less ago, Spanish (shelled) peanuts were imported largely into this country for confectionary purposes. In 1878 Spanish peanut seed was sown in Virginia, which State now raises as fine a nut as that previously imported; and, whereas, the price for the imported article was from 7 1/2 cts. to 10 cts. per pound, the domestic crop, which, if anything, is superior, sells at 5 cts. to 6 cts. per pound. About 10,000 bushels of these Spanish peanuts have been raised, but it is expected that double or more of this quality will be gathered yearly. Peanuts are consumed in every State of the Union; a quantity are shipped to Canadian ports, and quite a number of bushels are sent to the Bermuda and West India islands.

The future prospects are exceptionally bright. The acreage is very large, and the season, commencing October 15th next, promises to yield more peanuts by many thousands of bushels than were ever raised before.

The crop ending September 30, 1881, is estimated as follows:

Tennessee.....	Bush. 650,000
Virginia.....	1,550,000
North Carolina.....	120,000

Total.....2,320,000

At an average of 7 cents per pound.....\$35,400

Total consumption for three years in the United States:

1878.....	Bush. 1,063,000
1879.....	1,380,000
1880.....	1,927,000

Total.....4,373,000

At an average price of 5 cents per pound.....\$218,650

In the Forest.

Now that the sun's rays are becoming more direct, and the thoughts of shady retreats forces itself upon the mind, what is more grateful than the cool shade and musical air of the forest to one who has toiled or traveled for hours under the burning sun? The forest and its charms have furnished themes for the grandest poems, and they fill with pleasure those who feel poetry they cannot express. The little scene which the artist has caught in the picture upon this page will suggest to many the pleasures of summer rambles. It will be good to let the scene be a prompting to the over-busy ones to escape to the restful quiet of the forest, that their tired natures may be refreshed by it, and their minds and bodies strengthened for longer life and more zealous deeds.

A ROCK-FENCED FARM.—A sprightly correspondent of the *Record-Union* notes a peculiarly charming Colorado farm, as follows: "If ever I adopt agricultural proclivities I shall maul the soil of Colorado. I visited a ranch owned by William Hicklen, which struck me as being about the right place for a lazy man. He has a little green patch of about 400 acres, right in the mountains, of almost level as a billiard table. The rocks run up almost straight for 50 or 100 ft., and form an amphitheater, accessible only by an entrance not over 60 yards wide. Only 60 yards of fencing—think of it! A waterfall drops from the rocks, and a stream of clear mountain water slips through the ranch." What a delightful place!

FARMERS' CONGRESS.—A Farmers' Congress will assemble in St. Louis, Sept. 29th. Hon. John Bidwell is Vice President for California. In a sketch of the aims and methods of the Congress we read: "The Vice-Presidents have responsible and important duties to perform. They are expected to report the condition of farming in their respective States, with their views as to the best policy to encourage a better system of agriculture. They are requested to make known to the people of their States the benefits to result from the national union of farmers, and labor to build up every organization having for its object the advancement of the agricultural interest."

Wheat Abroad.

The latest by telegram from the English wheat market is that the Egyptian trouble is making prices firmer, and that it is feared that two or three months' delay may be occasioned in the delivery of Indian wheat. Buyers here are doing their best to talk down the possible effects of the war on prices, and say that there will be no rise. The English should understand the matter pretty well, and their markets show that they think the war may endanger or delay supplies. Producers here are of the same opinion, and are holding firmly for an advance.

The latest by mail from the Russian wheat region brings reports, drawn from 48 telegrams received from the different heads of governments, stating the present aspect of the crops up to the 16th of June. In one group of seven different governments the reports state the winter wheat is very satisfactory, and promises a productive harvest. In the second group, one may reckon 23 governments, and in all districts the winter wheat is reported as good. In the third group the governments state that in some districts it is frozen or otherwise spoiled by drouth or worm. Very bad are the accounts received

Gathering Crop Reports.

We learn from an Eastern journal that "Commissioner of Agriculture Loring has appointed Edward J. Moffatt, of New York, as agent of his department to gather and report agricultural and crop prospects from Europe. He will be attached to the Legation at London as a Deputy Consul. His reports will give the Commissioner and, through him, the farmers of the country such valuable information as they have never had before. The new system will be in working order in a few weeks."

Some special agent or assistant should be appointed to gather similar information concerning agricultural affairs on the Pacific coast. It will not be necessary to recite the arguments we have several times brought forward on this subject, but it cannot be doubted that if some one, well acquainted with the country, should be engaged to collect statistics of agricultural progress and descriptions of successful methods on this coast, information would be secured which would aid greatly in filling the Government lands with men capable of developing them, and thus minister to the advancement of the country—which is, we suppose, one of the ob-



MOONLIGHT IN THE FOREST.

from the government of Nishnig Novgorod, in which the condition of the winter wheat was seen to be very unsatisfactory after the going away of the snow, but after the commencement of more favorable weather, and the later frequent rains, it has, in a measure, somewhat recovered, and now looks considerably better. In the Government of Pensia out of 500,000 acres fully 25 000 are wholly lost, which have now been re-plowed and sown with summer wheat. In the Government of Poltava in some places the winter wheat is entirely lost, in consequence of the early autumn and late spring frosts, and there is little hope for an average crop. In the Government of Smolensk the winter wheat is only moderate, on account of the snowless winter. Of the Governments of Charkow, Zula, Twer and Tschernigow the same can be said as of the Government of Smolensk. Cherson paints the saddest picture of all; there the rye is entirely gone or fed off on account of the failure of grass in the pastures, or else it is regularly blighted and does not come to perfection.

All over Russia the condition of the spring wheat is very satisfactory. A good hay crop is also expected, except in some places where it has suffered too much from drouth. All in all, one can call the outlook satisfactory in relation to winter wheat (except in the few instances mentioned above), and very satisfactory for summer or spring wheat and grass.

TO MAKE CORKS STAY.—Force the corks into the bottles brim full of liquid, and they will adhere firmly. Vials thus corked can be safely carried in a valise without otherwise fastening.

JOHN BRIGHT has resigned from the British Cabinet.

California Cheese Factories.

The cheese interest of California is growing steadily and availing itself of all local and distant markets which are at present attainable. The most rapid growth has been in Los Angeles county, where, upon the moist low lands in the southern part of the county, there have sprung up magnificent alfalfa fields and unlimited quantities of other materials suited to promote the milk flow. The *Los Angeles Mirror* reports nine factories, all of them doing well and turning out, in the aggregate, a very large amount of cheese. There is one located up the river, two at the Ballona, two at Compton, one or two at Norwalk and Artesia, one at or near Santa Ana, and one near Wilmington. And there is room for a dozen more. The cheese finds a market readily at 12 1/2 cents per pound, uncased. One firm in Los Angeles sells an average of 3,000 pounds per week. Their specialty is the Harshman or Anchor brand cheese. The factory is located at Compton, and has a capacity of 1,000 to 1,200 pounds per day. This factory reported last year a very creditable yield from the milk, being one pound of cheese from something less than nine pounds of milk—average for the season. We should like to know more about what the factories are doing, who runs them, all about the feed and yield of the cows, the methods of manufacture, etc. Some kind friend might write us a good article on this subject.

We find in the last issue of the *Santa Clara Journal* an abstract of the last annual report of R. McComas, Secretary of the Santa Clara cheese factory, submitted and adopted at the last regular meeting of the stockholders, which took place on the 8th inst. The report shows the number of pounds of milk received from patron stockholders to be 1,569,695; number of pounds of milk received from patrons, not stockholders, 98,471; total milk used, 1,668,166. Pounds of cheese made during the year, 158,675; pounds of milk to one pound of cheese, 10 51-100; average price per pound for cheese sold, less commissions paid, 13 97 100 cents; gross sales of cheese for the year, \$22,172.45; paid dividends on milk, \$19,268.14. Among the many items paid out during the year, we note the following:

Wood.....	\$ 180 00
Coal.....	66 15
Labor in factory.....	1,120 00
Labor of Secretary.....	408 00
Incidental expenses.....	444 75
Repairs on factory and machinery.....	56 65
Improvements to building and machinery.....	125 00

The year just closed shows an increase of 25% over last year's business, and the prospects are highly flattering. The board of directors for the year just commenced is the same as last year, all the old officers having been re-elected, and is as follows: S. I. Jamison, President; A. B. Hunter, Treasurer; R. McComas, Secretary; James Sutherland, L. P. Alexander.

FRUIT AND FLOWERS.—The S. F. Fruit & Flower Mission, located at 713 Mission street, desire in this public manner to return thanks to Mr. W. H. Jessup, of Alameda, for a large chest of fine ripe black cherries—say 12 boxes—a bushel or more of this delicious fruit, which they distributed on Thursday to the sick and destitute, which they look after every week—the Children's Shelter, Old Ladies' Home, Women's Hospital, the City and County Hospital, and elsewhere. In short, the ladies are all too glad to be the aimons of the bounty of those who have fruit and flowers to send to their hall as above every Wednesday and Thursday. The latter is the day for general distribution. Are there not others like Mr. Jessup, who will send in of their abundance? Wells, Fargo & Co. make no charge for expressing fruit and flowers to the city, directed as above. It is the only gift of the kind ever sent into the Mission. Berkeley and Vacaville are liberal givers every week, but how many other towns ought to remember these ladies, who do so much good in visiting the sick, with delicacies so much needed by them?

ARTIFICIAL SOIL.—M. Dudouy, of Saint Ouen, has been very successful in chemical horticulture. In his garden he has cultivated legumes, flowers and trees in parallel rows in 3 manners: 1, with ordinary manures; 2, with chemical manures in garden soil; 3, with a special compound, which he calls *floral*, in pure sand. The results of the third experiments have been very striking, yielding the earliest, the largest, and the most delicate vegetables, as well as the most thrifty and brilliant flowers. The *floral* contains nitrogen, phosphoric acid, potash, magnesia and sulphur, in a form so concentrated as to require dilution with 20,000 times their volume of water. The experiments have been continued for 5 years, with uniform success.—*Les Mondes*.

ACTIVE steps have at last been taken in St. Paul, Minn., to abate the locomotive whistling nuisance. Repeated notices have been given to the railroad companies to have the whistling stopped, but no attention has been paid to it by the engineers, and Mayor Rice has now instructed Chief Weber to have every engineer arrested who may be caught blowing his whistle within the city limits.

IMPORTANT changes in the star route schedule for California have been made by the post office department.

THE SOUTHERN HONEY CROP.—Honey will be worth money this year if the canners and bottlers in the city do not put up too much glucose syrup. The *San Diego Sun* says: "The honey crop of the county is going to be a short one—less than half—as an aggregate. Favored localities may do a little better than half, or up to the latter, but the county will not be better than stated." The *Los Angeles Union* reports a similar condition as follows: The honey crop of this section will be almost nil this year. A few favored localities will turn out a fair product, but the majority of the ranges will furnish hardly enough to feed the bees alone. That is said to be the case with the range along the Sierras to the north of the city, and also that of the Santa Monica range.

STANISLAUS COUNTY.—The *Modesto Journal* says: The wheat about this section is now pretty well cut, and the thrashers are at work in every quarter. As a general thing, the crop is yielding from 10% to 20% better than was expected. The scarcity of hands has somewhat retarded operations, and farmers have been obliged to pay a higher rate of wages than is usual, besides having to submit to the inconvenience of having, in some cases, incompetent and otherwise objectionable people around them. However, the crop will ultimately be gathered and thrashed, for which we ought to be and are thankful.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON
and Mrs. F. W. HARMON, for the last 10
years principals of Washington College

The HARMON SEMINARY will receive girls of all
ages; the instruction comprising Primary, Preparatory
and Academic. Thorough course in the English
branches. The Arts, Music and Modern Languages in
charge of well known masters. Special course prepara-
tory to the State University.

The HARMON SEMINARY will be first-class in all re-
spects, and will combine the best educational advantages
with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay St., S. F.

STOCKTON



Telegraph Institute and Normal School, Corner Hunter
street and Miner Avenue, Stockton, Cal. Largest School of
its kind on this coast. Open day and evening. Tuition and
expenses less than one-half the usual rate. Excellent board,
\$10 per month. Courses of Study: Full Business Course,
Full Normal Course, Book-keeping Course, Special Courses, Teach-
ers Course, Preparatory Course, Telegraphic Languages. The
College Journals containing full information, will be sent
post paid to any address. F. R. CLARK, Principal.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

Paid in Installments, \$75.

Send for circulars.

SACKETT

(FOR BOYS)

SCHOOL.

Takes first rank for thorough-
ness and ability of its teachers;
also for home care.

Business, Classical, and
English Departments.

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M.,
Principal, Oakland, Cal.

Sonoma Valley College.

Has the most desirable location and the finest school
building on the coast. The climate is warm and health-
ful. It is free equally from fogs and malaria during the
summer. The school is sufficiently removed from the
city to preserve regular habits on the part of pupils, and
to protect them against contagious diseases. Only the
best pupils from the best families are sought. The num-
ber of boarding students will be limited positively to
twenty, and application for admission must be made in
advance. To this limited number of pupils will be se-
cured the best companionship, the best accommodations,
the best care and the ablest instruction that can be pro-
cured in any first-class school of the East. The Principal
is well known as an educator, being the FOUNDER OF
THE BERKELEY GYMNASIUM. He will be supported
by a Faculty composed of young men in the prime of
life and recognized by the public as successful teachers.
Students prepared for any American University. Special
attention will also be given to the English and Commer-
cial Department. The next term will begin on

Monday, July 31st.

Registered students can be admitted earlier if desired.
For catalogues or particulars, address

JOHN F. BURRIS, Principal,
Sonoma, Cal.

THE HOME SCHOOL —FOR— YOUNG LADIES, 1825 Telegraph Avenue, Oakland, Cal.

The next year will begin on

WEDNESDAY, JULY 26, 1882.
H. N. FIELD, Principal.



417 Kearny Street, San Francisco.
C. N. ANDREWS, President. G. B. BARNARD, Business Manager.

Send for Circulars

CLEAR LAKE AND CALISTOGA STAGE LINE.



San Francisco
—TO—
LAKEPORT
In Eleven Hours.

Passengers leave San Francisco via C. P. R. R., at 8 A.
M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12
M. daily (Sundays excepted); arrive at Lakeport in even-
ing. On Tuesdays, Thursdays and Saturdays, stages leave
Calistoga for Lakeport via Middleton, Glenbrook, Kelsey-
ville and Soda Bay; returning alternate days.

This is the Most Direct Line from
San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast.
From Mt. St. Helena it affords the traveler a view of the
famed Napa and Russian River Valleys and the Coast
Range; and from Cobb Mountain to the great Clear Lake
Region in front and the Pacific ocean in the rear. This
line connects with stages for Anderson, Adams, Siegler,
Howard Springs and Soda Bay. On Mondays, Wednes-
days and Fridays stages leave Calistoga at 12 M. for Mid-
dleton, Guenoc, Lower Lake, and Sulphur Banks; return-
ing alternate days. This line connects at Lower Lake
with stages for Siegler, Howard, Adams and the celebrated
Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!
Driven by the most skillful drivers on the coast. For full
information and tickets apply to SAM. MILLER.

Tourist and Ticket Agt.,
2 New Montgomery St., Palace Hotel.

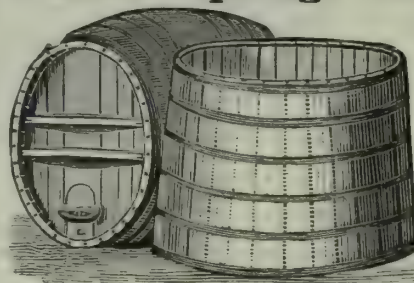
Round Trip Tickets to Lakeport and Return, \$12.
Single Tickets, \$6.50.
Lakeport office at W. W. Green's Hotel.
JOHN CLARK, Agent. W. F. FISHER, Proprietor.

New Crop Insect Powder. BUHACH! BUHACH!



None genuine without this trade mark.
SURE DEATH TO ALL INSECTS.
An imported powder of a bright yellow color is sometimes
sold as Buhach. Buy only that which bears our trade mark.
All druggists and grocers net keeping it send for price list
BUHACH PRODUCING & MANUFACTURING CO.,
154 Levee street, Stockton, Cal.

CALIFORNIA Wine Cooperage Co.



FULDA BROS., Proprietors.
30 to 40 Spear St., S. F.
ALL KINDS OF CASKS, TANKS, ETC.
Ship, Mining and Water Tanks a Specialty.

S. P. BAILEY, O. E. BADGLEY, JOHN BAILEY.

BAILEY, BADGLEY & CO.,
Cor. Main and California Sts., Stockton, Cal.

Importers and Jobbers in

Agricultural Implements, Hardware, Etc.

Agents for the

J. I. Case and Woods Headers, McCormick Harvesting Machine
Co.'s Binders, Reapers and Mowers, the LaBelle Freight,
Farm and Header Wagons, Althouse Vaneless Windmills,
Minnesota Chief Thrashers, Engines and Horse
Powers, San Leandro, Buford and Stockton
Cang and Sulky Flows.

Also, State Agents for the Celebrated
AMERICAN HAY CARRIER AND ELEVATOR.
Large Stock of Builders' Hardware and Carpenters' Tools.
Orders Promptly Filled, and Goods sold at Bedrock Prices.

This paper is printed with Ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph H. Dorety 527
Commercial St., S. F.

CALIFORNIA'S Exposition.

The Twenty-ninth

Annual State Fair

Begins at

SACRAMENTO, CAL.

On the 11th, and ends on the 16th of Sep-
tember.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

LIVE STOCK, MACHINERY, IMPLE-
MENTS, ETC., TEXTILE FABRICS,
MECHANICAL, AGRICULTURAL,
HORTICULTURAL PRO-
DUCTS, and FINE
ARTS, ETC.

Any further information may be had upon application
to the Secretary, from whom Premium Lists may be pro-
cured. RUGH M. LARUE, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacra-
mento, Cal.

NEW CATALOGUE

—OF—

SEWING MACHINE NEEDLES,
Oil and Other Supplies.

Just out. For Dealers only. Mailed free.

MARK SHELDON,

9, 11 & 13 First St., - - San Francisco,
CALIFORNIA.

DIVIDEND NOTICE.

The German Savings and Loan Society.
San Francisco, June 30, 1882.

For the half year ending this date, the Board of Direc-
tors of THE GERMAN SAVINGS AND LOAN SOCIETY
has declared a dividend on Term Deposits at the rate of
four and thirty-two one-hundredths (4 32-100) per cent.
per annum, and on Ordinary Deposits at the rate of three
and six-tenths (3 6-10) per cent. per annum, free from
Federal Taxes, and payable on and after the 10th day
of July, 1882. By order. GEO. LETTE, Sec'y.

**The American Driven
WELL WATER SUPPLY SYSTEM**
FOR MINING, IRRIGATION, MECHANICAL
DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S.S. Hamburg, Plymouth Rocks and Pekin Duck's Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, brown and white Leghorns, Plymouth Rocks, Pekin Ducks.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

LAUREL RANCH.

Thoroughbred Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop. Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to FALKNER, BELL & CO., San Francisco

FOR SALE.

Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

QUALITY NOT QUANTITY. OUR NEW PACK FOR 1882. 50 ALL Chromo Cards. [Extra fine Stock] Artistic designs of Swiss Floral, Sea-View, Wreath, Landscape, Gold and Silver Panel, Bird Motte, Butterfly, Moonlight, Summer and Winter Scenes, all in beautiful (not gaudy) colors, with your name in fancy type, 10c. Sample Book of 90 costly Styles for 1882 25c. 40 per cent paid to Agents, or beautiful prizes given for clubs. Particulars with every order. CAXTON PRINTING CO. Northford Conn.

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY.

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys,

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES, No. 1, Capacity, 550 Eggs, Price, \$90. No. 2, " 250 " " 65. No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 3,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to GEO. B. BAYLEY, Box 1771, San Francisco.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit can not be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER, 18th and A Streets, Sacramento City, Cal.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHRED



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

POULTRY, Hogs & Cattle.

Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland TURKEYS. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES, Los Angeles, Cal.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO. Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUISENBERG & CO Sole Agents, 314 Sacramento St., San Francisco.

LANGSHANS.

I guarantee a pure Langshan, Cross Strain, fine, healthy Chicks, not related, for sale of this magnificent breed, for September delivery. MRS. J. RAYNOR, 1416 Folsom St., S. F.

50 LARGE SIZE New Chromos, with name, 10c. TODD & CO., late Wise & Co., Clintonville, Conn.

Duroc, or Red Hogs.



The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Spaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 83 lbs. gross, and 584 lbs. dressed. On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F. killed one weighing 1013 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

HINKLEY & GETCHELL, Laureles Ranch, Monterey, Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

ONE HUNDRED SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER, Cornwall Station, Contra Costa County.

BADEN FARM HERD.

R. ASHBURNER, Baden Station, - - San Mateo Co.

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE

JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge

JOHN JENNINGS.

Hooper's South End Grain Warehouses, Cor. Japan and Townsend Sts., S. F.

First-class Fire-proof Brick Building. Capacity, 10,000 tons. Goods taken from the Dock and the Cars of the U. P. R. R. and S. F. R. R. free of charge. Storage at Current Rates. Advances and Insurance effected.

FOR SALE.

Pitt's Separator, 36 inch, with self-feeder. Also Derrick, complete.

Steam Engine, 16-horse power, Straw-burner. Water Wagon, now complete, working in field. Also, 24-inch French Burr Barley Mill, mounted. Reference,

ERNEST WALL & CO., 302 Davis street, S. F.

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS, Cor Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO., Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.



Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt. CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—118 California Street, Room 3.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000 In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS: JOHN LEWELLING.....President A. D. LOGAN.....Vice-President ALBERT MONTELLIER.....Cashier and Manager FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co J. H. GARDINER.....Rio Vista T. E. TYNAN.....Stanislaus Co URIAH WOOD.....Santa Clara Co J. C. MERYFIELD.....Solano Co H. M. LARUE.....Yolo Co I. C. STEELE.....San Mateo Co THOS. MCCONNELL.....Sacramento Co C. J. CRESSEY.....Merced Co SENECA EWER.....Napa Co A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month. LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed. OLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months. BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER Cashier and Manager. San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to W. B. PARKER, Vacaville, Solano, Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of SANTA CRUZ COUNTY. Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.

One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest. ALBERT E. CRANE, 410 Montgomery St.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place, WM. C. PRINCE.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor, EDWARD FRISBIE, Anderson, Shasta Co., Cal.

STOCK RANCH FOR SALE.

About 28,000 acres of the San Cristobal grant, located in Santa Fe county, New Mexico. Is one of the finest stock ranches in the Territory. It is well watered, and is only about six miles from a railroad station. It contains a large tract of irrigable land, a large house, thrifty orchard, etc. Price \$35,000, on easy terms. Title, U. S. Patent. For further information call upon or address, S. N. LAUGHLIN, Castroville, Monterey County, Cal.

SAN FRANCISCO MARKET REPORT.

(CONTINUED FROM PAGE 53).

CORN—Corn is very dull and little doing. Prices are about the same as before.

DAIRY PRODUCE—Butter is gaining slowly. The fancy brands are in demand at 30¢, with other good stock going at 30¢. Cheese is unchanged.

EGGS—Eggs are 2½¢ better.

FRESH MEATS—The tendency is upward again on the lesser meats. Mutton, Lamb and Pork are advanced a fraction.

FRUIT—Supplies are still in moderate amount and prices well maintained.

HOPS—The few lots of the old crop are still quotable up to 35¢ for the best. It is reported that bids for future delivery are being made at 25¢ for Oregon and Washington, 20¢ for California.

OATS—Oats are dull and sales few. Futures are held at about \$1.40 to \$1.45 per cwt.

ONIONS—Onions are about the same as last week, and are quiet.

POTATOES—Potatoes are in good supply and unchanged.

POULTRY AND GAME—Turkeys are higher, but fowls and ducks have dropped off considerably, as shown in our list.

PROVISIONS—Another considerable advance has been made, and pork products are now at high water indeed.

VEGETABLES—Prices are well held, and supplies are moderate.

WHEAT—Wheat has fluctuated but little, although a vigorous bear pressure has been exerted. On the Produce Exchange a few sales were made at a decline, as follows: 250 tons No. 1 white, August, \$1.72½; 100, September, \$1.74½; 100 No. 1 white, September, \$1.73½; 100, October, \$1.74½; 400 No. 2 white, October, \$1.69½. Sales on the Grain Exchange were 1,150 tons, as follows: 500 No. 2, September, \$1.66; 600, October, \$1.65½. Bids and offers were: No. 1 white, August, \$1.70 bid, \$1.72 asked; September, \$1.71 bid, \$1.72 asked; October, \$1.73½ asked; No. 2 white, spot, \$1.70 bid; July, \$1.65 bid, \$1.66 asked; August, \$1.65 bid; November, \$1.66½ asked.

WOOL—There has been rather more sold this week, but rates are about the same as before.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., July 19, 1882.

BEANS & PEAS.	
Bayo, ctt.	3 00 @ 25
Butter, doz.	3 75 @ 25
Castor, doz.	3 50 @ 25
Pea, doz.	2 00 @ 25
Red, doz.	2 00 @ 25
Large White, doz.	3 25 @ 25
Small White, doz.	4 00 @ 25
Lima, doz.	4 00 @ 25
Field Peas, doz.	5 00 @ 25
do, green, doz.	2 00 @ 25
BROOM CORN.	
Southern, doz.	3 00 @ 25
Northern, doz.	4 00 @ 25
CHICORY.	
California, doz.	4 00 @ 25
German, doz.	5 00 @ 25
DAIRY PRODUCE, ETC.	
Cal. Fresh Roll, lb.	30 @ 31
do. Fancy Branda, lb.	31 @ 32
Pickle Roll, lb.	29 @ 30
Firkin, new, doz.	29 @ 30
Eastern, doz.	18 @ 20
New York, doz.	18 @ 20
CHEESE.	
Chesse, Cal., lb.	12½ @ 14
EGGS.	
Cal. Fresh, doz.	33 @ 32½
Ducks, doz.	33 @ 32½
Oregon, doz.	33 @ 32½
Eastern, by ex'p's	33 @ 32½
Pickled here, doz.	33 @ 32½
FEED.	
Brant, ton	14 50 @ 15 00
Corn Meal, ton	10 00 @ 10 50
Hay, ton	10 00 @ 10 50
Middlings, ton	23 00 @ 23 50
O. Oake Meal, ton	32 00 @ 32 50
Straw, bale	70 @ 75
FLOUR.	
Extra, City Mills, 5 00	@ 5 25
do. Co. City Mills, 4 75	@ 5 00
do. Oregon, 4 75	@ 5 00
do. Walls Walla, 4 75	@ 5 00
Superfine, 3 50	@ 4 25
FRESH MEAT.	
Beef, 1st quality, lb.	7½ @ 8
Second, lb.	5½ @ 6
Third, lb.	4½ @ 5
Mutton, lb.	4 @ 5
Spring Lamb, lb.	6 @ 7
Pork, undressed, lb.	6 @ 7
Dressed, lb.	10½ @ 11
Veal, lb.	6 @ 7
Milk Calves, lb.	7½ @ 8
do, choice, lb.	9 @ 10
GRAIN, ETC.	
Barley, feed, cwt.	1 70 @ 1 75
do, New, cwt.	1 25 @ 1 30
do, Brewing, cwt.	2 00 @ 2 05
do, New, cwt.	1 40 @ 1 45
Chevalier, cwt.	1 70 @ 1 75
Ruckwheat, cwt.	1 30 @ 1 35
Corn, White, cwt.	1 50 @ 1 55
do, Small Round, cwt.	1 25 @ 1 30
do, do, cwt.	1 20 @ 1 25
Milling, cwt.	1 20 @ 1 25
Rye, cwt.	1 75 @ 1 80
Wheat, No. 1, cwt.	1 75 @ 1 80
do, No. 2, cwt.	1 65 @ 1 70
do, No. 3, cwt.	1 50 @ 1 55
Choice Milling, cwt.	1 75 @ 1 80
HIDES.	
Hides, dry, lb.	10 @ 11
Wet, lb.	10 @ 11
HONEY, ETC.	
Beehive, lb.	25 @ 26
Honey in comb, lb.	15 @ 16
Extracted, light, lb.	8 @ 9
do, dark, lb.	7 @ 8
HOPS.	
Oregon, lb.	25 @ 26
California, lb.	25 @ 26
Wash. Ter., lb.	25 @ 26
Old Hop, lb.	25 @ 26
NITS—Jobbing.	
Walnuts, Cal., lb.	10 @ 11
do, Chile, lb.	7½ @ 8
Almonds, lb.	15 @ 16
Swift shell, lb.	10 @ 11
Brazil, lb.	10 @ 11
Pecans, lb.	13 @ 15

General Merchandise.

WHOLESALE.

WEDNESDAY M., July 19, 1882.

CANDLES.		Cement, Rosen-	
Crystal Wax,.....	16 @18	dale,.....	1 75 @ 2 00
Paraffine.....	20 @	Portland.....	3 75 @ 4 00
Patent Sperm.....	25 - 28	NAILS.	
CANNED GOODS.		Assrt'd sizes, keg, 3 75 @ 4 00	
Assorted Pie Fruits.			
2 lb. cans.....	3 25	Pacific Blue Co's	
Table do.....	3 50 @	Neatsfoot Oil, No.1	00 @1 00
Jams and Jellies.....	3 75 @	Castor, No. 1.....	@1 05
Pickles, lb gal.....	3 25 @	do, No. 2.....	@ 95
Sardines, q box.....	1 67 @	Baker's A. A.....	@1 30
Hf Boxes.....	2 50 @1 90	Olive, Pagnoli.....	25 @5 75
Merry, Fruit & Co's		Posa.....	4 75 @5 25
Preserv'd Beef		Palm, lb.....	9 @ -
2lb. doz.....	3 55 @3 50	Lined, Raw, bbl	@ 60
do 4 lb doz.....	5 60 @6	Boiled.....	@ 65
Preserv'd Mutton		Cocoa nut.....	60 @ -
2 lb. doz.....	3 25 @3 50	China nut, cs.....	38 @ 69
Beef Tongue.....	5 75 @6 00	Shoe, bbl.....	1 40 @ 75
Preserv'd Ham.....		Coast Whales.....	35 @ -
2 lb. doz.....	5 50 @5 60	Polar.....	@ -
Deviled Ham, 1 lb.		Lard.....	@1 00
do.....	3 00 @3 50	Petroleum (110°).....	18 @ 22
do Ham 1 lb foot	2 50 @	Petroleum (115°).....	28 @ 35
Boxless Pigs Feet		PAINTS.	
3lbs.....	50 @3 75	Pure White Lead.....	7 75 @ 8
2 lbs.....	2 75 @	Whiting.....	1 1/2 @
Spiced Fillets 2 lbs	3 50 @	Putty.....	4 @ 5
Head Cheese 3 lbs	3 50 @	Chalk.....	1 1/2 @
COAL Jobbing.		Paris White.....	2 @ -
Australian, ton.....	@ 8 50	Ochre.....	3 1/2 @
Coos Bay.....	@ 8 50	Venetian Red.....	3 1/2 @
Bellingham Bay		Asph mix'd Paint	@ 2 00
Seattle.....	@ 6 50	White & Tints.....	2 00 @2 00
Cumberland.....	@13 00	Green, Blue and	
Mt Diablo.....	@ 13 00	Ch Yellow.....	3 00 @3 50
Leligh.....	@ 8 50	Light Red.....	3 00 @3 50
Liverpool.....	@ 8 50	Metallic Buff.....	1 50 @1 60
West Hartley.....	@ 8 50	RICE.	
Scotch.....	@ -	China Mixed, lb.....	4 1/2 @ 5
Vancouver Id.....	@ -	Hawaiian.....	4 1/2 @ 5
Wellington.....	@ 9 00	SALT.	
Charcoal, sack.....	@ -	Cal. Bay, ton.....	14 00 @22 00
Coke, bush.....	@ -	Common.....	6 50 @14 00
COFFEE.		Carmel Id.....	10 00 @22 00
Sandwich Id. lb.....	@ -	Liverpool lb.....	14 00 @20 00
Costa Rica.....	12 @ 14	SOAP.	
Guatemala.....	12 @ 14	Castle, lb.....	9 @ 10
Java.....	18 @ 20	Common brands.....	4 1/2 @ 8
Manilla.....	15 @ -	Fancy Brands.....	7 @ 8
Ground, in cs.....	@ 22 1/2	SPICES.	
FISH.		Clives, lb.....	3 7 1/2 @ 40
Sac'to Dry Cod.....	@ - 5	Cassia.....	19 @ 20
do in cases.....	@ - 5	Nutmegs.....	85 @ 90
Eastern Cod.....	7 @ 7 1/2	Pepper Grain.....	15 @ 16
Salmon, bbls.....	7 00 @ 7 50	Pimento.....	16 @ 17
Hf bbls.....	3 50 @ 4 00	Mustard, Cal 1 lb	
1 lb cans.....	1 12 1/2 @ 1 25 1/2	Glass.....	@1 25
Phil Cod, bbls.....	@ -	ETC.	
Hf bbls.....	@ -	Cal. Cube B.....	@ 12 1/2
Mackerel, No. 1		Powdered.....	@ 13
Hf bbls.....	9 50 @ 10 00	Fine Crushed.....	@ 12 1/2
In Kits.....	1 75 @ 1 85	Granulated.....	@ 12 1/2
Ex Mess.....	8 50 @ 9 00	Golden C.....	@ 11
Pickled Herring,		Cal Syrup, kg.....	65 @ 70
box.....	3 00 @ 3 50	Hawaiian lb.....	25 @ 30
Boston Smoked		TEA.	
Herring.....	65 @ 70	Young Hyson.....	
LIME, etc.		Moynoe, etc.....	40 @ 65
Plaster, Colden		Country pkd Con-	
Gate Mills.....	3 00 @ 3 25	powder & Im-	
San, 10 00 @ 12 50		per.....	35 @ 75
Lime, Santa Cruz		Hyson.....	30 @ 35
bbl.....	1 25 @ 1 50	Floco-Chow O.....	2 7 1/2 @ 32
		Flower, medium.....	35 @ 37 1/2
Fruits and Vegetables.			
[WHOLESALE.]			
WEDNESDAY M., July 19, 1882.			
FRUIT MARKET.			
Apples, bx.....	75 @ 1 25	Peaches.....	7 @ - 9
do, Basket.....	25 @ 40	do pared.....	18 @ 20
Apricots, lb.....	2 1/2 @ 3 1/2	Pears, sliced.....	9 @ 10
Bananas, bunch.....	2 50 @ 4 00	do whole.....	7 @ 8
Blackberries.....	3 00 @ 4 00	Plums.....	11 @ 12
Cantaloupes, crt	2 50 @ 3 50	Prunes.....	9 @ 10
Cherries, chst, 11 00	@12 00	Raisins, Cal, bx.....	@ 2 50
Cherry Plum, bx.....	25 @ 75	do, Halves.....	@ 2 75
Cocoanuts, 100, 6 00	@ 7 00	do, Quarters.....	@ 3 00
Crabapples, bsk.....	25 @ 30	Eight.....	3 25 @
Cranberries, lb.....	12 50 @14 00	Zante Grape.....	8 @ 10
Currents, chst., 3 00	@ 4 00	VEGETABLES.	
Figs, box.....	50 @ 1 25	Artichokes, sk.....	25 @ 50
Gooseberries.....	4 @ 8	Asparagus, box.....	75 @ 1 00
Grapes, bx.....	75 @ 1 25	Beets, etc.....	@ 75
Limes, Mex.....	10 @12 00	Cabbage, 100 lbs.....	8 1/2 @ 1 00
do, Cal, box.....	75 @ 80	Carrots, sk.....	4 @ 6
Lemons, Cal.....	1 25 @ 2 25	Cauliflower, doz.....	50 @ 75
Sicily, box.....	@10 00	Corn, green.....	8 @ 13
Australian.....	@ 5 00	Cucumbers, bx.....	3 1/2 @ 40
Oranges, Cal, bx 4 50	@ 5 00	Eggplant, lb.....	5 @ 6
do, Tahiti M.....	@4 00	Garlic, lb.....	@ 3
do, Mexican, 15 00	@17 00	do, poor.....	@ 1 1/2
do, Loreto.....	60 @ 125	Lettuce, doz.....	10 @ 12
Peaches, box.....	60 @ 125	Mushroom.....	@ -
Pears, bsk.....	25 @ 1 75	Koal, green, lb.....	12 1/2 @ 15
Pineapples, doz	6 00 @ 8 00	Pear, green, lb.....	@ 1 1/2
Plums.....	2 @ 3	do, sweet.....	14 @ 2
Raspberries chst. 10 00	@11 00	Paranipe, lb.....	@ 2
Strawb's, chst., 8 00	@10 00	Pepper, box.....	1 00 @ 1 25
Watermelons, doz	2 50 @ 3 00	Rhubarb, bx.....	25 @ 75
DRIED FRUIT.			
Apples, sliced, lb.....	@ 10	Squash, Marrow	
do, evaporated.....	@ 12 1/2	fat, ton.....	@60 00
do, quartered.....	6 @ 6	String Beans.....	14 @ 2
Apricots.....	21 @ 22	do, wax.....	2 @ 4
Blackberries.....	14 @ 16	Summer Squash.....	25 @ 50
Cherries.....	25 @ 30	do, white.....	25 @ 50
Citron.....	9 @ 10	Tomatoes, box.....	75 @ 80
do.....	3 @ 3	do, River, 1 25	@ 1 50
Figs, pressed.....	4 @ 7	do, Turnip, 4 @	50 @ 65
do, loose.....	3 1/2 @ 4		
Nectarines.....	14 @ 15		
Packers' Prices for Fruits and Vegetables			
The following are the prices for Fruits, etc., fixed by the Packers' Exchange.			
Apples.....	@ -	Plums, Yel Drop.....	@ -
Apricots.....	@ 3	do, Coo's Yel Drop.....	@ -
Blackberries.....	@ -	do, Yellow Egg.....	@ -
Cherries, Red & Bk.....	@ 4	do, Green Gage.....	@ -
do, White.....	@ 5	do, Jefferson.....	@ -
Guineberries.....	@ 4	do, Ickworth.....	@ -
Muscat Grapes.....	@ 4	Quinces.....	@ -
Nectarines.....	@ -	Raspberries.....	@ 7
Peaches, Yel Cling.....	@ 4	Strawberries.....	@ 5
do, White Cling.....	@ 4	String Beans.....	@ 10
do, Yellow Free.....	@ 4	Sugar Beans.....	@ 11
do, White Free.....	@ -	Tomatoes.....	@ -
Pears, Bartlett.....	@ 4		
Bags and Bagging.			
[JOBBER PRICE.]			
WEDNESDAY M., July 19, 1882.			
Eng Standard Wheat.....	9 1/2 @ 9 1/2	45 inch.....	9 1/2 @ 9 1/2
Cal Manufacture.....		40 inch.....	8 1/2 @ 8 1/2
Hand Sewed, 22x36.....	9 1/2 @ 9 1/2	Wool Sks Hand Swd	
20x36.....	8 1/2 @ 8 1/2	34 lb.....	@47
23x40.....	12 @ 13	4 lb do.....	@21 50
Machine Swd, 22x36.....	9 1/2 @ 9 1/2	do, 10 lb.....	@20 00
Flour Sks, halves.....	9 1/2 @10 1/2	Standard Gunnies.....	18 @19
Quarters.....	6 @ 6 1/2	Bean Bags.....	6 1/2 @ 7
Eighths.....	4 1/2 @ 4 1/2	Twine, Detrick's A.....	3 1/2 @ 3 3/4
Heesian, 60 inch.....	@12 1/2		AA, 35 @37
Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup, it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, Druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.			

Summer Resorts.

ANDERSON'S SPRINGS,
LAKE COUNTY, CAL.

Nineteen miles from Calistoga, Napa county. Five miles from Middletown, and ten miles from the GREAT GEYSERS, between which and Anderson Springs, there are good Wagon Roads.

Hot Sulphur and Steam Baths

For the Cure of Rheumatism, Paralysis, St. Vitus' Dance, Dropsy, Etc. Cold Sulphur for Dyspepsia, Diseases of the Stomach and Kidneys.

Scenery Unsurpassed. Climate Mild and Equable.

Consumptives generally improved in health, and asthmatics are invariably relieved. Trout Fishing in the grounds. Deer hunting in the immediate vicinity. New Cottages for the better accommodation of guests. Cooking good.

IMPORTANT RECOMMENDATIONS.
Remarkable Cure of Dropsy.

Vallejo, June, 1882.
I suffered intensely with dropsy, and was induced by Mr. Edgecomb to try Anderson's Springs, he having been cured there, after undergoing frightful agonies, being tapped three times before he reached there; and I am deeply grateful for taking his advice, for such a beneficial effect had the Springs on me, that I am now entirely cured, and advise all who may be suffering to try Anderson's Springs.

Sight Restored.

A candid and well-known gentleman of San Francisco certifies briefly as follows:

May 31, 1882.
"I was cured of inflammation of the eyes at Anderson's Springs, Lake county." M. J. DUNN, 425 Brannan St., S. F.

Many other cases of Dropsy and Paralysis, Rheumatism, Swelling of Limbs, and various other obstinate cases of chronic diseases have been cured from year to year, at the above-named springs, which are located in Lake county, 19 miles from Calistoga. Special regard is paid to the diet of guests, who are liberally furnished with good home cooking, etc. Send for further information. Address

ANDERSON & PATRIQUIN.
Anderson's Springs, Lake Co., - via Calistoga, Cal.

A Song of Nature.

[BY W. A. CLARK]

By the gurgling stream as it winds along
On its way to the valley below,
It sounds in my ears like a long lost song
Of childhood's sweet day, long ago.

The smooth worn boulders, like long-lost friends,
Familiar in times long past,
Stand forth to my view and with my vision blends,
And my youth seems again in my grasp.

Like life's blood a dancing through eager young veins,
The water runs rapidly past,
Portraying this life with its joys and pains;
Returning, no, never, alas!

But here, by this stream, is a treasure more rare,
That will heal all diseases and pain,
Even fountains of life-giving water are there,
Not supplied by the winds nor the rain.

But dear mother earth, from her bosom supplies
These springs that were hid from our sight;
They strengthen our heart and open our eyes,
And fill us with youthful delight.

And even the rocks at this wonderful spot
Breathe soft on our bruises and pain,
Their medical vapor, exceedingly hot,
And this bathing is never in vain.

These waters of life and this medical breath,
Are free to the great and the small,
At Anderson's Springs, saving from death
The blind, halt and maimed, one and all.
Unto God be all praise who created the earth
With these blessings so rich unto men,
Who even now slowly are finding their worth,
And do bless him in turn again.

ADAMS SPRINGS,
Lake County, Cal.

MILLER & STOLLE, - Proprietors.

These Springs are particularly beneficial in purifying the blood, and unsurpassed by any in the State for the cure of rheumatism, dropsy, scurvy, weakness, dyspepsia, colic, catarrh, liver and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Board and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Fine Mountains of Lake County, California, about eight miles south of Clear Lake, two and one-half miles from the Siegler Springs, two and one-half miles from "Basset's" place, in Cobb Valley, only six miles (by a good trail) from the Harbin Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, \$7.50. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

BARTLETT SPRINGS.

Situating 16 Miles Northeast of Clear Lake,

in Lake County,
Forty miles West of Williams, Colusa county, on the main traveled road from Colusa to Mendocino.

Three Different Routes to the Springs,

One via WILLIAMS, one via CLOVERDALE, LAKEPORT and UPPER LAKE, one via CALISTOGA and LOWER LAKE, and all connecting with the train

LEAVING SAN FRANCISCO AT 8 A. M.

Fare will not exceed TWELVE Dollars either way. Daily Mail via LAKEPORT, Semi-weekly mail via WILLIAMS. Post Office, Express Office and Telegraph Office here all the year through.

C. R. CLARKE, Proprietors.
J. C. CHIGLER.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists in a large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES-HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

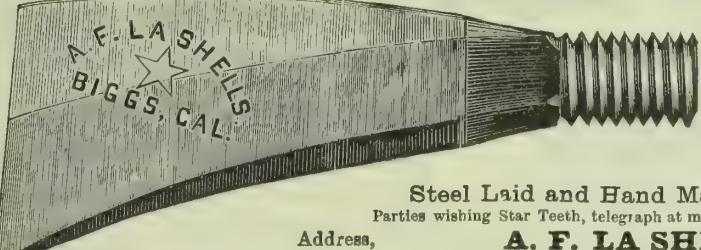
RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.



Star CYLINDER AND CONCAVE TOOTH.

Steel Laid and Hand Made.
Parties wishing Star Teeth, telegraph at my expense.

Address, **A. F. LA SHELLS,**
Biggs, Butte County, Cal.

SEEDS

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

WARTHUSES:

115, 117 & 119 Kinzie St.
104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,
CHICAGO, ILL.

Highland Springs
SANITARIUM.

This popular and healthful summer and winter resort for families, pleasure seekers and invalids, is situated in

Lake County, 25 Miles from Cloverdale,

Seven miles south of Lakeport, four miles of Kelseyville, and in sight of Clear Lake, at an altitude of 1700 feet, and is sheltered from the Cooling Coast Winds and Fogs by mountains 1600 feet in height, which for

Grandeur and Beauty of Scenery are Unsurpassed on the Pacific Coast,

While the Beneficial Effects of its Mineral Waters are equal to any in the United States or Europe.

MAGIC SPRING,

Analyzed by Prof. W. B. Rising, University of California.

TEMPERATURE.....	85°
Grains per U. S. Gallon.....	
Chloride of Sodium.....	1.290
Bicarbonate of Potash.....	0.544
Bicarbonate of Soda.....	21.763
Bicarbonate of Lime.....	50.411
Bicarbonate of Magnesia.....	70.243
Bicarbonate of Iron.....	0.973
Bicarbonate of Manganese.....	trace
Silica.....	7.398
Alumina.....	0.169
Organic Matter.....	trace
Free Carbonic Acid.....	74.462
Total.....	237.262

W. B. LISING, Berkeley, April 3, 1882.

DR. C. M. BATES (formerly of San Francisco), having become sole proprietor, by purchase and lease, of these justly celebrated Springs, will devote all necessary time and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations.

Carriages, Buggies and Saddle Horses
Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily. Post Office and Telephone connected with hotel.

Direct Route via San Rafael and Cloverdale 7:10 A. M., will arrive at Springs 5:30 P. M.

By steamer "DONAHUE," via Donahue Landing, 2:30 P. M., will remain over night in Cloverdale; and via Napa and Calistoga, 8:00 A. M.

On Tuesdays, Thursdays and Saturdays
Will be met at Kelseyville with private conveyance, if notified.

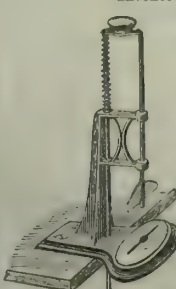
For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

Excelsior Fruit Pitter.

Invented by A. Donatella.



This machine recommends itself by the following good qualities:
Rapidity of work, one operator doing the work of four with knives. It cleans the pits perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the riddle for the dryer. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe plums. Prunes, Apricots or Nectarines pitted with this machine dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address, A. DONATELLA, Healdsburg, Cal.

PACIFIC BRANCH.



GEO. D. DORNIN.....Manager.
WM. SEXTON.....Asst. Manager.

INSURES ON GROWING CROPS under a plain and easily understood Contract, also on Grain in Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts.

Solid Wrought-Iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency. LINFORTH, RICE & CO., 323 & 325 Market St., S. F.

EXCURSION
TO ALASKA.

The August trip of the Steamship IDAHO to Alaska will be made a special feature of interest for tourists and pleasure seekers. In addition to her regular ports of call (Wrangell, Sitka, Harrisburg, etc.) it is intended she shall visit Glacier Bay and other points of special interest.

The trip from Puget Sound to Alaska, instead of being, as many imagine, rough and tempestuous, is made nearly the whole distance on inland waters, which are as smooth and untroubled as a mountain lake. The scenery is a magnificent panorama of wondrous grandeur. The noted and celebrated points of interest in California and other States dwarf into insignificance in comparison with the wonderful sights and towering mountains in this wonderland of glaciers, icebergs, Aurora Borealis and night-les day. Only a limited number of passengers can be taken from San Francisco, as a large number of tourists have engaged to go from Portland, Victoria and other northern ports.

Those desiring to engage passage will please register their names at the Company's Ticket Office, 214 Montgomery street. No name accepted unless accompanied by a deposit of \$20 on account.

The fare for the round trip has been fixed at a low rate of \$115, which includes meals and a berth. Passengers will take the DAKOTA, which leaves Broadway Wharf July 29th, at 2 P. M., and transfer to the IDAHO at Port Townsend about August 3d, reaching San Francisco on the return about August 25th.

GOODALL, PERKINS & CO.

General Agents.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

Only "PEBBLE" Establishment.

1861 1882
Muller's Optical Depot,
135 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

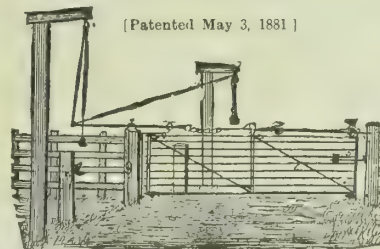
The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to

Order. Two Hours Notice.

CAMPTON'S
Self-Opening Iron Farm Gate.

[Patented May 3, 1881]



It is the Champion Gate of the World for its Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co. June 3, 1882.
A. P. CAMPTON, Esq., Dear Sir: The two Automatic Iron Gates of your patent (one 12 and the other 10 ft. in width) erected by you on my farm, two miles west of Davisville, have given me entire satisfaction. They are all you represent them to be, the most substantial, the neatest and the most easily operated of any gate that I know of. They are just the gate that every farmer should have; in fact, they can not afford to do without them. Respectfully yours,

H. M. LARUE.
A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee;
John Aylward, manufacturer, P. O. Box, 88, Livermore, Alameda Co., Cal., and Jas. Stanley, Mission San Jose, Cal., agents.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

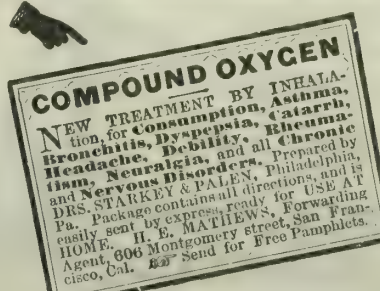
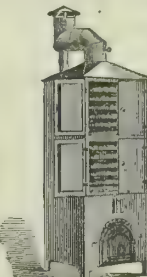
Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process is common 3 the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Lesh, Marysville; T. B. Wait, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.



BOONE & MILLER,

Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The warehouses, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Hill's Improved Horse Powers. Hill's Improved Granger Gang. Hill's Side Hill Gang. Hill's Gem Seed Sowers. Hill's Improved Headers. Hill's Single Sod and Tule Plow. Hill's Double Deep Tiller. Hill's Wood and Iron Harrows, etc. Hill's Single Plows. Fresno Ditching and Grading Plow.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, Agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento

NEW STORE AND LARGE STOCK!

AUSTIN BROTHERS,

IMPORTERS OF

HARDWARE, IRON, AND BLACKSMITH SUPPLIES.

Rope, Wire, Belting, Pumps, Pipe and Steam Fittings,

310 and 312 Main Street, Corner of America, STOCKTON.

Agents Halladay Wind Mills.

W.R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

Lift and Force Pumps,

Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.

Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

THE OSBORNE MACHINES,

COMPRISING

SELF BINDING
HARVESTERS,

Front Cut & Rear Cut

Single Mowers,

AND

SINGLE REAPERS,

COMBINED

MOWERS & DROPPERS



Agent for STUDEBAKER Farm and Spring Wagons, HILL'S TRUCKS with wide and narrow tires, RAKES, DERRICKS, BELTING, CORDAGE, OILS, FORKS, HAIR, etc. Steam Engines, and general repairing, with large assortment of extras for Agricultural Implements, and the STOCKTON GANG PLOWS, REVERSIBLE MOLDS and LAND SIDES. Address, JOHN CAINE, Globe Iron Works, Stockton, Cal. P. O. Box, 95

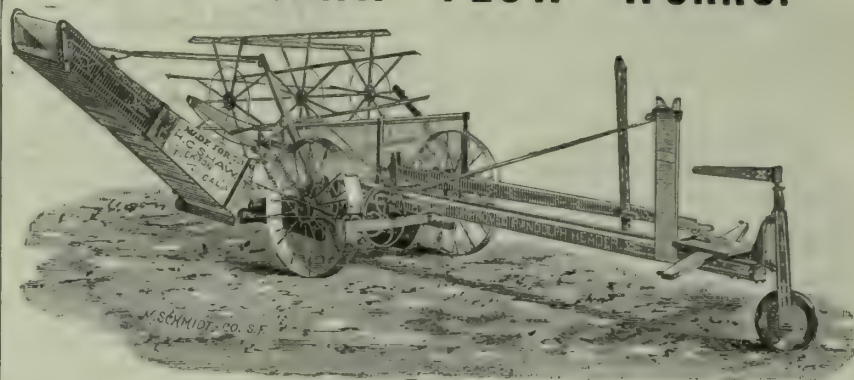
NOTICE!

To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-raiser, once having used our medicines will ever be without them in the house. For sale everywhere.

Trade} H. H. H. {Mark	Trade} H. H. H. {Mark	Trade} H. H. H. {Mark
Hoof and Healing Ointment	Horse Liniment	Condition Powders.
For Brittle Hoofs, Fever in Feet, Founder, Contracted Hoofs, Sand Cracks, Quarter Cracks, Collar Galls, Harness Galls, Scratches, Mud Fever. Etc., Etc.	The most effectual liniment ever used for Ringbone, Spavin, Sweeney, Callous Lumps, Old Sores, Sprains, Stiff Joints, Bruises, Windgalls, Etc.	For Inward Strains, Hide Bound, Loss of Appetite, Yellow Water, Poll Evil, Scratches, Mange, Rheumatism, Epizootic, Coughs, Colds, Etc.
H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.

H. C. SHAW PLOW WORKS.



GENERAL AGENTS

IMPROVED RANDOLPH HEADERS,
LIGHTEST DRAFT!! BEST ELEVATION!!!

Three Hundred Sold in Two Years.

Chieftain Sulky Hay Rakes,

H. C. SHAW Stockton Gang Plow,

ALSO, AGENTS FOR

WALTER A. WOODS' IRON MOWERS,

FISH BROTHERS' FARM AND SPRING WAGONS.

FURST & BRADLEY SINGLE AND SULKY PLOWS,

Powell's Electric Hay and Grain Elevator.

HEADER EXTRAS! MOWER EXTRAS!! PLOW EXTRAS!!!

(Send for Illustrated Catalogue and Price list.)

201-3 El Dorado Street,

Stockton, Cal.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House

O. F. BECKER, Proprietor

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet. 10c. Clinton Brog., Clintonville, Co.

A. W. SANBORN & CO.,

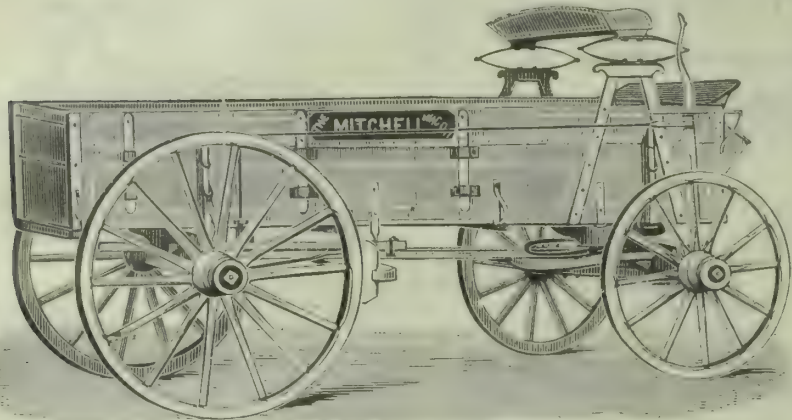
Manufacturers and Dealers in

CARRIAGES, EXPRESS, THOROBRADE & BUSINESS WAGONS,

From their own Manufactory in Manchester, N. H. Also Agents for the

MITCHELL FARM AND SPRING WAGONS,

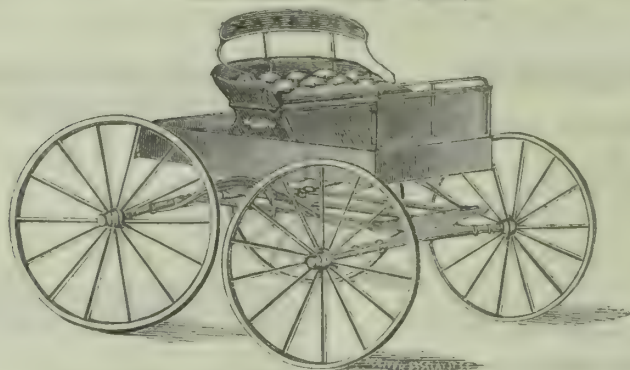
Nos. 24 and 26 Beale Street, San Francisco.



MITCHELL FARM WAGON.



THOROBRADE WAGON—TWO OR THREE SEATS—THREE SIZES.



SIDE SPRING BUSINESS WAGON—THREE SIZES.



FOUR SPRING WAGON FOR RANCH AND FAMILY USE—THREE SIZES.

“ECONOMY,”

THE ERTEL

1,000 OF THESE PRESSES

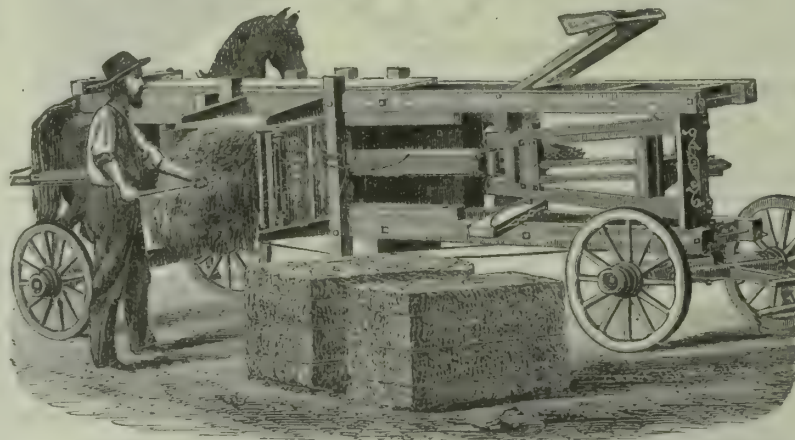
NOW IN USE!

PATENTED

September 25, 1877,

AND

JANUARY 22, 1878.



STRICTLY

PORTABLE!

Press

AND

POWER

COMBINED.

PORTABLE HAY AND MOSS PRESS.

The Economy Hay Press, of which the above cut is a representation, has not only achieved a well-merited precedence over all other Hay Presses, but it also retains its world-wide reputation for pressing hay, etc., more compactly than any other press in the market, hence all kinds of railroad cars may be loaded with FULL WEIGHT OF HAY. The Economy is operated with but little force, and is sold at so low a price that any farmer can buy it, and more money is made in operating this Press than can be done by any of its competitors, which fact can be fully substantiated in any locality where the Economy has been introduced. Being in use in every State and Territory in the United States and Canada, and having received the first premium over all its numerous competitors in 1880, WITHOUT EXCEPTION, the claims of the Economy to superiority remain undisputed. For years, one of these Presses has been turned out daily, but such is the increasing demand that the works will be enlarged to accommodate the accumulation of orders. Parties desiring to purchase a machine for baling hay, straw, etc., would consult their own interests by investigating the merits of this Press thoroughly before contracting for any other.

MERITS AND CAPACITY OF THE ECONOMY.

This Press, if shipped knocked down, will be in 28 packages, with one box of fixtures. If so shipped, when it arrives at its destination, three men of ordinary knowledge of machinery, can easily put it together in two hours. It can then be drawn by two horses over any ordinary road and pass through such wagon gates as are found on farms. Upon reaching the hay-stack, the horses are detached from the tongue of the Press, and one is hitched to the power sweep on the side of it; the Press is then ready for service. Three men, with one horse, can press 80 bales of hay in a day, weighing from 190 to 250 lbs. per bale, including moving and making the wire ties as they need them. From 100 to 125 bales can be loaded in a railroad box car, weighing from 10 to 12 tons.

THE COMPLETE ECONOMY PRESS.

This Press, when called complete, consists of the main Press, with the Power, Tie-Making Machine, Trucks with Tongue, Double-Tree and Neck Yoke, Tie Stretcher, Hay Hook, and one good Wrench; and is generally shipped knocked down, especially to distant places, in 28 packages and one box with fixtures. It is also shipped mounted or set up, if so ordered. Weight of the Economy Press, 3,200 lbs. All persons are cautioned to give correct shipping directions, in order to avoid mistakes and delays.

Price of Press, Complete, at Sacramento or San Francisco, \$450. Address

BAKER & HAMILTON, Sole Agents,
San Francisco or Sacramento.



Volume XXIV.]

SAN FRANCISCO, SATURDAY, JULY 29, 1882,

Number 5

A Curious Aquatic Bird.

Our engraving gives a view of a curious aquatic bird, which launches its nest upon the water, and, it is said, practices the navigator's art, propelling its nest when danger threatens. It is such a performance which the artist has portrayed, the bird pushing off its nest preparing to alight upon it, very much as a man would shove off a boat and jump into it. Whether the artist has drawn upon his observation or imagination in putting the bird into just the position it occupies, we are not sure, but it is a fact that there are birds with floating nests, and we shall draw from good authorities in giving a brief account of them.

Dr. Coes, in his "Birds of the Northwest," describes the American eared grebe (*Podiceps Californicus*). He says:

I first saw the species alive in southern California, where I found it to be very common, both on the waters of the bay of San Pedro and in the sloughs back of the coast. They were, of course, in immature dress, the season being November. During the past year I was pleased to find the birds breeding, in pools about Turtle mountain, with various other water-fowl. This is apparently the northeasternmost point at which the species has been observed. Visiting this locality in July, I was too late for eggs, for the young were already swimming, and, in most cases, fledged. The birds were very common, rather more so than the horned grebe, with which they were associated. Many specimens were secured in their full nuptial dress. The change begins in August, but it is not completed until well into the following month, as traces of the breeding plumage persist several weeks after it has grown faded and obscure. On the breeding grounds, as just said, the eared grebes were more plentiful than the horned, since a majority of the latter breed farther north; but upon the migration, when these come south, the proportion is reversed. Both species were to be seen together upon all the water courses of northern Dakota when I left the country in the middle of October. I saw nothing notably different in their general habits.

Other observers have found the eared grebe in full dress, and nesting, in various of our Western Territories, demonstrating a very general breeding range. Mr. Henshaw has lately taken the eggs in southern Colorado. He informs us that he found them, in the absence of parents, completely covered over and concealed by reedy material, so that they were discovered by mere accident. The following is his article in the "American Naturalist":

"In a series of alkali lakes about 30 miles northwest of Fort Garland, southern Colorado, I found this species common and breeding. A colony of perhaps a dozen pairs had established themselves in a small pond four or five acres in extent. In the middle of this, in a bed of reeds, were found upward of a dozen nests. These, in each case, merely consisted of a slightly hollowed pile of decaying weeds and rushes, four or five inches in diameter, and scarcely raised above the surface of the water upon which they floated. In a number of instances, they were but a few feet distant from the nests of the oot (*Fulica americana*), which abounded. Every grebe's nest discovered contained three eggs, which, in most instances, were fresh, but in some nests were considerably advanced. These vary but little in shape, are considerably elongated, one end being slightly more pointed than the other. The color is a faint yellowish white, usually much stained from contact with the nest. The texture is generally quite smooth; in some instances, roughened by a chalky deposit. The eggs were wholly concealed from view by a pile of weeds and other vegetable material laid across. That they were thus carefully covered merely for concealment I cannot think, since, in the isolated position in which these nests are usually found, the bird has no enemy against which such precaution would avail. On first approaching the locality, the grebes all congregated at the farther end of the pond, and shortly betook themselves through an opening to the neighboring slough; nor, so far as I could ascertain, did they again approach the nests during my stay of three days. Is it not, then, possible that they are more or less

dependent for the hatching of their eggs upon the artificial heat induced by the decaying vegetable substances of which the nests are wholly composed?"

HAY-DRYING MACHINERY.—Some idea of the scene in an English hay field where the crop is being artificially dried, may be gained from the following: "We saw a couple of men at one of these fans, which was clapped on to the end of a wooden shaft, extending to a point in the

Steam Digging Machinery.

Some months ago we made mention of a steam digging machine invented in England, which excited considerable interest among our readers. Several of them wrote us that they had had similar ideas for the construction of a steam spader which should take the place of the plow and do much better work. It may be that some of our agricultural inventors are thinking about digging machines, and we therefore give

five or six bushels more yield of grain in the one than in the other.

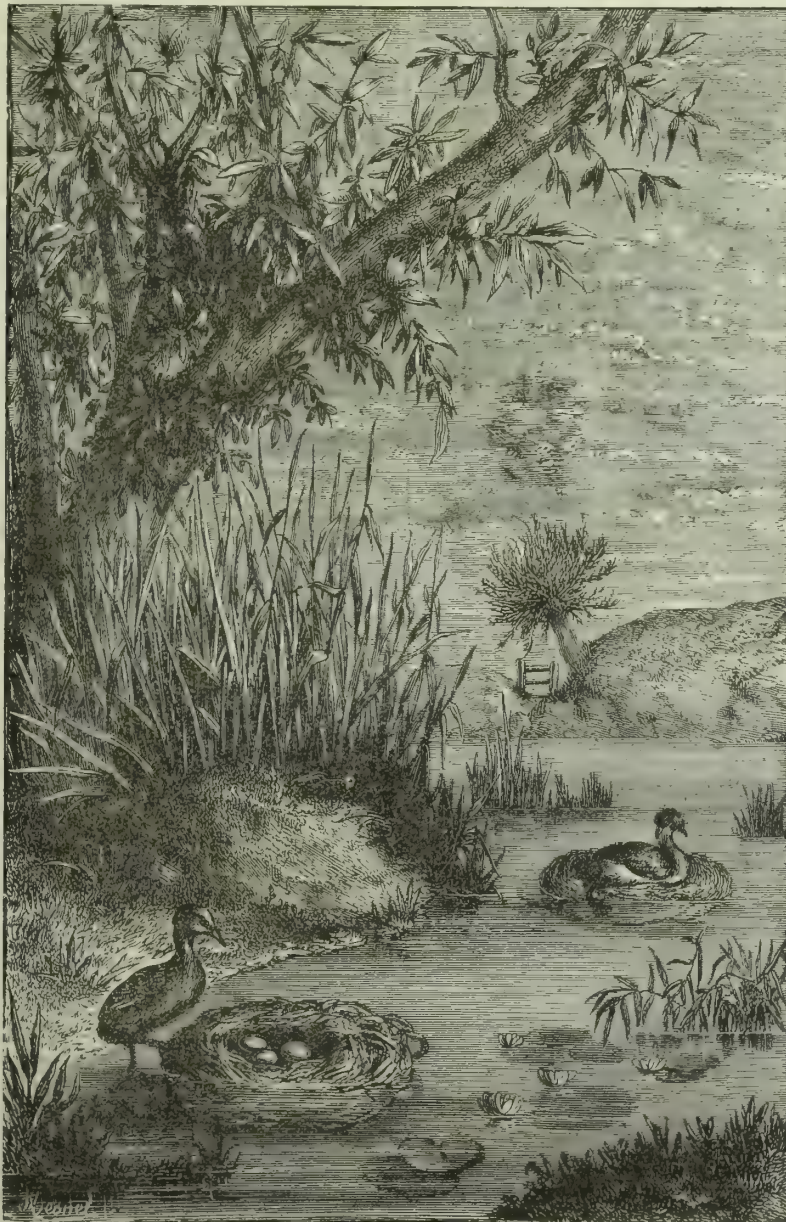
The committee of examiners speak of the working of the implement itself in a field under tillage for turnips, which has grown Italian rye grass this spring. The digger was crossing the piece which had previously been dug at a depth of about 11 inches. The work now being done was admirable in character, and not a single unfavorable opinion in regard to it was to be heard from any member of the party. The clean digging at the ends of the lands was also specially approved, in consequence of the forks being made to work while the heavy machine is revolving round on its axis.

It is stated that the strip dug by the machine is 21 ft. wide. The conclusions reached by the judges are stated as follows: Steam digging seems far preferable to steam ploughing or steam cultivation, for two capital reasons—the soil is moved uniformly at the same depth, and never breaks up in large bowlders, as in the other cases, thereby bringing the under soil in big blotches to the surface; and the roots of weeds are actually forked up by the same means, which allows perfect percolation of the drainage through the subsoil.

Glucose in Wine.

Glucose is a trouble to many of our agricultural industries. It comes forward as an adulterant, a substitute for something better—in short, plays rather a disreputable part all around. The honey producers justly abominate it, for it robs them of many a deserved dollar. The wine men have bound themselves together to put down the use of it as a menace to the quality of their product.

At the last meeting of the St. Helena Vini-cultural Club, H. W. Crabb gave an account of some experiments he had just made with glucose, which may contribute something to the popular understanding of the material. He says: I took three packages of equal size, one containing pure grape juice, the two others containing each equal parts of the same juice and glucose water, all showing 23° sugar by Bahl-ing's saccharometer. The pure juice was dry in 15 days (the room being cold). One package of the mixture was dry in 30 days—the other continued in fermentation for 60 days—both emitting a rank, offensive odor during the process, arising from the amount of chalk and sulphuric acid required in its manufacture. Racking at this time appeared to remove the greater part of the offensive odor, and in 30 days was clear and bright enough to pass for a two-year-old wine. I now thought it contained a very superior fining principle, and if a small enough quantity would answer the purpose, it might be a valuable acquisition. But this was its most favorable period—it had reached its zenith, and while the pure juice was now beginning to develop its vinous properties, the mixture commenced to deteriorate—becoming flat and incipid, as any grape juice would by being one-half water, and the sulphuric acid and chalk (sulphate of lime), developing a disagreeable bitter after-taste. Notwithstanding, I have racked it again and fined it to a perfect condition, there is not the least improvement, and I believe, as it becomes more dry with age, that the bitter, nauseous after-taste will become more and more pronounced, so that one glass of it will leave such a lasting impression on the palate as to never want any more, whereas the package of pure juice is now vinous, sprightly, refreshing and inviting. Of all the articles used in treating unsound wines, there is nothing that so completely deadens or destroys its vinous properties as either carbonate of lime or chalk. And there is nothing that creates a more disagreeable odor than an overdose of sulphur, unless it be the three articles combined, and I might add, gypsum. None of these should ever be allowed to enter into any grape juice calculated for wine purposes, as it will be sure to redound to the injury of the maker and the trade. Glucose is too impure an article to be used in wine, because it overcomes entirely the vinous properties and leaves instead a disagreeable, bitter after-taste, resembling that of chloride of lime.



THE GREBE AND ITS FLOATING NESTS.

body of the rick, whence tunnels, both horizontal and vertical, had been kept open in the mass of hay, as it was being put together. And there was a thermometer at hand to consult as to the temperature. It had been 180°, and the fan was throwing out great volumes of hot steam in its action, and the thermometer was then 160°, and going down." This is quite a business-like operation, and the resulting hay was said to be sweet and good. However, we prefer our hay-drying machinery overhead, as it is rigged in California.

ROSECRANS' bill for a public building at San Francisco has failed to get a report from the Public Buildings Committee, through the failure of that committee to get a quorum at the last two meetings. It is not likely it will be reported at the present session, although Rosecrans is urging it upon the committee.

a condensed transcript of some comparative tests between the steam plow and the steam digger, which we find described in the London *Agricultural Gazette*: It is claimed that the digger has the effect of destroying weeds and furthering the interests of clean cultivation. In a nine-acre field of clover at Little Waltham, a small strip all through the center of the field had been cultivated by the plow in the ordinary way, which produced a large quantity of black grass with the clover, while the dug portion of the field was thoroughly exempt from the pest.

The most striking evidence which met the observation of the party of inspectors on the point, whether better crops are grown as the result of the digging, was found in a field of barley, the one-half of which had been plowed and the other dug. There was at the present time a notable difference, apparent enough on looking over the hedge from the road. There will probably be

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Ede

A Trip to Southern California.

EDITORS PRESS:—I have been a devoted reader of the PRESS for a long period, and I am frank to confess that I have been accustomed to regard the pen-pictures of Southern California as highly colored, written, perhaps, by those whose personal sympathies with a section who saw everything *con amore*, in consequence that was full of home associations and interests. Not until recently has it been my privilege to visit this California Eden. I am now willing to make the *amende honorable*, and frankly admit that your pen-pictures have fallen short rather than exceeded the truth, in regard to the growth and possibilities of this section of the State.

A quick and delightful trip of less than one day brought us to Los Angeles, affording a bird's-eye view of that fast-growing colony at Fresno, and the oil-producing region of Newhall. At the former place we had the pleasure of meeting the energetic and indefatigable Miss Austin, whose success in fruit culture is said to equal her former success in mental culture in San Francisco, where for years she was in the van of educational work. This is saying much for her present success.

Los Angeles strikes the observer as a city thoroughly alive, and full of the instinct of youth. The toccin of advance has been sounded even in the sleepy camps of the old Spanish settlements, and they, too, are bestirring themselves and trying to "tidy up" their surroundings. Nature has done much for Los Angeles, and man ought to improve these natural gifts. It is inland, and yet on the sea board. It has its glorious width of prospect, and its wealth of mountain scenery, its rocks, and hills, and vales, and hills, its high bluffs and its broad campaign, its far-off ocean stretch, where sea and sky lock in eternal embrace, as if earth and heaven were one. It has the freshness and quiet of a secluded village, combined with the hum and stir of the thrifty city. It is rich in historical associations, and the old Spanish landmarks tell of its natal hour.

The drives around Los Angeles are delightful. Taking an early start, we visited Sierra Madre Villa, a charming drive of about two hours, over a good road that slowly winds up to the very base of the mountain range. The view from the hotel at this point surpasses description. It is not strange that Sierra Madre Villa is so popular a resort for pleasure seekers, and for those who need the invigorating influence of an almost faultless climate.

From this place we drove to Pasadena, a perfect garden spot, visiting the homes of several pioneer residents, including also the charming home of your correspondent, Mrs. Jeanne C. Carr, which has gone forward with such phenomenal strides. The orange orchards and vineyards are looking well, and the trees and vines seem to be in a thrifty condition. Professor and Mrs. Carr take a great interest in forestry, and have almost every kind of tree upon their beautiful place. The temperature of this section is delightful; the soil is rich and fertile, and adapted to the growth of all kinds of fruits and vegetables. Land is held at high figures, as it brings abundant returns.

We visited the immense orange groves at San Gabriel. The Rose vineyard yielded the past season some 390,000 gallons of wine and 95,000 gallons of brandy. This vineyard includes about 600 acres, and over 200 acres are devoted to tropical fruits.

Leaving San Gabriel, we went on to Pomona, a lovely little town, about an hour's ride by rail from Los Angeles. This is a point of great interest, inasmuch as it is destined to become a place of importance at no distant day. The climate is superb, the soil is rich and adapted to the culture of all kinds of fruits, cereals and vegetables. It is directly on the line of the railroad, and the orange orchards and vineyards already under way bring in the most encouraging returns. The fruit is of superior quality; limes, lemons, oranges, grapes, apricots, and all the smaller fruits, flourish abundantly wherever cultivated. The immense fields of alfalfa testified to the capabilities of production in this line. Several crops are grown in one season on the same land, yielding a handsome income.

The mountain slopes around Pomona are especially adapted to bee culture, and the honey crop is of great value to the producer. Only a part of his time is required in looking after his bees, and the remainder is devoted to the raising of crops. Thus a double income is insured. The water question at Pomona is one of comparatively easy solution. The mountains are full of inexhaustible springs, and the land lies admirably for irrigation. Artesian wells are abundant and are easily sunk, the water being inexhaustible when once reached. The lands at Pomona are within reach of men of moderate means, and may now be secured at reasonable figures. They are claimed to be equal in value to those of Pasadena and Riverside for the growth of the orange and the vine, and Pomona has the advantage of being directly on the railroad. It seems strange that this valuable tract of country has not been already con-

secrated to the orange and vine. The famous Cucamonga vineyard is at this point. Its vintage is world-renowned.

Colton, San Bernardino and Riverside were next visited. They are all on the move toward permanent prosperity, notably the last-named place. The thrift, energy and enterprise manifest at Riverside are calculated to kindle the veriest drudge into a hero. There is a sort of *esprit de corps* in all public improvements, which serves to facilitate progress in every direction. Riverside is the garden spot of Southern California.

It takes money to purchase land there, it being held at \$500 an acre, within the water district. The returns from some of the old orange orchards seem almost fabulous, ranging, in a few instances, as high as \$1,500 per acre. The society at Riverside is delightful, it having been settled up by a vigorous, thrifty and public-spirited citizenship.

All in all, a visit to Southern California impresses one with the conviction that fortunes are to be made in this section through the natural resources of climate, soil and accessibility to market. The only drawback seems to be the high figures at which good land is held in the more improved sections. But there is land to be had at Pomona, and on the line of road, equally valuable, and, with the facilities for irrigation, it will be equally productive. This land is still within the reach of men of moderate means. Southern California has a great future. It is the Eden of America.

VISITOR.

HORTICULTURE.

California Lemons.

At the late Riverside citrus fair the following resolution was unanimously adopted on the last evening of the session:

Resolved That a committee of three be appointed to prepare a full report upon the California lemon, in connection with the committee on the best kind of lemon, appointed at this fair, that said committee make full tests for acidity, bitterness, etc., of California-budded and imported lemons. That they are hereby authorized to employ a competent expert to make the same tests. That they be authorized to report and report in full, with expert report, and that copies of said report be mailed to every fruit dealer in this State and the Pacific Coast.

The original committee consisted of L. M. Holt, W. N. Mann and Thos. Hendry, and the Chairman added H. J. Rudisill, G. W. Garcelon and L. C. Waite to this committee under the above resolution.

To make the comparison as full and complete as possible, the committee sent out circulars to the prominent lemon growers in southern California, asking for samples of lemons for a general test, and that they be gathered simultaneously—i. e., on the first day of April—and that the age of the bud, age of the tree, root upon which budded, nature of soil upon which grown, be given—that the committee might have more satisfactory data to work with than is generally the case with a lot of fruit gathered promiscuously.

The following list shows where and by whom the specimens tested were grown:

Liebon Lemon.

1. G. W. Garcelon, Riverside, orange root.
2. J. W. Wolfskill, Los Angeles, orange root.
3. Blanchard & Bradley, Santa Paula, orange root.
4. H. G. Bennett, Pasadena, on orange root.
5. S. H. Ferris, Riverside, orange root.
6. B. F. White, Riverside, orange root.
7. Benjamin S. Eaton, Pasadena, orange root.
8. Shugart & Waite, Riverside, orange root.
9. S. H. Ferris, Riverside, lemon root.
10. R. H. Gilman, Anaheim, lemon root.
11. G. W. Garcelon, Riverside, lemon root.
12. J. R. Dobbins, San Gabriel, orange root.

The lemons sent by Mr. Dobbins all decayed except one, and hence it was not numbered or tested.

Eureka Lemon

12. S. H. Ferris, Riverside, orange root.
13. Shugart & Waite, Riverside, orange root.
14. Blanchard & Bradley, Santa Paula, Ventura county, orange root.
15. J. W. Wolfskill, Los Angeles, orange root.
16. H. J. Holmes, Pasadena, orange root.
17. W. B. Russell, Riverside, lemon root.
18. H. G. Bennett, Pasadena, orange root.

Sweet Rind.

19. G. W. Garcelon, Riverside, orange root.
20. S. H. Ferris, Riverside, orange root.
21. R. H. Gilman, Anaheim, lemon root.
22. W. C. Kimball, National City, lemon root.
23. G. W. Garcelon, Riverside, lemon root.
24. J. S. Harvey, Jamul, San Diego county, lemon root.

Lemon of Genoa.

25. J. R. Dobbins, San Gabriel, orange root.
26. S. Richardson, San Gabriel, lemon root.
27. H. G. Bennett, Pasadena, orange root.
28. Benjamin S. Eaton, Pasadena, orange root.
29. S. Richardson, San Gabriel, lime root.
30. J. S. Harvey, Jamul, San Diego county, lemon root.
31. S. Richardson, San Gabriel, orange root.
32. Blanchard & Bradley, Santa Paula, orange root.

Miscellaneous Varieties.

33. Knobby—G. W. Garcelon, Riverside, original tree.
34. Olivia—Geo. C. Swan, San Diego, original tree.
35. Naples—James Bettner, Riverside, buds from trees imported by Gen. Sanford, of Florida; thornless, on orange root.
36. Sicily Seedling—H. G. Bennett, Pasadena, buds from seedling tree on orange root.
37. Sicily Seedling—J. W. Wolfskill, Los Angeles, on orange root.
38. Los Angeles Seedling—G. W. Garcelon, Riverside, on Malaga lemon root.
39. XX Lemon—J. W. Wolfskill, Los Angeles, on orange root.
40. Seedling—Wm. Niles, Los Angeles.
41. Sicily Seedling—P. Davis, Anaheim, buds from seedling tree on orange root.
42. Seedling—G. W. Garcelon, Riverside.
43. Seedling—Elwood Cooper, Santa Barbara.
44. Seedling—P. Davis, Anaheim.
45. Seedless Seedling—G. W. Garcelon, Riverside.
46. "Tank House" Seedling—George C. Swan, San Diego.

47. Lisbon—Mrs. E. J. Davis, Riverside, on orange root.
48. Sweet Rind—Mrs. E. J. Davis, Riverside, on orange root.
49. Messina, imported from New York, shipped direct on arrival from the Mediterranean to H. B. Everest, Riverside.
50. Palermo, imported with the above.
51. Messina lemons, from Dalton & Gray, San Francisco, said to have been received in San Francisco about five months ago, and to have been picked about six months.
52. Malaga lemons—came with the above and picked about the same time.

May 5th, 35 days after the above lemons were gathered, the committee met to make comparisons as to bitterness, acidity, smoothness of rind and general appearance. The samples being placed upon plates and designated by number, the work of the committee was confined to them simply in the abstract.

As regards bitterness of rind, a scale of three was established, and designated as: First, no trace; second, slight trace, and third, bitter. The lemons being cut and allowed to stand in tumblers of water for 24 hours, developed the following results:

No trace—Nos. 1, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 32, 34, 35, 36, 41, 43, 47, 48. Of these, Nos. 9, 10, 23, 24, 29 and 34 were on lemon root.

Slight trace—Nos. 2, 3, 4, 14, 27, 45, 46. Bitter—Nos. 11, 12, 26, 30, 31, 33, 37, 39, 40, 42, 44. Of these, Nos. 11, 12, 26 and 30 were on lemon root.

The uniformity of gathering and curing process passed through insured one lemon no unfair advantage over another, with the exception of a few specimens that were not well matured, or had been slightly affected by frost during the winter.

As regards acidity to the taste, a few are worthy of special mention; and while some were not well up, owing to immaturity, etc., other samples of the same variety showed remarkably well under the chemical test in a high rate of citric acid. Specimens Nos. 12 and 14 of the Eureka variety were not well matured, but the same lemon tested above the general average in the percentage of citric acid. Nos. 21 and 24 (Sweet Rind on lemon root) were very good. No. 28 (Lemon of Genoa on orange root) was also very good, but No. 29 (Lemon of Genoa on lime root) was very weak in acid. No. 30 (a Rubio, or Lemon of Genoa, on lemon root) was strong in acid, but bitter; No. 31 (Lemon of Genoa on lemon root), not well matured and bitter; No. 34 (Olivia, seedling, on lemon root), very good; No. 35 (Naples on orange root), weak and insipid; Nos. 36 and 41 (Sicily budded on orange root), very good; No. 43 (Seedling, very good; No. 46 ("Tank House" Seedling), slightly bitter, but good; Malaga (imported), weak and insipid. Other imported varieties, not strong in acid, but free from bitterness.

It was noticeable that the smoothness and thinness of rind indicated a greater quantity of juice owing to the better development and cured state of the lemon. The extreme size does not show its proportional quantity of juice, but the medium sizes show the best average.

The following table gives a complete statement of the tests as far as made:

NUMBER	Weight of lemon in drams.	Amount of juice in drams.	Per cent. of juice.	Per cent. of acid.	Amount of acid.
1.	33.5	11.87	35.5	7.6	.39
2.	28.5	9.75	34.2	7.8	.36
3.	29.6	9.30	30.5	10.23	.32
4.	32.	9.	28.	9.94	.30
5.	19.5	9.75	50	7.31	.71
6.	30.5	10.50	34.4	9.06	.35
7.	10.25	36.6	9.05	.03	
8.	23.5	8.50	36.2	10.53	.30
9.	25.10	10.	39.2	9.65	.37
10.	28.5	10.	35	7.31	.33
11.	31.	13.50	43.6	9.	.21
12.	20.	7.50	37.5	9.15	.30
13.	20.	10.	50	10.33	.33
14.	19.	6.	31.6	10.44	.32
15.	23.	9.85	43	8.7	.36
16.	23.5	9.50	40.5	7.51	.34
17.	33.	15.	45.4	10.1	.4
18.	32.5	7.50	23.	7.6	.37
19.	34.	10.12	29.8	8.77	.39
20.	21.	7.	33.3	8.70	.34
21.	17.5	6.	34.2	9.15	.35
22.	26.5	12.	45.2	8.19	.38
Imported Messina.	17.	5.75	33.8	9.65	.35
Imported Palermo.	21.5	7.	32.5	8.29	.38

The cultivation of the lemon in the United States has been very much neglected in those localities best adapted to its growth. This neglect, we think, is due to the inexperience of the grower of citrus fruits in gathering and curing the lemon for market, to the prevailing impression that there is greater liability to disease in the lemon stock, and to the fact that nearly all of the seedling lemons, and many of the budded varieties, develop sufficient bitterness of rind to make them unfit for market. That there is a very profitable field yet unoccupied by the growers of citrus fruits is very clearly shown by the following statistics, gathered from the valuable report of J. H. Batwick upon the importation of green fruits into the United States for 1881 and preceding years:

From this we find that for the decade commencing with the year 1872 and ending in 1881 the importations have been as follows:

	No. Boxes.	No. Lemons.
1872.....	317,532	111,136,200
1881.....	369,241	391,083,302

An increase in 10 years of 542,709 boxes and 189,948,150 lemons; an annual average increase of 54,271 boxes.

The same rate of importation will no doubt continue, resulting in the next decade in the

enormous importation of over 1,500,000 boxes annually, containing over 500,000,000 of lemons.

It is also a notable fact that while the importation of the lemon has increased so rapidly, that of the orange during the same time has increased only half as much from all sources, and it is reasonable to suppose that this increase in the importation of the orange will be entirely checked within 10 years by the great productiveness of the groves of Florida, Louisiana and California.

To assist the growers of citrus fruits in southern California in supplying this increasing demand for the lemon, and to place that grown by them properly before the consumers on the Pacific coast was the object of this examination. The committee desired to make this as thorough and exhaustive as possible upon the points expressed in the resolution authorizing it; but, unfortunately, the material used for acid tests was exhausted before a test of all the samples could be made, and before a new supply could be obtained from San Francisco, many of the samples had decayed so much as to be unfit for use. Also, as the financial condition of the Citrus Fair Association would not admit of the employment of an expert to make additional tests, that portion of the work was not undertaken.

The foreign lemon, always commanding the highest price in the San Francisco market, was adopted by the committee as a standard of comparison for the lemons grown in southern California. Freshly imported specimens were secured from Messina, Malaga and Palermo, direct from Boston, through the liberality of Mr. H. B. Everest, and Messina from Messrs. Dalton & Gray, of San Francisco, the latter having been picked some six months. All the specimens were in good condition.

The lemons of southern California were from all the important fruit-growing districts of this section, as shown by the foregoing list, and from the fact that they were picked about the same time and cured in the same manner, the collection was the best in its average appearance and quality ever placed upon exhibition in the State.

The following points were adopted as a basis of comparison with the foreign lemons:

First—Appearance, including size of lemon and quality of rind.

Second—Bitterness.

Third—Percentage of acidity.

First—Appearance, Etc.

A lemon weighing about three ounces when cured, of a bright golden color, with a smooth, soft rind, seems to be the favorite in the market; and in all these respects the committee were unanimous in the opinion that the budded lemons on exhibition from southern California were fully equal to the best imported.

The Sweet Rinds and most of the seedlings, with an occasional Lisbon and Eureka, were above the standard size and weight. This will nearly always occur when the fruit is permitted to hang longer upon the tree than is necessary to mature it for the market.

It was noticed in this examination that the lemons of Santa Barbara, Ventura, Los Angeles, Anaheim and San Diego, were nearly globular in form, and all having a smooth, morocco-like texture of the rind, while those of the same varieties found in San Gabriel and Pasadena were more elongated in form and not as smooth, and those of Riverside and vicinity were still more elongated and rougher rind—a marked difference that must, in the opinion of the committee, be attributed to the differences in the temperature and humidity of the atmosphere in the localities named.

Second—Bitterness.

A bitter lemon is worthless for marked purposes, and to the fact that so many of the seedling lemons of California are bitter is to be attributed, to a great extent, the low value of this lemon in the San Francisco markets.

The test for bitterness, as adopted by the committee, was much more severe than that required of the lemon in ordinary use; yet the result was an exceedingly favorable one for the best budded varieties of our lemons.

Out of 48 samples tested, as above recorded, 30 were entirely free from bitterness, 7 showed only a trace, and 11 were decided bitter.

We think, from this showing, it will not be difficult for our fruit growers to eliminate all traces of bitterness from the fruits grown here. To do this successfully, the causes must be thoroughly understood, and the remedies, when known, as thoroughly applied.

As a foundation for further and more searching investigation, we offer the following suggestions as to causes:

We are inclined to the belief that the stock has a great deal to do with the bitterness of the fruit. It is well known that the fruit of the seedling Sicily lemon is, as a rule, bitter, as grown in southern California, while the fruit grown from buds upon the sweetest orange stock is generally more free from bitterness. Of the 11 varieties marked as bitter in the foregoing list, it will be seen that six are seedlings, four are budded on the lemon stock, and only one was on the orange stock.

The condition of the fruit during growth will, to some extent, cause bitterness of the rind. If checked in its growth by lack of or excess of moisture, or by cold, bitterness will result.

Sample No. 12 is an evidence of this, as it is from a tree that, last season, produced fruit entirely free from bitterness, while this season the fruit was not fully grown, and imperfect

when picked. Again, we think that bitterness, like any other quality, can be transmitted through budding; and hence, when bitter fruit is found in successive years upon the orange stock, it is due to want of care in selecting stock to bud from.

It is found also that fruit from young trees will show traces of bitterness that will gradually be lost as the tree increases with age. Occasionally this bitter principle is found in the imported lemon, and it is possible that it is found there to the same extent as here, but that the period of picking and the curing process the fruit undergoes in the voyage here removes it.

Third—Percentage of Acidity.

When freedom from bitterness is attained, the relative value of the lemon for commercial purposes will depend upon the percentage of acid it contains. In this respect the tests, as far as we were able to make them, showed the superiority of the California over the imported fruit. The highest percentage of the imported Messina was 9.65% of acid, while that of the California Lisbon (No. 8) reached 10.53%, and another (No. 3) was 10.23%, and two of the California Eurekas (Nos. 13 and 14) were respectively 10.33% and 10.43%.

The average percentage of acid in three tests made of the imported lemons gave 8.71%, while that of 19 tests of California budded lemons gave 9.04%.

It is a fact worthy of notice that the fruits giving the highest percentage of acid were specimens from the lemon bud upon orange stock; viz.: Nos. 3 and 4, 8, 13 and 14, showing in this respect the value of this stock for the lemon.

From a careful analysis of the foregoing, it will seem that the California budded lemon, properly grown and handled, is the equal, in every respect, of the imported lemon. Your committee is therefore forced to the conclusion that its want of appreciation in the San Francisco market is due to two causes:

1. Unjust prejudice against California lemons generally.

2. Want of care in the producer in picking and handling the fruit.

That the first is true to some extent, is shown by repeated shipments of budded lemons from Riverside to the Denver market during the past winter, where they brought \$10 per box—\$2 per box more than the best imported lemons, while the same varieties would be sold in San Francisco for \$2 and \$4 per box less than the imported lemon. It is fair to presume that the taste of consumers in Denver is as highly cultivated in this respect as that of the same class at San Francisco.

Second, that there is deplorable carelessness in picking and handling this lemon is undoubtedly true, and to this cause may be attributed much of the loss that falls to individual producers, and to the trade generally. A prominent fruit grower of Riverside was in the city of San Francisco a few weeks since, and saw in the warehouses of one of the largest commission merchants there, a large number of boxes of California lemons. Upon examination he found them of all sizes, colors and shapes, tumbled into the boxes without wrapping or care of any kind. The result was, that they would either have to be sold at a price that would hardly pay freight and commission, or be stored for some weeks, and then be sorted and repacked, of course, at considerable cost to the owner, and possibly large loss of fruit.

As an appendix to the above report, the committee would offer the following

Recommendations:

Discard all trees that, after a fair and repeated trial, continue to show bitterness of fruit.

Exercise great care in the selection of varieties free from bitterness and rich in citric acid, from which to bud.

Use the seedling orange as a stock upon which to bud, as the orange is a hardier and healthier stock, and the lemon budded upon it is hardier than upon lemon stock.

Keep your trees in a healthy, vigorous condition, especially during the fruiting season.

The Lisbon and Eureka lemons are, so far, the most promising varieties, being productive, early bearing, of medium size, fine appearance, sweet rind and rich in acid.

As the lemon can be kept from six to eight months after picking, if properly handled and cured, and will improve rather than lose in quality during that time, pick the fruit before it is ripe, or, rather, while a portion of the rind is green, store it for six or eight weeks in a cool, dry room, thoroughly ventilated, placing the fruit in thin layers upon shelves or hurdles, where it can be readily examined and picked over if necessary.

Avoid moisture during the process of curing. Sort when ready for market, making at least two sizes or qualities, and pack none but perfect specimens, wrapping neatly in tissue paper with the name of the variety and producer printed upon the wrapper, as a guarantee of good faith in the shipper.

With these rules fairly observed we see no reason to doubt the prompt appreciation of California budded lemons in every market, and a complete check given to the importation of foreign lemons into California.

L. M. HOLT,
THOS. HENDRY,
H. J. RUDISILL,
G. W. GARCELON,
L. C. WAITE,

Com.

W. N. MANN, Sec'y.

FORESTRY.

Forest Trees of California—No. 6.*

Western Juniper.
(*Juniperus Occidentalis*.)

"And as Elijah lay and slept under a juniper tree, behold, then an angel touched him."—*Ancient Book of Kings*, Vol. I: xix, 5.

The Western juniper is one of the most venerable and picturesque trees of all the higher regions of California—venerable as to appearance, and for the vast antiquity of the larger trees, which date far back, nearly to the great *Sequoian* age; and picturesque, for often hundreds, nay, thousands of miles may be traversed without meeting a single perfect tree. All seem more or less dismantled, or the top altogether carried away by storms or the ever-recurring snow-slides. When viewing these veterans, let us bear in mind they have braved the eventful cycles of time, that are measured by many thousands of years, with a vitality almost equal to the olive tree. If killed by any cause on one side, the other still goes on its life-long journey, eccentrically developing, until the investigator finds it convenient to take bearings in order to determine the original center. This broad base of accelerated expansion is always more or less unsymmetrical by those big bars of swelled or anguloid eccentricity so eminently characteristic. Above, it rapidly tapers to an attenuated top. Whole groves of the typical tree may be sometimes seen 40 to 50 ft. high, from a body 8 to 10 ft. in diameter of the most perfectly free and unmolested development in relatively rich soil at the head of Carson river, or in a few of the most favorable cold alpine valleys.

The bark is of light cinnamon color; fibers somewhat shreddy, which beautifully interlace, and are nicely netted. The finely, as it were, braided cord-like twigs are remarkably condensed, or matted, thickening the final spray. Thus it well maintains the expression of rigorous vitality, altogether suited to the perilous regions it inhabits—that is, along rocky mountain sides, mostly in close contiguity to the line of perpetual snows; or for the California Sierras, say up to about 10,000 ft. altitude. It has also a very extensive range of country from Pitt river to east of the Cascades, in Oregon, and throughout our high Sierras, and toward the Rocky mountains, until it meets the Red Pencil cedar, or Eastern juniper (*J. Virginiana*), in the Zuni mountains of Mexico, and even into Texas. The wood of this, however, is not so red inside, nor so fragrant, but lighter and yellowish; is equally durable and of like value. The tiny leaf-scales are fringed on the margins (the Eastern leaf margins are smooth), and branchlets four-angled; leaf-scales mostly in threes, often in pairs, blunt tipped or scarcely a little sharp, more resinous and silvery shined. In the young state the glands are obscure; manifest enough in age. The blue-bloomed berries are rather large, over a third of an inch in diameter, spheroidal, one or more seeded, the color beneath the bloom brownish and sweeter tasted, when heated or burned exhales a delightful, aromatic incense, both exhilarating and highly salubrious. They also furnish boughs and twigs for a durable esculapian bed for the feeble pilgrim who is wise enough to spend a season of rejuvenation in the mountains and spread his primitive couch of them beside their all-glorious camp-fires. As these ecstatic aromas excite the affections and promote grateful perceptions, whence is all true adoration and blessedness, it is no wonder the prophet felt the angel touch him—an angel of health, if no other—nor that our sage ancestors burnt the juniper around their dwellings to keep away evil spirits, or exorcise the demons of infection and every sort of plague, and held that an especially fortunate family, which was willing and well to do, withal so scrupulously neat as to strew faithfully their floors every Friday with some of these branches. We dare say, along their devout footpaths arose some hallowed incense from the family altar.

Finally, if we view this tree securely sheltered from its manifold misfortunes that overtake it in its more exposed haunts, say in high mountain vales, or along the banks of those streams, it becomes a very handsome tree. One can scarcely realize the great contrast of elegance and beauty. Perhaps, among a thousand expressions, the most general and striking is that stubborn air of death-grapple, and evermore irrepressible conflict of these veterans of a thousand wars against all the combined elements of earth and heaven. Offset to this conic top of well-defined, softly green, and graceful boughs and body, you still behold maintained the perfect symmetry of strength below. Or, yonder stands the usual type, a tree well-nigh in ruins, perchance bygone greatness half in ruins, with modern repairs; or, it may be only a relic of passed glory, now lonely and neglected, here and there venerable and grave, anon grotesque, always in a high degree picturesque. But, really, who may tell all the varied expressions of this marvelous great Far Western juniper?

To dwell upon its durable timber qualities would be to repeat the lore of cedar and juniper renown—as live fences, rock and wall screens, naval knees, boats, common carpenter and cabinet work, and all uses where light, close-grained, soft, smooth and compact wood is wanted.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

SHEEP AND WOOL.

The Mohair Industry.

"After short silence then, and summons read,
The great consult began."—*Milton*.

EDITORS PRESS:—In continued adherence to the doctrine of the thoroughbred, my next investment was with the illustrious originator of the improved Kentucky sheep. The pedigree of the animal is in the handwriting of the venerable Colonel himself, who commences the correspondence that accompanied it in these words:

"Though 69 years old to-day, and still unwell, I write you the pedigree of the buck No. 4 with my own hand."

Pedigree of the Angora Buck, No. 4.

No. 4 was bred by the subscriber, and is pure-bred, or thoroughbred, of the Angora or Cashmere breed of goats, and will be two years old in May, 1878. No. 4 was got by the pure-bred Angora buck No. 356, bred by Col. R. Peters, of Georgia. The dam of No. 4 is the pure-bred Angora female of my flock, No. 8, and she is descended through several generations from a pure-bred female which I purchased of Col. Peters many years since, and which was bred to a pure-bred buck which I bought of Col. R. Williamson, and whose sire and dam were imported by Dr. Davis, of South Carolina.

Before I got tags for the ears, the animals were designated by holes and notches in their ears, and therefore they cannot be given more fully.

Witness my hand, October, 1877. ROBERT W. SCOTT.
Locust Hill Farm, Franklin Co., Kentucky.

Upon his arrival at the Angora Downs he is marked "Debtor," to \$169 85. Both his shipment and reception were noted by the Kentucky newspapers, and, connected with his transit is an episode: I had instructed Col. Scott to prepay his expenses right through to Mariposa. Owing to ill-health the Colonel was obliged to entrust the business to his son-in-law. This gentleman did not observe that, although the full rates were accepted, the railroad receipt was drawn in a defective manner, consequently there are nearly \$20 of the charges exorbitant. Col. Scott brought the matter to the attention of the railroad officials, but, in the meantime, some person had adroitly resigned and the investigation proved fruitless. Perhaps, under the present management of railroads, such practices will be obsolete.

In this manner passed the unruffled current of our days until one delightful afternoon in September, 1878. I was enjoying my siesta, after having regaled myself with a genuine Persian canteloupe, when Mr. Grove rode into the yard, alighted and handed me a letter, the envelope and superscription of which by this time had become familiar to me. While I was intent upon its perusal, in fervid but impeded speech his burdened soul found vent. * * * But here the random fluid of California re-ounds. 'Tis the unbiased ink of Massachusetts that's before you:

MARTIN KIRBY, Esq., Angora Downs, Mariposa Co., Cal.—Dear Sir: Your mohair has just come to hand, and I have made five average grades. I have examined carefully each of the fleeces in the separate sack, as you desired, and I give you, on a separate sheet, the values I have put upon them, also remarks on each fleece. The principal and general fault with your mohair is its coarseness. Mohair must be fine, that is, a small hair, as well as long, to be very valuable. However long and bright it is, if it is very coarse, it will not rank high in value.

The fleeces from your "Old Shirland," for instance, is almost like hogs' bristles in coarseness, and, for this reason, it is only fit for a very low grade of goods, like carpets, etc., being entirely unsuitable for the purposes mohair is ordinarily used for.

Where the word "quality" is used in connection with wool or mohair it means fineness of staple generally.

"Peters 85" is the best fleece in your lot for quality, and, if it had a little more length, would be very valuable. The older a goat or sheep gets the coarser and lower the fleeces become, so that it is important to kill off the oldest animals in any flock and keep the younger ones.

The fleece from "Peters 104" is coarse, but it evidently has good blood and may be a good breeder.

All of your mohair would show up to better advantage to be cleaner washed. The natural lustre of the fibers or hairs is hidden by the grease and dirt on it.

You will notice that all my remarks are in the line of complaint or pointing out faults. I suppose this is what you want. The good points will take care of themselves if the faults are remedied.

I received Mr. Tetley's circular, and I have reason to believe that he graded the mohair he bought in California and sent only the best of it to England, and the balance he sent to New York for sale. If the California mohair raisers wish to cater to the English market they will have to bring up the length and quality equal to the Turkish article.

The prices I have put to the breeding fleeces of yours are 10 cents to 15 cents per lb. lower than the same fleeces would have been worth a year ago; please take this into account. Mohair, in sympathy with luster wools, has fallen 20% to 25% in price the last 12 months, but we are in hope to see it go up again before another clip, as it is abnormally low now. Yours truly, H. M. FARR.

Transcript of Separate Sheet.

"Old Shirland" (nominal), imported, croppy; value of fleece 40 cents per lb. Remarks—Good length and bright, but very coarse.

"Representative from Kentucky;" value of fleece, 65 cents per lb. Remarks—Coarse, but good otherwise.

"Mattie Jane;" value of fleece, 50 cents per lb. Remarks—Fair quality and length.

"Waiting Mary;" value of fleece, 35 cents per lb. Remarks—Matted, kempy and short.

"Peters 104;" value of fleece, 60 cents per lb. Remarks—Good length, but coarse.

"Peters 112;" value of fleece, 45 cents per lb. Remarks—Coarse and not long enough.

"Peters 85;" value of fleece, 65 cents per lb. Remarks—Good quality, but short.

"L. & R. 7;" value of fleece, 55 cents per lb. Remarks—Fair length and quality.

"L. & R. 21;" value of fleece, 50 cents per lb. Remarks—Irregular, an old animal or unhealthy.

"Shirland Atlanta;" value of fleece, 60 cents per lb. Remarks—Good, but coarse.

"Croppy Atlanta;" value of fleece, 50 cents per lb. Remarks—Long but very coarse. This fleece would be worth 80 cents per lb. if it was fine.

"Young Lady Grove;" value of fleece, 70 cents per lb. Remarks—Good length and fair quality.

"Martha Washington;" value of fleece, 55 cents per lb. Remarks—Long and coarse.

"Donsie Nannis;" value of fleece, 65 cents per lb. Remarks—Good length, but coarse.

The Dialogue Which Ensued.

Grove: It now becomes evident that we have a "white elephant" on our hands. This

goat business can be summed up in two words, exaggeration and misconception. Here is some goat literature that I found hanging upon a bush:

In our original paper on the Angora goat we announced the following conclusion: "The Angora goat, and the domestic goat of Europe and this country, having descended from separate sources, the obtaining of good results from the crosses of the two races is theoretically improbable, and is demonstrated to be so by the best experience in Europe." As we stated in a recent article on sheep-husbandry in the South, later observations of experiments in Australia, and especially in the Cape of Good Hope, have led us to modify the conclusion above quoted. We must now admit that good fleece-producing animals may be founded on the common goat. The conclusive fact establishing this is the one stated by the Messrs. Bowes, in their wool statistics for 1878, that the first shipment of mohair from the Cape of Good Hope, made in 1865, consisted of but 6,804 lbs. In 1873 the quantity reached 1,298,455 lbs., "and the quality has been very much improved." It is not possible that this vast increase could have been made except by breeding on the common goat. The excellence of the product of the graded animals is proved by the highest test; it has become a regular article of commerce.

The greater part of the enterprise devoted to the Angora goat culture in this country has been frittered away, and has been productive of no results. Breeders who crossed pure animals upon common goats have sold the grade animals as if they had all the excellences of the absolutely pure goats. The purchasers, in their turn, breeding the grade bucks to common goats, have been naturally disappointed in the results, and have let the breeds run entirely out. The failure has come from attempting to derive profit from the sale of the graded animals, instead of from perfected fleeces.

Can you explain to me where these people get the authority to teach what they don't know?

Mr. Kirby: Quos ego! Sed præstat componere vultus.

Grove: All I see the matter with the goat, is that the exhibition standard and hypothesis are both wrong.

Kirby: We certainly have two classes of animals here; goats for the factory and goats for the fair grounds; but when you speak of a hypothesis, I can find none.

Grove: There is an implied hypothesis, and it is certainly a strange one, for it amounts to this: The common goat has been the means of advancing the mohair interests of the British colonists, and of retarding us. However, before going further, I intend to investigate our expensive little pet. Can you answer me the question, "What is mohair?"

Kirby: Mohair is the natural covering of all the lower animals, and especially of the goat, in a small portion of Asia Minor.

Grove: Well, what is a goat?

Kirby: A goat is a useful domestic animal, of a very susceptible organization, that will adapt itself in a few generations to exactly the conditions of life in which it is placed, provided you give him a pile of rocks and the morning sun.

Grove: Where did your goat originate, and in how many types?

Kirby: Our goat originated in Asia Minor, not far from Angora; in two types, one black and one blue, the descendants of the blue type being esteemed of the most value to man.

Grove: If this philosophy is correct, the laws of reversion or atavism will give us, under favorable conditions of life, the very animal that we are desirous of obtaining.

Kirby: It has required immense misapprehension to force the goat, or rather the mohair business to where it is.

Grove: How much of the common goat has this animal that you call Young Lady Grove in her composition?

Kirby: One-sixteenth, and perhaps more.

Grove: How does she yield in weight in comparison with the prize nanny, Mattie Jane?

Kirby: She out-yields the prize animal one-fourth of a pound, while it takes seven pounds of the prize nanny's fleece to equal in value five pounds of her's. But we can go further, for Waiting Mary is the daughter of Mattie Jane, sired by Sweepstakes Hercules, grand sire Imported Hercules, and it takes two pounds of her fleece (Kid's clip) to equal in value one of Young Lady Grove.

Grove: This looks like a travesty on stock-breeding—every vestige of superiority swept by the board in two generations to gratify a prestige on the exhibition grounds. It now becomes evident that the common goat has nothing whatever to do with the failures in this business, but has been a very convenient factor for the professionals to screen their own culpable negligence and cupidity. I tell you what I wish you would do: Place these animals on the records so that I can understand them in case that anything should happen before you can bring the problem to a final solution. Also, write to Col. Peters and find out if you can obtain the blood of Peter's 85 in a male. In the meantime I will con over some questions ready for our next conference. So good-bye.

MARTIN KIRBY (73).

Darrah, Mariposa Co., Cal.

ENGINES TO RUN BY SUN LIGHT.—William Calvert has patented a reflector consisting of 100 or more mirrors, by which he concentrates the heat of the sun in sufficient force to generate steam in large quantities. He claims it will revolutionize the manufacturing business where fuel is scarce and sunshine plenty. It will be recollected that Ericsson recently promised to prove the practicability of so concentrating the sun's rays as to drive a mill steadily. He announced that he had perfected a means of collecting the sun's rays and reserving them for use in cloudy weather. His silence indicates that he did not succeed; but it is not to be assumed that a first failure condemns the principle. We find that two French savants pronounce the principle correct; saying that science will finally triumph over all difficulties; and they anticipate a general derivation of all mechanical power from sun-heat.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 5.

(Written for RURAL PRESS by CLARA DREWING.)
Harvest Thoughts.

This is the season when the farmer does homage to the Patron goddess, known as Ceres, by gathering and storing the harvest which has grown up and ripened under his care and cultivation, the reward of his spring labor.

As civilization advances and the world moves on, the mode of planting and gathering the harvest improves. In olden times we read of wooden plows being used in tilling the soil, and sickles for cutting the grain. In such cases as these, but few acres could be cultivated. Imagine, if you can, what it would be for one of our large farmers in Butte, Colusa, San Joaquin and other counties, to try to gather his grain crop with a sickle, or even with a cradle, as some of our grandfathers used to. What an endless task it would be!

The wants of our ancestors were not so large as those of the present generation, and so much breadstuffs was not needed to supply the demand of the world's population. It was not necessary to have so many broad acres under cultivation, nor was there a need for the machinery of the present day. The means of transportation were not what they are to-day.

California, which used to be considered so far away 30 years ago, is now in communication with all parts of the world. Her grain is being shipped to foreign ports, but it ought to be ground in this country and then shipped. Exporters would not have such a good chance to adulterate the grain and then say that the farmers do not raise clean wheat. It is no encouragement to a producer to keep his grain free from foul seed when he knows the shipper will mix some of the unclean with his, which is clean, and his wheat commands no better prices than the other; yet they say it is the farmer's fault for not producing good grain. As long as shippers and consumers pay the same price for good and poor grain, the farmer will not take the extra trouble to raise clean grain.

Patrons are all so busy now and help so scarce that a quorum for Grange meetings can not be had very often. The golden grain bends to the knife of the header and reaper, and the busy whirr of the thrashing machine is heard in many places.

As we look upon these fields of garnered grain, our thoughts wander, and the question comes to us from our Grange song, "are we sowing seeds of kindness" on the field of life, that the harvest by-and-by may be a rich one? Are we ready for the sickle of time? Shall we gather golden grain from the good "deeds done in the flesh?" The harvest is never known to mortal man until the labor is done.

Vallejo, Cal.

WORK IN THE SUBORDINATE GRANGES.—One of the great needs of our Order is more thorough work in the subordinate Granges. They are the foundation of our Grange organization, and should be carefully guarded, as neglect here will result in the overthrow of the whole structure. Great care should be exercised in selecting the officers, as upon them devolves the responsibility of maintaining the interest throughout their term of service. Each officer should perfectly understand the duties of his office, and then be punctual in attendance and faithful in the discharge of said duties. No Grange having faithful, efficient officers ever dies or surrenders. I think especial attention should be given this year to the work of thoroughly instructing the membership in the ritual work and in the best methods of making our Grange meetings interesting and profitable. The great objects we seek to accomplish will never be reached without careful attention to all the minor details of our work. I, therefore, recommend that our Lecturers be directed to devote especial attention to this part of the work. If we can thus increase the efficiency of our subordinate Granges, they will be able to largely increase our membership.—J. H. Brigham, W. M., of Ohio State Grange.

WHAT IS SAID OF THE GRANGE.—A New York business man has a good opinion of the Grange. He says: "I desire to say, that from recent investigations, as I have had opportunity, you are engaged in a noble cause, and one that will commend itself to every right-minded man and woman in the commonwealth; a cause that seeks to elevate manhood and womanhood, by civilization, education, unity and equality, without regard to their financial condition. The development of that object will, I predict, result ere long in a greater prosperity among the masses of the people, and develop a public sentiment that will cause the monopolies of the country to take heed, lest they fall and are crumbled under the feet of the honest tillers of the soil. Then will taxation through this broad land be equalized, and the interests of the farmer and mechanic be respected, and not till then; but the cloud, thank God, of the Order that was once no 'bigger than a man's hand,' is now portentous with the words—love and equity to all mankind in their vested rights."

EDUCATION.—Many of us lament our lack of an education, and feel that we would give almost anything to possess it, forgetting that it is never too late to learn. There are numberless instances of persons who will assure you that the best part of their education has been obtained in the Grange, and that they still find there the most ready means of improvement. If really too late to accomplish much for ourselves we can point out the way and urge our children not to neglect the benefits of the Grange. The responsibility is ours; the opportunity is theirs. Let us not fail to impress it upon their minds. An education does not consist in a knowledge simply of the three R's, viz.: Reading, writing and arithmetic, but in the knowledge of what will elevate us to a higher manhood and higher womanhood, with an ability and a disposition to do as well as we know. In other words, we must learn to study for ourselves, think for ourselves and work for ourselves.—Dirigo Rural.

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

STRIKE OF RANCH HANDS.—Chico Record, July 22: Yesterday the hands at work on the Glenn ranch in the harvest fields went on a strike for higher wages. They were getting a very good price—\$1.50 per day and board, but wanted an increase of 50 cents, which was flatly refused them. A dispatch was sent to Chico for laborers, and a load of them left for the Glenn ranch last night. We are now likely to have a raid of tramps within our borders since the strike of yesterday, as it has been said that the men in the strike, or, rather, the leaders, are tough characters.

COLUSA.

WILD HONEY.—Cor. Sacramento Bee: Wild bees are plenty in the woods along the river, and also in the woods in the foothills of the Coast range. Some persons living near town made it a business every fall to hunt bee-trees, and they find it profitable. The honey is good; better along the river than in the foothills.

WIND AND FRUIT.—The hot weather and north wind injured the fruit in this vicinity. It is actually scalded, and it has withered and dried up or fallen off. The trees show the effect very plainly, and the grapes on the south side are withered as though partly dried, while on the north and east side the bunches are large, plump and doing well.

FRESNO.

THE IRRIGATING CANALS.—A correspondent of the *Expositor*, who has been looking into the subject of the cost, capacity, value, etc., of the irrigating canals in Fresno county, that have been diverted from King's river, furnishes the following: The Centerville & Kingsburg Canal cost about \$70,000. When running a full head it carries 200 cubic feet of water per second. The cost, therefore, of construction is at the rate of \$350 per foot, but it sells readily at \$500 per foot, and the price is steadily augmenting. The Fresno & King's River Canal, or Gould Ditch, cost about \$65,000. It carries about 100 cubic feet per second. Water in this canal is now selling at the rate of \$500 per foot, or \$150 less than its cost. The Emigrant Ditch cost between \$20,000 and \$25,000. It carries about 50 cubic feet per second. The cost per foot was from \$400 to \$500, and it is selling at the rate of \$400 per foot. The land is settling up so rapidly at the lower end of the canal that the price is sure to go up to \$700 or \$800 per foot. The Liberty Canal is not yet finished, but so far is furnishing the cheapest water of any in the county. It cost between \$6,000 and \$7,000, and carries about 30 cubic feet per second. There is no stock of this company selling. The Fresno Canal & Irrigation Company is what may be termed a close corporation, the general public knowing but little of its workings. Its cost, therefore, is not known. It has a capacity of something over 300 cubic feet per second. Water rights in it are selling at the rate of \$800 per cubic foot, with an additional charge of \$100 per annum for repairs, etc. The actual selling price, therefore, is \$1,800 per cubic foot. At \$800 per foot the value of this property is \$240,000. While the canal, as a whole, shows but little appreciation in value over their cost, the lands that lie along them and are capable of being irrigated from them, have made a remarkable advance in price. As an instance, let us take the Centerville & Kingsburg Canal. Its 200 feet of water is capable of irrigating 32,000 acres of land, which without water would be worth \$40,000, but with it is dirt cheap at \$640,000.

LAKE.

CROPS.—Lakeport Bee, July 21: A harvest report comes from the ranch of J. M. Martin that don't sound much like poor crops in Lake county, by any means. Holmes & Welty's thrasher finished its work on Monday last, and the average yield of the entire crop was between 45 and 50 bushels per acre.

KERN.

THE ALFALFA CROP.—*Californian*, July 22: Up to the beginning of July the season was unusually cool, and the growth of alfalfa had not been rapid, so that it was feared this valuable crop would be lighter than usual. But since that time all danger of this has been more than obviated; The continuous and excessively hot weather, without our usual cool nights, has forced this invaluable forage plant into such a surprisingly active growth that it is almost vis-

ible to the eye, and there is very little doubt but that the yield, for the season, will be as large, if not larger, than the best of our previous years.

LOS ANGELES.

A FAIR TO BE HELD.—At a meeting held on Thursday, a delegation from the committee of citizens to canvass the city, attended and reported excellent progress in the matter of subscriptions. On motion of Mr. Niles, a committee of seven, on speed programme, was appointed by the board as follows: Messrs. E. L. Mayberry, Hancock Johnston and Capt. Hutchinson, Los Angeles county; J. R. Gries, Ventura; Alex. Brazelton, San Bernardino; M. A. Foster, San Diego; Nick Covarrubias, Santa Barbara. On motion of Mr. Niles, the following committee on revising the premium list was appointed: Messrs. Hollenbeck, Lichtenberger and Niles. R. H. Hewitt was elected Secretary. Adjourned to meet at the same hour and place on the 27th inst.

EARLY BEARING.—*Commercial*: A remarkable example of the productiveness of the soil in this section is shown on Fort street, corner of Third, where Mr. Duseo, 15 months ago, planted a "River Valley" peach, from New Jersey, and now has produced 22 peaches from the little tree that grew from that peach. The tree blossomed when 27 inches high and now, when about 48 inches high, has produced 22 peaches.

APRICOT ON PEACH.—*Cor. Times*: Mr. Martin, of Pasadena, realized \$1.38 from a one-year-old apricot, budded on a three-year-old peach stock. The peach tree was of little value, so a year ago this spring the apricot bud was put in, with the above result. I put this in so that any of your readers who have peach trees that are comparatively valueless, may have a sure cure for the complaint of no fruit, or, what is worse yet, poor fruit. I would add that this is not an isolated case, as is many times, but that Mr. Martin served a whole row of 33 trees of early Alexandrias the same way, with the same results.

THE WINE CROP.—*Herald*: The grape crop promises to be very large, and the vineyardists are jubilant. We understand that our wine makers are going to make an unusual quantity of wine, running away up into the hundreds of thousands of gallons each.

SAN JOAQUIN.

SMART WEED.—*Lodi Sentinel*: Although the barley crop is heavy upon Staten Island, the harvesters are meeting with great trouble on account of the great growth of the "smart" weed and the abundance of cracks in the ground. The weeds are so thick that they choke up the machines and the cracks are so wide and deep that the horses are in constant danger of being crippled and the machines broken down. The self-binders and reapers are generally used where the weeds abound. The grain has to be spread until the weeds are cured, to prevent them from infecting and rotting it. The barley on the Island goes from 40 to 60 bushels to the acre.

SANTA CLARA.

THRASHING.—*Gilroy Advocate*: Thrashing is easily and expeditiously done by the wonder-working action of Job Malsbury's new thrashing machine. A day or two since, on Furlong's ranch, 1,200 sacks of barley were filled from its side spouts in 11 hours, and without any extra exertion. It never has been tested to its fullest capacity, but its owner tells us that it will do over 2,000 sacks in a day. The apparatus is simple in construction. The frame is 5 ft. wide and 25 ft. from cylinder to rear. The shoe extends the whole length, and screens and separators are arranged so that it does perfect work. It is a splendid success, reflecting credit upon the inventor as well as upon Whitney's machine shop, in this city, where it was manufactured.

THE LOS GATOS CANNERY.—*Santa Cruz Sentinel*, July 22: One of the principal, if not the principal, industries in Los Gatos is the Los Gatos Fruit Packing Co., a corporation organized with a stock of \$50,000, the stock being mostly held by the fruit growers in the vicinity. The present officers of the company are: Pres., Samuel Templeton; Sec'y, A. Hildebrand; Treas., J. W. Lyndon; Supt., J. J. Groom. The company started on the 10th of April last. The building they occupy is a new frame one, 60x80 ft. on the ground, two stories. The lower story is used entirely for the packing of fruit and the upper story for making tin cans, of which they have made ahead some 118,000. The men employed turn out 3,500 cans per day, which number can be increased if desired. A 30-horse power engine is required to do the work of the company. At present there are 45 men, women and girls employed, who turn out three tons, or 3,000 cans of fruit per day. As the fruit becomes more plenty the capacity will be increased to 10,000 cans per day. Everything in the factory has its own department, and under the able supervision of Mr. Groom, who is an experienced fruit packer, the company is turning out a first-class article of fruit. The wages paid the females at present, green hands, are 75 cents per day. After a month or so, the packer in the meantime becoming more experienced, the wages will be raised so \$1. Some engaged on piece work make as high as \$1.25 per day.

SONOMA.

GOOSEBERRIES.—*Santa Rosa Republican*, July 20: W. D. Cohan, of Green Valley, raised a ton of gooseberries on one-third of an acre of ground, for which he received \$100. He also

marketed 700 pounds of red currants. All without irrigation, and on land about 200 ft. above Green Valley creek.

SANTA CRUZ.

A FAIR SOCIETY.—*Courier-Item*: A number of public spirited people convened at the court house on Saturday to discuss the subject of a fair at this place the coming fall. It was decided to organize a temporary committee who would carry forward the project and at the close of the fair determine upon future action. After much solicitation, Mr. F. A. Hihn consented to act as President of this committee, and was so elected by unanimous vote. Mrs. B. P. Kooser was chosen Secretary, Martin Kinsley, Treasurer; W. W. Waterman, of Vine Hill, First Vice-President; Mrs. Martha Wilson, Second Vice-President. It was decided to hold a fair about October 1st.

GRAIN.—*Watsonville Pajaronian*, July 20: The thrashing machines of this valley have nearly all set to work in earnest. Grain is turning out well; that is, barley, on which the machines have been running. The harvest will be better than was expected a month ago. Parties who got scared by the frost and out their grain for hay now wish they had let it stand and mature.

SONOMA.

WOOL CLIP.—*Petaluma Argus*: I. G. Wickersham, who has lately returned from the sheep ranges of the northern part of the county, reports the wool clip very satisfactory in quantity and quality, while the prices realized were good, ranging from 26 to 29 cents per pound. Capt. Wickersham and others have tried the experiment of shearing once a year, and are pleased with the result. They get by one shearing just about the same amount of wool, and find their sheep are better prepared to stand the winter if they start in with a good coat in the fall, and that they are equally free from disease as those that are sheared twice a year.

STANISLAUS.

PHOSPHORUS FIRES.—*Modesto Herald*, July 20: Last Friday morning, at one o'clock, a fire was discovered in the wheat field of Dan Callahan, on upper Dry creek, by a gentleman who was riding along the road, and he immediately gave the alarm. There were a gang of headers on the ranch at the time, and they stopped it, as there was no wind blowing at the time. The fire had burned a streak about 25 yards wide and 250 yards in length. At about eight o'clock, Jonathan Gray was riding past the house, and he saw a large stack of hay and a stack of barley on fire, about 30 yards from the house, but it was so far gone that there was no use in trying to quench the flames. While the men who had gathered around were watching the hay and barley burning, they discovered flames issuing from the roof of the porch on the fine two-story dwelling house, and they immediately put it out. In doing so, they discovered phosphorus on the shingles, which burned their hands. Some of the men were on a barley stack near by, watching for flames, when the fire ignited on top of the stack, and they found a rag which had been saturated in water containing phosphorus. They threw the burning straw from the top of the stack and stopped the fire, saving the phosphorus. About noon of the same day, while walking around the blacksmith shop attached to the ranch, one of the men discovered phosphorus in a rag under a corner of the building, which was just beginning to burn. The stack of hay contained from 60 to 70 tons, and the barley consumed amounted to about 600 bushels. The loss sustained by Mr. Callahan will not be less than \$1,500. On Saturday morning a man named Miles was arrested on suspicion of having set fire to the property, and brought to Modesto.

HARVEST NOTES.—*Farmers' Journal*: Hauling to the warehouses has slackened up a little for the last day or two, some farmers having finished, while others are employing all their force in thrashing. There seems to be no falling off in the increase of the crop; on the contrary, from almost every side comes the same gratifying intelligence that the yield is fully one-fourth larger than was anticipated. All the farmers are sending for more sacks, and the supply, which was supposed to be superabundant, will now barely meet the demand. As we conjectured, the price has again advanced under the manipulations of the speculators, and bags now sell in San Francisco for 10 cents, and in Modesto for 10½ cents. It is probable that a still higher figure will be demanded in the near future. As nearly one-half the grain still remains to be cut, there will be plenty of work for some time to come, and farm laborers are still in active demand, and a considerable number in addition to those now engaged could still find employment. At the old Drake place, near town, the wheat is all thrashed, and yielded 12 bushels to the acre. At the McMahon place, near Waterford, also farmed by Mr. D. McMahon, there are 700 acres of wheat of very fine quality, which is yielding 12 bushels to the acre. No smut whatever has been found at either of these points. At the latter place Tom Young's machine is now thrashing at the rate of 900 sacks per day, William Sturdevant being in charge of the work, who expects to have fully six weeks' employment in the immediate neighborhood. This wheat is all winter-town. Mr. McMahon says he always gets a crop, that he plows deep, and summer-fallows as a rule. Mr. Charles Garner's summer-fallow, which he had estimated would yield 30 bushels to the acre, surprised him agreeably by turning out 34 bushels.

SOLANO.

RECOVERED WHEAT.—Dixon Tribune, July 22: J. D. Johnson harvested 100 acres of summer-fallow wheat that yielded 1,560 sacks, or a little over a ton to the acre. It might be of interest to add here, that at the beginning of the season, this field of grain looked so bad that Mr. Johnson, as well as his neighbors, thought it would be necessary to resow it.

SUTTER.

THRASHING NOTES.—Yuba City Farmer, July 22: During the week we have interviewed a number of our farmers who have had thrashing done. They are all satisfied with the yield and quality, summer-fallow going from 25 to 40 bushels per acre, and winter sown from 15 to 20. Many farmers are having their wheat re-cleaned over the side cleaners, with splendid success. They say it pays even where wheat is otherwise clean; but little goes into the feed grades, and yet the wheat is so much improved in appearance that it only needs to be seen to be appreciated. The Farmers' Union is now receiving wheat re-cleaned and not. Some of the latter suffers at least 10 cents per 100 in comparison to that which has been re-cleaned.

TEHAMA.

RED BLUFF NOTES.—Cause: Some time since, H. A. Rawson purchased what he considered would be a sufficient number of sacks to hold his wheat and barley crop. He commenced heading and thrashing his grain a few days ago, and to his astonishment he found that he would require a large number more of sacks than he had already bought and filled. A day or two ago he came to town and purchased 9,000 more sacks, and he feels confident that he will have sufficient wheat and barley to fill them. Mr. Rawson is this year farming about 4,000 acres of wheat and barley. The grain is of an excellent quality, and the quantity is far in excess of his most ardent expectations. This same kind of good news from our farmers is reaching us daily, which leads us to believe that the wheat crop of Tehama county this year will be almost an average.

VENTURA.

CROP NOTES.—Free Press, July 22: Mr. John F. Cummings, one of our most thrifty and enterprising farmers, out upon the Santa Paula road, has just taken off a crop of 20 sacks per acre from a piece of land which has not been plowed for five years—the grain having volunteered year after year. Mr. Cummings pastured it this year until March, intending to plow it up, but as soon as the stock was taken off, the barley came forward so vigorously that he concluded to let it alone. Mr. J. G. Hill, on the Colonio, thought by the looks of his barley field that perhaps 4,500 sacks would hold the crop, and he laid in that many. By the time the thrashing machine had labored with it for one day, he concluded he could fill 1,000 more, and ordered them. Next day, as the pile of grain still increased, and the pile of sacks diminished, he ordered another 1,000, and whether he has stopped ordering yet, we don't know. So far, he has filled 6,500 sacks from what he considered a 4,500-sack crop. And he is a good judge of grain, too. But so far, this year, the crops seem to be fooling all the farmers, and on the right side. In the Upper Ojai valley, the wheat crop was never better than this year. The lower valley crops are also very fine—much better than was anticipated six weeks ago. The Proper and White Australian are the varieties mostly sown. At the Sespe, the crops of barley, corn and beans are the best the farmers have had in ten years. Mr. J. K. Gries has been running his big thrashing machine for ten days, and the lowest yield he has yet handled was 20 cents per acre.

HONEY CROP.—Apiculturist: On the 26th of June, John G. Corey, the veteran bee-keeper and Corresponding Secretary of the Ventura Bee-keepers' Association, wrote us that "after consulting with many of our heaviest producers, I came to the conclusion that Ventura county will not produce 20 tons of surplus honey. We produced 400 tons in 1878."

YOLO.

CLARKSBURG NOTES.—Cor. Democrat: There is a positive scarcity of farm help in this section of the country. Farmers have good crops without any exception. No farmer here thinks of confining himself to any one production; variety is the order of the day. Alfalfa, barley, rye, buckwheat, oats, hops, and a great variety of fruits and vegetables constitute the products of this section of Yolo county, while stock raising and dairying forms a very important branch of home industry. There are two large dairies near this place, each of which yields from 1,000 to 1,200 lbs. of butter per week. These are owned and run respectively by Mr. J. B. Greene and Herman Huben, Esq. In addition to these, there are a number of smaller dairies doing a good business. Five large steamers have been loaded for San Francisco with alfalfa hay during the months of June and July at this place. We visited the hop farm of Stephen Smith yesterday, two miles below here on the river, where we saw some of the finest hops that ever hung on vines. Mr. Smith has in about 12 acres, and he expects to harvest 1½ tons to the acre. The price, he thinks, will not be less than 30 cents per pound. At this rate, the proceeds of the crop will amount to \$10,800.

FEARFUL LOWLANDS.—Record Union: In the winter of 1880-81, when the lowland country was flooded, owners of swamp lands thought they were utterly ruined, and that their lands would never return large yields again. They

had then suffered loss of crops four successive seasons by overflow. Among the heaviest of the sufferers was Charles F. Reed, of Knight's Landing. He was heard to say in the State Capitol one day that there had probably been taken the last crop from reclaimed lands. This year (1882) Mr. Reed's crop has been a success. He says that he will receive for the surplus that he sells, \$140,000. Of this at least \$100,000 is net profit. It is altogether the largest and most profitable crop ever raised on such a tract of land (about 6,000 acres). Mr. Reed was offered, some time ago, \$200,000 for his land, by an English company, that proposes to try a new system of reclamation upon a large body of lowlands. He declined the offer on the grounds that his crop would net him \$100,000, and that after it was removed the land itself would be worth all he was offered for it by the English company.

The Department of Agriculture.

Outside of the agricultural journals, we notice that the establishment of a Department of Agriculture has excited considerable adverse criticism. We think it is one of the most remarkable facts of our history, that one of the most important national interests has been unrepresented at Washington so long. Agriculture, the most important of our productive powers, the basis of our wealth, the driving-wheel of our commerce and manufactures, has been entirely unrecognized as the paramount element of the nation's power and greatness, except in a subordinate way. It is high time it was placed in the chief council of the State.

The army of 25,000, expending \$40,000,000 annually, and comparatively doing nothing, has ever had a department to look after its minutest movements, and no one has grumbled. The navy, limited to 11,000, a mere burlesque, as compared with European powers, the laughing stock of the world, expending \$20,000,000 annually, has a place in the Cabinet, and yet no one claims that it is an unnecessary luxury. The post office is worthy of the Government, does a noble work, and no one begrudges a dollar of its appropriation, so long as it is wisely and economically administered. The State Department is slow, conservative, dogmatic; is considered the most honorable, and is yet, perhaps, of the least importance, but is necessary, to watch over our foreign relations. The Interior Department, next to the post office, comes more vitally in connection with the interests of the people. It is the source of our land titles, manages Indian affairs and the pension business, regulates mining, and is managed with great ability, though a little too much hampered by red tape. The Treasury is, perhaps, the greatest marvel to a visitor. It is said that more than \$1,000,000 is handled there daily. It is the heart of the national finance, and its vaults hold to-day more coin than those of any Government in the world.

But agriculture, which creates all the wealth which fills the treasury, feeds the army and navy, and keeps the Interior Department busy, has had no department at Washington, and yet many think it a superfluous dignity, and criticize the action of Congress in establishing one. It is timely and needed. There is no nation whose agriculture has paralleled ours, and every European government has a special department for encouraging and protecting this branch of industry.

It is unquestionably the largest interest in the nation. Twenty-eight millions of our people are directly or indirectly dependent upon the products of the farms. The value of our farms, according to the last census, was \$10,197,162,905. The yearly product is now nearly, if not quite, \$4,000,000,000. We have more than 5,000,000 farms, and out of the \$883,925,947 of our foreign exports, \$729,650,016 were agricultural.

We have 10,357,981 horses, 1,812,932 mules, 993,970 working oxen, 12,443,593 milch cows, 22,448,590 other cattle, 35,191,656 sheep, and 47,683,951 swine, making an aggregate of farm stock worth \$1,500,503,807. Our grain crop in 1880 was 2,697,362,465 bushels. The grain crop of California for 10 years is shown to have been of the value of \$318,231,046, or nearly double the gold and silver taken from its mines, which amounted to \$186,406,248 for the same period.

Behold the grandeur of our country, the growth of a century! When we consider how varied is its climate, how extensive the area of arable soil, its inexhaustible mines and forests, we must conclude that it has the most unlimited opportunity to become one of the most independent and self-supporting nations on the face of the earth, and that no department of the Government can be more useful, more honorable than that which presides over this immense industry.—Stockton Independent.

THE HARMON SEMINARY.—The buildings of the Harmon Seminary for Young Ladies at Berkeley are now complete and are highly praised by all who visit them. There will be pleasant rooms, for about 50 girls and is not expected to increase the school beyond that number, as the principals believe that better justice can be done to a small group than to a large number of pupils. The school will open on Thursday of next week, Aug. 3.

REMOVAL.—The Packers' Exchange of California, has removed its office to 121 Market street, (up stairs).

THE reports of massacres of Europeans in Egypt are confirmed.

News in Brief.

THE tobacco crop of Hayti promises to be superior this season.

JOHN JAMES, a miner, was crushed to death in Plumas county last week.

THE Marysville Appeal says that \$80,000 is needed for levee work in that vicinity.

THE roughs are again being driven from Seattle, W. T., by the Vigilance Committee.

IN a railroad collision at Vincennes, Ind., five men were injured and \$75,000 damages done.

IT is announced that the Nicaragua canal bill will be laid over until the next session of Congress.

THE Dutch man-of-war Adder, whose loss was recently announced, has been discovered capsized.

AN engine cut off one of Sandy Williamson's feet on the Southern Pacific railroad, near Salinas, Sunday.

IT is estimated that the sugar crop of Cuba will this year amount to 601,500 tons, a large excess over the last crop.

THREE American prospectors have been found murdered in Sonora, and it is thought they were killed by Mexicans.

A WHITE physician on the Klamath reservation was shot dead by an Indian whose son the doctor had failed to cure.

OWING to the enormous crop of apricots on the trees this year, the fruit will be about one-third as large as last year.

EX GOVERNOR STANFORD has been elected one of the Park Commissioners of San Francisco, vice William Alvord, resigned.

CHARLES BRADLAUGH has been arrested in London on a charge of publishing blasphemous libels in the Free Thinker.

THE preparations for the exposition at Denver, Col., are in a forward state, and a fine showing for the opening is assured.

THIRTY-FIVE buildings, mostly business houses, were destroyed by fire at Fresno Sunday night, causing a loss of about \$250,000.

ARRANGEMENTS have been completed for sending about 50 of the Russian refugees, recently arrived at Cincinnati, to form a farming colony in Kansas.

PRESCOTT, A. T., in 10 days will be within 100 miles from the A. and P. railroad. In less than 2 months the road will be within 6 hours' ride from that town.

THE Central Pacific railroad is about to erect new machine shops at Wadsworth. The buildings will be extensive, and are to be located on the opposite side of the river from town.

THE Iowa Agricultural college deserves credit for teaching girls something of the practical part of life. They are required to learn how to make bread, roast and boil meats and to make coffee.

THE Town Trustees of Haywards have imposed a licence of \$5 per quarter on every laundry where two persons or less are employed, and \$10 a quarter where six or more persons are employed.

THE miners of the Bear River Drainage Association, having resolved upon the construction of a dam in Bear river to impound the debris, a delegation of prominent miners have started to look out and survey the most feasible site.

THE long-deferred lighting up of the first district of Edison's Electric Light Company, in New York, is now announced for September 1st. The district is bounded by Spruance, Nassau and Wall streets and the East River. Fourteen thousand five hundred lamps are in position.

ONE of the objections raised to the extension of the operations of the geological survey is the probable enormous cost. The total amount of money appropriated by the general Government for geological surveys during the past 15 years is \$2,423,528.37. With this amount 672,580 square miles have been surveyed.

TRAIN men near Winnemucca complain of having trouble with tramps almost every day. Sometimes the tramps are aggressive, and throw stones at the conductors and brakemen, and at other times refuse to get off the train until forced to do so. As the train has to be stopped to put off the tramps, they take advantage of the situation and jump on again as it starts.

AMONG the passengers checking baggage for the overland train were 66 Chinamen, holding through tickets for Boston via New York. They were evidently house servants who had served time in San Francisco, being well dressed, well fed, trim-looking, and all speaking more or less English. What English they did speak, however, they refused to air in explaining the immediate cause of their departure.

E. N. BURTON, Superintendent of the Mint, a few days since addressed a letter to the daughter of the late John Brown, of Harper's Ferry fame, who is now a resident of Saratoga, Santa Clara county, tendering her the position of Adjuster in the Mint. The superintendent has received a letter from the lady, acknowledging the compliment and accepting the appointment.

IN the case of James M. Manning vs. Louis McLane et al., an action brought against the Park Commissioners to recover compensation for labor performed in access of the eight-hour limit of the Constitution, during a period of several years, Justice Clough has given judgement for the defendants, holding that plaintiff should have notified the Commissioners when receiving his pay that he would hold them responsible for the extra service.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR THE WEEK ENDING JULY 11, 1882.

269,848.—NUT LOCK—Philip Curran, Caliente, Cal.
269,847.—LEATHER CREASER—Charles H. Corey, San Jose, Cal.
269,863.—SEWING MACHINE FOR MAKING BOTTLE COVERS—George Grisel, S. F.
269,980.—TWO-WHEEL VEHICLE—Henry Hortop, Rutherford, Cal.
269,887.—VELOCIPEDE—William B. Morris, S. F.
269,889.—GRAIN-ADJUSTING BELT FOR HARVESTERS—S. T. Northcott, Marion Co., Oregon.
261,101.—SAFETY DEVICE FOR ELEVATORS—C. C. Palmer, Oakland, Cal.
261,035.—HEATER AND BASE FOR DRIERS—W. S. Plummer, San Jose, Cal.
261,036.—DRYING CHAMBER FOR FRUIT EVAPORATORS—W. S. Plummer, San Jose, Cal.
260,786.—EXPLOSIVE POWDER—William R. Quinan, S. F.
261,044.—METAL DRILLING MACHINE—John Richards, S. F.
261,030.—SPRING BOTTOM OIL CAN—Z. St. Pierre, Bullionville, Nev.
260,913.—WATER WHEEL—Rufus W. Tufts, Santa Cruz, Cal.
261,079.—HORSE DETACHER—J. H. Clow, Sheridan, Or.
260,882.—HEADER—M. N. Laufenburg, S. F., Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

SEWING MACHINE FOR MAKING BOTTLE COVERS.—George Grisel, No. 260,863. Dated July 11, 1882.—This is a new and useful machine for making bottle covers, having reference more particularly to the manufacture of covers made of the stems or stalks of reeds, grass, tule, and other similar fibrous materials, for which said covers made of the stems or stalks of tule, letters patent were issued to this inventor and E. K. Cooley in 1881. This invention consists in a peculiar feeder, and in certain improvements whereby, through the means of a peculiar double-spring pawl, the tule stems are laid upon each other in a double row at one end, to give the tapering shape to the cover. It consists further in a peculiar forming or sustaining bar, upon which the tule is fed, and around which the cover is formed, a novel feature of said bar being a peculiar means by which it is raised and lowered, and supported at one end only, whereby the cover, when formed, may be readily removed. It consists further in a novel mechanism for forming the chain stitch which binds the stalks together, and certain other minor details of construction.

VEHICLE.—Henry Hortop, Rutherford, Napa Co., Cal. No. 260,980. Dated July 11, 1882. This invention relates to that class of two-wheeled vehicles known as "carts," and it consists in a novel arrangement of the shafts, springs and body, together with certain peculiar connections, whereby the object of the invention is accomplished—namely, to provide against the unpleasant rocking motion which the joggling of the horse communicates to the seat, and renders the employment of a cart undesirable. The arrangement may be briefly described as follows: The shafts are bent at each side of the lower portion of the body. They extend to and are firmly clipped to the axle. The springs are ordinary elliptical springs clipped to the axle and having cross-bars clipped to their tops. Upon these bars the body is secured, either firmly or hinged, its foot-rest or lower portion extending down and forward between the shafts. This lower portion is not attached to the shafts, but is supported upon each side by covered braces secured to each side of the body, or to a bar thereunder, and having its upper ends bolted to the cross-bar upon which the body is secured. The forward ends of the springs are connected with the shafts by links pivoted to each.

WATER WHEEL.—Rufus W. Tufts, Santa Cruz, No. 260,913. Dated July 11, 1882. This improvement in water wheels applies particularly to those in which a body of water under pressure is confined, and in seeking to escape, is caused to pass through suitable channels upon wheels adapted to revolve, whereby said wheels are moved with power and rapidity. The invention consists in the construction and arrangement of a wheel or wheels having curved flanges set at an angle, rigidly secured upon a central shaft, with a peculiar directing chute or chutes, the channels of which are in relation with the flanges upon the wheels, and which direct the pressure of water thereon to the best advantage.

VELOCIPEDE.—Wm. B. Morris, S. F. No. 260,887. Dated July 11, 1882. This improvement in velocipedes consists in a novel means of propelling and guiding them. It would require diagrams to describe the details of construction of this machine properly.

THE BEST.—The RURAL PRESS has completed Vol. XXIII. This journal has steadily improved, and is now one of the best agricultural papers, not only upon the coast, but also upon the continent.—Lodi Sentinel.



Five and Forty.

Little Mildred, five years old,
Soft blue eyes and locks of gold,
Sit and looks in auntie's face,
With a curious, patient gaze.
"Auntie, are you very old?"
"Not so very, dear," said I.
"There are older people. Why?
Do you think I look so old?"

"You wear spectacles," said she,
"When you see and read with me."
"That is nothing," I declare,
"Many young folks glasses wear;
Some for this and some for that,
Eyes too round or eyes too flat."
"Which are yours?" said Mildred. "Say,
Take your specs off." I obey.

"There is something in your eyes
Like old people." Oh! how wise,
How observant children are!
Could she read the lines of care,
Long endurance, patient grief,
Suffering borne without relief?
"You remind me," then she said,
"Of my grandma, who is dead."

"Dear old grandma, how I miss her!
Oh! how hard I used to kiss her,
For I loved her 'most to death."
Then she asked me, in a breath:
"Have you got a grandma, too?"
No! A mamma? Left at home?
Why not bring her here with you?
Sick, and so she couldn't come?
How'd she let you come away?
Don't you think you ought to stay?"

"Oh! I hope she will not die,
As my grandma did one day!
I'm so lonely I could cry.
Seems sometimes she's on the stair—
Just her step! I run to look;
But dear grandma isn't there.
I should be so sorry, dear,
If your mother went away."
Very tenderly she spoke.
In each blue eye stood a tear.
Sweetest little girl alive
Is our Mildred, aged five.

Suddenly, another thought:
"Have you got a husband? Say!
Oh! I wish that you had brought
Him to see us. No! But why?"
"Haven't any, dear." Oh, my!
Why, my mamma couldn't live
Thout my papa, I believe.
Don't you want one, Auntie Prue?
Let me get one, dear, for you."

No objection did I make;
Only said: "It used to take
Two to make a bargain, pet."
"But I know who I can get."
(Then she told her little plan.)
"And he is the nicest man,
For he does just what I say.
He would be as good to you.
If I ask him, Auntie Prue,
He would marry you to-day.
Oh! I wish that he were here!
Shall I ask him, auntie, dear?"

Sure, the oddest child alive
Is our Mildred, aged five!

—Father Thorne.

"Just Like a Man."

"They do beat all!" sighed Mrs. Peek, as she wiped her face earnestly with a spotted cotton handkerchief, and set her spectacles aloft on top of her cap border. "I summered an' wintered one on 'em nigh on to 50 years, and the things he done't I don't see into up to this day. Beside, I had sons, and darters' husbands as well, and they're all of a piece; tarred with the same stick, as Lias used to say."

"Well," spoke up Miss Patty Brinkly, a vivacious maiden lady, stopping to thread her needle, with both elbows on the quilt frame, and her thread and needle stabbing at each other nearly half a yard away from her straining eyes. "I ha'n't never had no such experience, thanks be to praise! Pa used to say if I had ha' married anybody I'd have killed 'em or ran away from 'em, and I dunno but what I should."

"They had something to be thankful for, then, as well as thee, Patty," dryly remarked Aunt Marcia Blinn, the only lady of the "Friends" persuasion, as she called it, of whom Oakley boasted.

"Well, they're queer, anyhow," resumed the Widow Peek. "There's no 'countin' for 'em; they'll up and do things you wouldn't no more expect of 'em than anything; and as for bein' protectors for women-folks and all that, which folks tell about in books, my land! Lias Peek would ha' died more'n 40 times if I hadn't ha' had dry things for to put onto him when he came in soakin' wet out of the crick, or after a pourin' rain. As 'twas, he died o' rheumatiz't he took along o' floating saw-logs down to the mill in a spring freshet and never coming home to dinner, but working all day in them damp clothes. I give him pokeberry rum, an' a hemlock sweat, and two hull bottles of Gumption's Ginger Bitters, besides a rubbin' of him powerful with camphire, before I sent for the doctor; but it struck to his stomic and he went off like a snuff. But that a'n't here nor there; as I was a-sayin', for nigh onto 50 years I'd put his flannel shirts into the front left-hand corner of the bottom drawer in the m'hog'ny bureau in the bedroom, and every Sunday mornin' reg'lar,

when he was cleanin' up for meetin', he'd holler out 'Lurancy! where's them flannel shirts o' mine?' Now that's so!" concluded the disconsolate widow, wiping her eyes, and adding in a stage aside—"But I'd give consider'ble to hear him holler that again!"

"And they hain't got no memory," put in Miss Patty, who had at last coaxed needle and thread to an amicable understanding, and was quilting away with zeal and discretion, as every good quilter knows how. "I never see the time when they wouldn't forget things. I've tailored round quite a number o' years, and I've had an eye on 'em, as you say. There was Silas Buck, I used to tailor for his folks consider'ble; the' was him and three boys and the hired man. Well, I'd get out o' linen thread, say, and you can't no more make overhauls with sewin' cotton than you can with spider-webs, and Miss Buck she'd say, 'Silas,' says she, 'Miss Patty's all out o' linen thread. When ye go down to the store after them rake-tails I wish you'd fetch up a hank o' black and a hank o' brown. Now don't you forget it!' and Silas he'd laugh, and he was just as clever as a basket o' chips, and he'd say—'I'll fetch it, mother,' but he wouldn't! 'nd I set an' set a waitin' for 't, and fin'ly put on my bonnet and was a mile down to the Corners for to fetch it myself; then he'd say, 'Cousin Patty—you see we called cousins because his father's second wife was sister to my Aunt Sophrony's husband—'Cousin Patty, hain't you got them overhauls done yet?' and I'd sorted bluster up 'nd say, 'Cousin Silas, I a'n't no more able to make bricks without straw'n the' Is'elites was for Pharo', and you didn't fetch me no bread yesterday!' and then he'd haw, haw, haw, right out; he was real clever, but land! so shiftless. That's just a case in pint, so to speak, ye know; just one time, but you can tell by a little what a great deal means, and as Miss Peek says, they're all alike."

"Thee doesn't think women-folks are all perfect, does thee, Patty?" queried Aunt Marcia, in her calm voice.

"Well, I dono as they be; I dono as I said they be, but you can gen'ly tell where most of 'em'll fetch up, and you're kinder fit and prepared for what they will do, and especially for what they won't do. Sometimes they'll disappoint all your calculations, but then you can fall back on Scrip'ter, and see't they was made to be the weaker sex; though, if 'taint really lawful to say so, I own I always did have a poor opinion of Adam as ever was; to be a tellin' how 'twas Eve made him eat the apple, when he done it the first time askin'; but 'twas jest like a man! They keep a doin' of it to this day; it's forever an' always 'the woman tempted me.'"

"Thee remember, doesn't thee, the Scripture says: 'The woman being deceived was in the transgression.' It hath always seemed to me kindly in Timothy so to speak of her as to lay the blame on the enemy."

"That ain't neither here nor there," answered the logical and undaunted Patty. "I ain't tryin' to make light of Eve's disobeyin', but I do say Adam was real mean to get behind her; he was able to say he wouldn't, I guess, jest as well as she was, but he didn't no more'n she did. I was a readin' somewheres t'other day, about an old French feller, a judge or somethin'—judge of a p'lice court, I expect by the tell—and whensomever they fetched a man before him that had been took up for a misdeed, no matter what it 'twas, he always asked, 'Who is she?' lettin' on as though a woman was to the bottom of every wrongdoin'. Clear Adam! And that's what I fault 'em for."

"Well, they be queer," Mrs. Peek again took up the fruitful theme. "Sary, what was that you was a tellin' about Thomas and them letters t'other night?"

"Oh, ma!" said Sarah Beers, deprecatingly, but with a laugh that lit her pale face and sad eyes. For Sarah was a typical New England woman—careful and troubled about everything; a coward physically, a hero mentally; afraid of her very shadow, but doing the bravest things, with her heart sinking and her joints trembling all the time, because duty or affection called her to such service. She married Tom Beers, a bright, strong young fellow, full of fun and reckless daring, and devoted to Sarah, but entirely ignorant of her daily anxieties and terrors; for she was as reticent as she was timid, if she thought she could save any one—much more any one she loved—by such reticence.

"Oh, tell on 't, Sary; 'taint no harm. We all know Tom sets by ye like his life. He wouldn't do no thing to plague ye, if he knowed it, no more'n he'd cut his head off; but that letter business was so exactly like men folks."

A chorus of voices echoed the request. There were only about 10 people at the quilting—it was the regular sewing-circle meeting of Oakley—so Sarah consented.

"Well, 'taint much to tell, but if ma wants me to. You know Tom's horse is real young, and kind of skittish, and if there is one thing above another I'm afeared of, it's a horse."

"Bless your soul and body!" put in her mother, "I never see the thing yet you wa'n't afeared of, Sary, horse or not."

"Oh, I know, ma, but I am awfully afeared of a skittish horse; Tom, he don't really sense it, and he says Jenny ain't ugly, she's just full of play; and I s'pose she is; she's knowing as a dog, and I give her a bite of somethin' every time he fetches her round; and she knows me real well, but she will jump and lash out and shy sometimes, and it makes me just as weak as water, so I don't never drive her if I can help it."

"You don't mean to say you ever do drive a

cretur when you feel that kind o' way toward it?" queried Miss Patty, sharply.

"Why, I have to sometimes, you know; there's oft-times a day Tom can't leave the hayin' or harvestin' or plantin', or something, and there has to be things fetched from the store, and no way to get 'em except I go for 'em, so Tom he jest tackles up and I go for 'em; he don't really mistrust that I'm scared, and I don't never tell him that I be; what's the use?"

"Well," said Miss Patty, with a sniff no type can express, and Sarah went on:

"So week before last, Aunt Simons writ and said she was comin' out to stay a day or two before she went back south, and she was goin' to fetch Joe, that's her oldest, along with her; she wanted for to have us meet her to the station, but she said she shouldn't come if it rained; she's got dreadful weak lungs; but she'd telegraph if she wa'n't coming. Well, Wednesday morning, the day she set to come, it did rain, sure enough, and seeing there was the donation party to get up, I sided my work away early and walked over to the Center, for I knew I should find all the folks I'd got to see to home. I'd just got ready to start for home about noon time, and I bethought myself to step into the post-office, for I knew there'd be the mail for the creamery, so I got a double handful of letters and papers and set my face toward home, when who should come up but Tom in the buggy."

"Get in!" says he, 'I'm agoin' to the station.' "What for?" says I.

"Why," says he, 'they hain't sent no telegraph, so they're coming.'

"But it rains," says I, 'and Aunt Simons said she shouldn't come if it rained.'

"Well," says he, 'I obey orders and break owners; she said she'd telegraph if they wa'n't comin'; and how do you know but it didn't rain there?'

"So I got in and put the mail down into the seat, and he driv like Jehu, for, we heered the train whistle; and says I, 'Oh, Tom! don't drive up the hill to the station, I'm so afraid Jenny'll be scared.'

"He laughed a little. 'I'll bet she wouldn't be half so scared as you,' says he; 'but I'll leave you to the foot of the hill, and if they come I'll holler down to you, and I'll get in and go up to t'other station and put 'em into the hack that waits there, for there can't four get into this buggy; and you drive along up to that station and then I'll put you into the hack with Aunt Simons, and I'll take Joe along o' me in the buggy.' So sayin' he jumped out, for we was there, and run up just in time to catch the train. I didn't have a thought that they'd be there, but they was, and he called out, 'They're here, drive along.' I knew 'twas the quickest way to take the road alongside the track, but the 'Tuck train was due, and Jen is skittish, but I thought I'd ought to, so I drove along; there wasn't no train, but right in the road, where I couldn't turn nor back, I see two loose horses—and if there is a thing that puts lightnin' into Jenny it's loose horses. I tell you, the shivers run down my back, but I knew the on'y chance was to go so fast she wouldn't think about side shows; so I jest laid the whip onto her, and she sprung to and went by them horses quicker! Well, the hack was going over the bridge but I caught up with it, and Joe, he got out with Thomas and took the buggy and I got in with Aunt. Tom had got to go up street to get a can for the creamery. I called out to him as we went off.

"Look out for your mail on the seat," and we drove along. But we hadn't gone a half a mile before Tom he come tearing along and stopped the hack.

"Where did you put the mail?" says he.

"Why, on the seat of the buggy," says I.

"No, you didn't!" says he; 'there wasn't nothing there but papers.'

"I guess I gave you the letters, then. I sort of thought I did," says I.

"Well, I haven't got 'em, anyway," says he. "Look in all your pockets, Sary, they ain't in mine." So I looked and looked, but I hadn't a letter. I knew I hadn't, but I looked to suit him. Then I thought how I drove by the side road, and I told him I guessed they'd jolted out of the buggy when I driv so fast.

"Dear me!" says he. "I must have those letters to-day. I've got to; I'll go back over the side road and see if I can see or hear anything about 'em." So he turned round. I tell you, I felt real bad; I couldn't think anyway in the world what I did with them letters, and I see he was worried to death. After we got to the house and Aunt Simons was fixin' herself upstairs, he drove up with Joe.

"Sary," says he, 'do look over your pockets again for them letters; I expect there was a three-hundred-dollar check in one of 'em, and we can't afford to lose it.'

"I was just ready to cry, I tell you, but I over looked the pockets again; they wa'n't there, and he said there wasn't any sign or hearin' of 'em on the road. I felt as though I should give up, when he turned and went out of the door; but just as he swung the gate to, he hollered out:

"Sary! Sary! and I run. 'I cave!' says he, laughing; 'here they be in my own pocket; you did give 'em to me.'

"Sure enough I did, but he put 'em into a pocket he didn't use for letters, ordinarily, so he never looked there! and there wa'n't no check at all in any one on 'em."

"I guess you were mad?" queried Miss Patty.

"Well, I was a little stirred up, I don't deny; I set right down, and cried quite a spell."

"Wan't that real man?" Mrs. Peek asked of the audience, with a tone of fine scorn.

"Did thee wish, then, thee'd never seen thy husband?" asked Aunt Marcia of Sally.

The anxious face flushed and the sad eyes sparkled.

"Aunt Marcia, I shouldn't know how to live without Tom, anyway, in this mortal world!" And the clear voice broke down as if the thought of such contingency was too much.

Aunt Marcia Smiled.

"I expect there is faults in all human creatures. 'Male and female created He them,' though; and we can't set out greatly to better the Lord's plans. We couldn't really get along thee knows, without menfolks, and they could not without us; but, I expect, if thee could hear them talk amongst themselves, Miss Patty, thee would hear, quite frequent, 'Just like a woman.'"

Miss Patty could not deny it.—Rose Terry Cooke.

Temperance.

[Written for RURAL PRESS by A. C. L.]

What a grand, good, moral cause temperance heads, and such good purposes as it helps along! Every good citizen of the United States, who feels an interest in the welfare of his beloved country, should do all in his power, by assisting with his heart, mind and hands, to strengthen this cause, that can so elevate mankind.

Many young men, and I must say some older ones, have the opinion that temperance means only abstinence from strong drink. I know that is all the temperance orders hold them from, but ought not there to be one or two more evils of to-day classed with alcoholic drink, and be put on the temperance pledge?

Strong drink, it is true, is the worst evil we have, but is not the chewing of that poisonous weed called tobacco, and the smoking of it in the shape of cigars and cigarettes an evil bad enough to be more thoughtfully considered? Cigarette smoking, by the way it is indulged in, might be termed a fashion which injures the minds and bodies, and turns strong, healthy boys into weak, sickly, sallow-looking creatures. Chewing is equally as bad and poisonous to the system as smoking, and it has been rightly said, that to chew continually, means in time to "spit your life away." I know that putting them on the pledge will not stop them, but they certainly should be linked with strong drink; and they are, in my mind. Although the effects are not quite as bad, they are the next to it. I think a man, to be considered justly a temperance man, should be an abstainer from these three vices anyway; but how many men are there that don't touch any of them? I think you will find very few if you will but look around. If they do not drink, they will either chew or smoke. A young man, who at the age of 25 years is free from all these habits, is to be congratulated upon his good sense. The principal evil, alcohol drinking, is a vice that will ruin our land if not checked. I would ask, why do men begin to drink it? I know why they drink it after they once begin, but why do they begin? that is the question. Why do the young men of the land, many who have seen the evils of it, begin to taste and drink that which ruins so many? Do they think it is manly, and that they must do it in order to be the right kind of a man? I expect they must think so, for I do not know what else could cause them to touch it. When they first begin, they never expect to be like the drunkard who lies in the street; but very many come to that time.

How sad to think of so many young men in this age of advantages, who might be so useful to the country and to the community in which they live, are just throwing themselves away for alcohol! Why don't they open their eyes and take advice from the song which so truthfully says: "Touch not the cup!" There is just where the trouble lies; if they never would touch it, they would be all right.

How much unhappiness and misery there is in a drunkard's home, besides the expense to the man who indulges very freely. Who cannot tell at very first sight where a drunkard lives, by the poverty and slovenliness which surround the place? Oh! I hope the time will come when all people will be temperance people, and the world will cease to be startled every day, as it is now, by the news of some great crime, the outgrowth of intemperance.

Chaff.

An exchange says it's a very bad thing to get rich too rapidly. We never thought of that before; now here's another danger for us to worry about and strive to guard against.

ENGLISH doctors say that plants in sleeping rooms are unhealthy. French doctors say they produce sweet slumbers. American doctors don't say anything about it, but charge it in the bill.

An old lady who was in the habit of, boasting after the occurrence of any event which she had predicted, was one day cleverly "sold" by her worthy spouse, who had got tired of hearing her eternal "I told you so." Rushing into the house breathless with excitement, he dropped into a chair, elevated his hands, and exclaimed: "Oh, my dear, what do you think? The old cow has gone and eaten up our grindstone!" The old lady was ready, and, hardly waiting to hear the last word, she screamed out at the top of her lungs: "I told you so. I told you so. You always would let it stand out of doors."

Kindness.

[Written for the RURAL PRESS by W.]

"If we knew the baby fingers,
Pressed against the window pane,
Would be cold and stiff to-morrow—
Never trouble us again—
Would the bright eyes of our darling
Catch the frown upon our brow?
Would the print of rosy fingers
Vex us then as they do now?"

I think but few human beings really understand the power of kindness in this world of ours. If this great principle of love and gentleness combined was better understood by people generally, there would be fewer breaking hearts and tears of lonely grief in this bleak old world. But, alas, there are some truths that human beings never learn until they are just ready to enter into the death valley; and so the lesson that they have gleaned by living is received too late. It is strange how blind people are to the workings and results of certain principles of right and wrong. I cannot just understand the mystery of this seeing and yet not seeing.

The law of human kindness is a strong one; and the world, with all its wickedness, finds it very hard to resist it. Vice and evil hide away from it, while folly and waywardness are wholly subdued by its gentle influences. There is some invisible charm lingering wherever it rules, and peace and quietness dwell in the serene atmosphere. It costs but a little effort to enforce this law that regulates, so gently, the conduct of mankind. It saves many scenes of wild commotion, and leads the votaries of error quickly upon the stepping-stones of right and truth. Yet people do not adopt this law of kindness very generally, although it is such a grand governing principle.

The fact is that passion and tyranny usually crush out from the soul this little germ of kindness, given us by our kind, heavenly Father. We cannot bear the ills and vexations of life gently and patiently, and so we let passion control us, which is usually succeeded by a desire to force wrong-doers to desist. We generally fail to regulate the conduct of those who trouble us in a satisfactory way; and so we are discontented and unhappy. Alas, we did not let the sweet principle of kindness rule. Lesson after lesson of sorrow we glean; and yet we do not learn the better way. We sow and reap a harvest of tears and sorrows, and thus journey along through life. At last we discover our sad mistake.

"Strange we never prize the music
Till the sweet-toned bird is flown!
Strange that we should slight the violets
Till the lovely flowers are gone.
Strange that summer skies and sunshine
Never seem one-half so fair
As when winter's snowy pinions
Shake the white down in the air."

Oh, why do we not scatter sunbeams and flowers along our life path, instead of thorns and brambles? We know that they will bring sorrow and pain to others, and yet we scatter them. A word of kindness and a look of sympathy cost but little, and yet we frown and condemn, and let the evil principle govern us. The love of the sweet child is chilled and friendship robbed of its sweetness by deeds of unkindness. If we only knew and understood how to live in the bright valley of sunlight, instead of wandering out upon the lowlands of misery, then we might be happy. Let us try to understand better this grand secret of human kindness.

"Let us gather up the sunbeams
Lying all around our path;
Let us keep the wheat and roses,
Casting out the thorns and chaff!
Let us find the sweetest comforts
In the blessings of to-day;
With a patient hand removing
All the briars from the way."

Monterey, Cal.

WHY A LAMP WICK DOES NOT BURN.—If we take a piece of lamp wicking and place it in the flame of a lamp, it is immediately consumed; but the same kind of wicking, placed in a lamp and lighted at the top, lasts the whole evening, and, if the lamp is supplied with alcohol, the wick is not even charred. The cause of this was a perfect mystery until a hundred years ago, when Dr. Black, of Glasgow, discovered the principle of latent heat. As the oil or the alcohol comes near the flame, it is evaporated, and by this change in its form, a large quantity of heat is destroyed, or rather is latent, so that it does not manifest itself in any way. It requires a great quantity of heat to change a liquid into vapor, so that evaporation always cools surrounding objects. The wick is cooled by the evaporation of the oil or alcohol below the temperature at which it will burn. Dr. Black's discovery suggested to Watt his great improvement in the steam engine—condensing the steam in a separate vessel from the cylinder. Watt attended Dr. Black's lecture.

A DISCOVERY OF A GRAND HALL, NEAR THE PANTHEON, AT ROME.—A grand hall, exceeding in length the full interior of the Pantheon, and supposed to be the vestibule of the Pantheon itself, or, rather, a connecting hall between the Pantheon and the Baths of Agrippa, has been recently explored. This hall measures 140 ft. in length, 50 ft. in width, adorned with eight splendid fluted columns of Phrygian and Numidian marble. Within this hall is a niche, where is a pedestal 12 ft. wide by 11 ft., large enough for a colossal group of sculpture. It is supposed that within this hall stood the celebrated bronze "Athlete" statue, which Agrippa brought from Greece, and placed in the portico of his warm baths.

YOUNG FOLKS' COLUMN.

A Girl's Life 100 Years Ago.

One hundred years ago a little girl named Mary Butt was living with her parents at the pretty rectory of Stanford, on the Terne, in England. She was a bright and beautiful child, and when she grew up she became Mrs. Sherwood, the writer of a great many charming stories for young people. But nothing that she wrote is so entertaining as the story of her childhood, which, when she was an old lady, she told to please her grand-children. I wonder how the girls who read this paper would endure the discipline which little Mary submitted to so patiently in 1782. From the time she was six until she was 13 she wore every day an iron collar around her neck, and a backboard strapped tightly over her shoulders. This was to make her perfectly straight. Perhaps you may have seen here and there a very stately old lady who never was known to lean back in her chair, but who always held herself as erect as a soldier on duty. If so, she was taught, you may be sure, to carry herself in that way when she was a little girl. Poor Mary's iron collar was put on in the morning, and not taken off until dark, and worse than that, she says: "I generally did all my lessons standing in stocks, with the collar around my neck. I never sat on a chair in my mother's presence."

Her brother and herself were great readers, but you can count on the fingers of one hand all the books they had to read. "Robinson Crusoe," two sets of "Fairy Tales," "The Little Female Academy," and "Æsop's Fables," formed the entire juvenile library. They used to take "Robinson Crusoe" and seat themselves at the bottom of the wide staircase, the two heads bent over the page together. Whenever they turned a leaf, they ascended a step, until they reached the top, and then they began to go down again. Little Martin was not very persevering with his Latin, so, although it was not then the fashion for girls, Mary's mother decided that she should begin the study in order to encourage him. The sister soon distanced the brother, and before she was 12 her regular task of a morning was 50 lines of Virgil, translated as she stood in the stocks.

You will ask what sort of dress this little girl was allowed to wear 100 years ago. In summer she had cambric, and in winter linsey-woolsey or stuff gowns, with a simple white muslin for best. Her mother always insisted on a pinafore, which was a great loose apron worn over everything else and enveloping her from head to feet. It is quite refreshing to find that neither the backboard nor the Latin took from the child a love of play and of dolls. Her special pet was a huge wooden doll, which she carried to the woods with her, tied by a string to her waist, after the grown people had decided that she was too big to care for dolls. A friend one day presented her with a fine gauze cap, and this was the only ornament she ever possessed as a child. I think the little girls who compare 1882 with 1782 must be thankful they were not born in the last century. Yet little Mary Butt was a very happy child, spending, when permitted, hours of great delight in the woods and groves, and listening eagerly to the talk of the learned and traveled visitors who came to Stanford rectory.

Mary's Dolly.

Mary had a new doll sent her by her cousin Mary. It had a great deal of curly brown hair tied with a blue ribbon. Its face and arms were of wax; its lips and cheeks were a lovely pink; and oh, better than all, its eyes, which were just the color of the ribbon on its hair, would open and shut! Mary was proud to have a dolly that would really go to sleep when she put it to bed, so the first night she got it she put it to sleep in a soft place in the bureau drawer. When she went to bed, the last thing she did was to take a peep at Gertrude, to see if she was safe. Late that night she woke up, for she heard a noise. It was only a little rustle, but it seemed near the bureau. She sat up in bed and looked, but the drawer was shut tight, and she thought Gertrude must be safe. She hoped she wouldn't be frightened, and she longed to tell her it was only a mouse in the wall.

As soon as it was light she ran to take Gertrude up; but what was the matter? She looked sick and queer. Half her nose was gone, and all of her lips! Mary sat down and cried. A naughty mouse had climbed up behind the bureau and into the drawer, and had nibbled away at the wax on Gertrude's face and spoiled her beauty forever.

"CAN I have some milk, mamma?" said a bright little five-year-old. "You can if you have not been eating cherries; you must never mix anything sour with milk." "Milk is sour, mamma," said he. "Sour! why, no; it isn't sour if it's fit to drink." "But," he rejoined, "the sour is there all the same; it must be there, and it comes out by-and-by!"

A LADY and her little daughter passing out of church, the child bade good-by to a poorly-dressed little girl. "How did you know her?" inquired the mother. "Why, you see, mamma, she came into our Sabbath school alone, and I made a place for her on my seat, and I smiled and she smiled, and then we were acquainted."

GOOD HEALTH.

The Nostrum Fallacy.

When a child complains of headache, lassitude, or want of appetite, the nurse concludes that he must "take something." If the complexion of a young lady grows every day paler and paler, her mother will insist that she must "get something" to purify her blood. If the baby squeals day and night, a doctor is sent for, and is expected to "prescribe something." What that something should be, the parents would be unable to define, but they have a vague idea that it should come from the drug-store, and that it cannot be good for much unless it is bitter or nauseous. Traced to its principles their theory would be about this: "Sickness and depravity are the normal conditions of our nature; salvation can come only through abnormal agencies; and a remedy, in order to be effective, should be as anti-natural as possible."

Perfectly logical, from a Scriptural point of view. But nature still persists in following her own laws. Her physiological laws she announces by means of the instincts which man shares with the humblest of his fellow creatures, and health is her free gift to all who trust themselves to the guidance of those instincts. Health is not lost by accident, nor can it be repurchased at the drug-store. It is lost by physiological sins, and can be regained only by sinning no more. Disease is nature's protest against a gross violation of her laws. Suppressing the symptoms of a disease with drugs means to silence that protest instead of removing the cause. We might as well try to extinguish a fire by silencing the fire bells; the alarm will soon be sounded from another quarter, though the first bells may not ring again till the belfry breaks down in a general conflagration.

The laws of health, though liberal enough to be apparently plastic, are in reality as inexorable as time and gravitation. We cannot bully nature, we cannot defy her resentment by a fresh provocation. Drugs may change the form of the disease—i. e., modify the terms of the protest—but the law cannot be baffled by complicating the offense; before the drugged patient can recover, he has to expiate a double sin—the medicine and the original cause of the disease. But shall parents look on and let a sick child ask in vain for help? By no means. Something is certainly wrong, and has to be righted. The disease itself is a cry for help. But not for drugs. Instead of "taking something," something ought to be done, and oftener something habitually done ought to be omitted. If the baby's stomach has been tormented with 10 nursings a day, omit six of them; omit tea and coffee from the young lady's menu; stop the dyspeptic's meat rations, and the youngster's grammar lessons after dinner. But open the bedroom windows, open the door and let your children take a romp in the garden, or on the street, even on a snow-covered street. Let them spend their Sundays with an uncle who has a good orchard; or, send for a barrel of apples. Send for the carpenter, and let him turn the nursery or the wood-shed into a gymnasium. In case you have nothing but your bedroom and kitchen, there will still be room for a grapple-swing; the Boston Hygienic Institute has patented a kind that can be fastened without visible damage to the ceiling.

If the baby won't stop crying, something ought to be done about it. Yes, and as soon as possible; remove the straight-jacket apparatus, swaddling-clothes, petticoat, and all; spread a couple of rugs in a comfortable corner, and give the poor little martyr a chance to move his cramped limbs; let him roll, tumble and kick to his heart's content, and complete his happiness by throwing the pægoric bottle out of the window.—Dr. Felix L. Oswald, in *Popular Science Monthly*.

SOMETHING NEW IN CONSUMPTION.—The *Reno Journal* tells of the case of A. H. Barnes, of that city, who fights off consumption by wearing a silver tube, which passes between the ribs into the lungs. In 1849, Mr. Barnes, then living in Sycamore, DeKalb county, Illinois, was declared an incurable consumptive. The lung was tapped and he recovered. In 1863 he was again taken down by the disease, when he once more resorted to the tube, and has worn it constantly ever since. There is a daily discharge of matter. Mr. Barnes is a man of very regular and temperate habits, does not use tobacco in any form, nor stimulants of any kind, hardly ever uses any medicine, excepting sometimes a little iron for the blood; is always feeling well when the hole in his side is open, sometimes feeling a heaviness there, but has got used to that. This case is certainly worthy the special attention of medical men. It seemed to give a man a new lease of life, even when apparently as good as dead. When Mr. Barnes conceived the idea of tapping his lung, all the physicians but one counted it as a thing that would prove fatal. However, he persuaded one to perform the operation. In 1863, Mr. Barnes was in Honey Lake valley, and was on the brink of the grave. Now, again, the resident physicians were opposed to the idea of an incision, and after repeated appeals for an operation, which was refused, Mr. Barnes borrowed a lance and cut open his side himself. He then inserted a catheter, and drawing off nearly a quart of matter, immediate relief was found. The cough and expectoration stopped almost instantly, and Mr. Barnes was soon upon his feet again. Thus he has prolonged his life for over 30 years.

DOMESTIC ECONOMY.

TOMATO SOUP.—Take eight middling-sized tomatoes, cut them in two, remove the pips and watery substance, put them in a saucepan with a faggot of sweet herbs, a clove of garlic, an onion stuck with three or four cloves, some all-spice, whole pepper and salt to taste. Place the saucepan on a gentle fire, stirring the contents occasionally. When the tomatoes are thoroughly done, turn them out on a hair sieve, remove the onion, the garlic and the faggot of sweet herbs; remove also the moisture which will drip from the tomatoes, then work them through the sieve until nothing remains on the top but the skins. Have a quart of plain stock boiling hot, stir the tomato pulp into it, and, removing the saucepan from the fire, stir in the yolks of two eggs beaten up with a little cold water and strained. Serve over small dice of bread fried in butter.

SALLY LUNN.—The genuine "Sally Lunn," as made in Virginia kitchens, is always a cake raised with yeast. It should be made, raised, baked and served in the same dish, and has little flavor in common with the so-called "Sally Lunn" made with baking powders. Take five cups of flour and pour over it a cup of boiling water; add a cup of milk and half a cup of butter; beat thoroughly, and when the mixture is blood warm add four eggs, a little salt and the same amount of sugar; add last of all a half-cup of home-made yeast or the same amount of baker's yeast. Beat hard till the batter breaks in blisters. Set to rise over night, and in the morning put it in the oven as soon as the fire is hot enough to bake it. Bake brown. The dish in which it is made and baked should be earthen, and the cake should be torn apart in suitable pieces before it is served, not cut; hot bread is always made heavy by the knife.

SOMETHING ABOUT SUMMER DINNERS.—Summer dinners should never have anything on the table when the guests sit down but the flowers and the desert, the ice pitcher or carafes and bowls of ice, the glass, China and silver, and this should all be simple and not profuse. It is better for almost everybody to eat a hot dinner, even in hot weather. An egg salad is an excellent cold dish for lunch or a picnic dinner. Boil your eggs hard, slice them, cover with a mayonnaise dressing, and put a few lettuce leaves about the plate. Cold custards, Charlotte Russe and cream stiffened with gelatine and delicately flavored are very nice at a summer dinner, with home-made cake.

CHEESE FRITTERS.—Put about a pint of water into a saucepan, with a piece of butter the size of an egg, the least bit of cayenne, and plenty of black pepper. When the water boils, throw gradually into it sufficient flour to form a thick paste; then take it off the fire and work into it about one-quarter of a pound of ground cheese, and then the yolks of three or four eggs and the whites of two beaten up to a froth. Let the paste rest for a couple of hours, and proceed to fry by dropping pieces of it the size of a walnut into plenty of hot lard. Serve sprinkled with very fine salt.

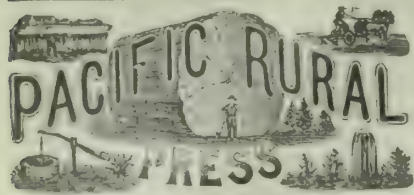
PEA SOUP.—Take a quart of shelled peas; boil the pods in a gallon of cold water until all the substance is boiled out of them; then skim them out and put two pounds of beef into the pot. After the meat is boiled to shreds, skim the soup well, strain, and return it to the pot; add the peas, with a little parsley, and let it simmer until the peas are quite tender; season with pepper and salt; thicken with a little butter and flour, let it boil up once, and serve.

PLUM TART.—Stone some plums and stew them for an hour, with plenty of sugar and half a tumblerful of water. Make a short paste with the white of one and the yolks of three eggs, an ounce of butter, an ounce of sugar, a pinch of salt, a little water and flour. Roll it out to the thickness of a penny piece, line a mold with it, uniting the joints with white of egg, fill it with rice and bake it. When done, remove the rice, put it in the stewed fruit and serve.

CHERRY PIE.—Line a pie-tin with rich crust; nearly fill with the carefully seeded fruit, sweeten to taste, and sprinkle evenly with a teaspoonful of corn-starch or tablespoonful of flour, and a tablespoonful of butter cut into small bits and scattered over the top; wet the edge of the crust, put on upper crust and press the edges closely together, taking care to provide holes in the center for the escape of the air.

SAVORY OMELETTE.—Beat two eggs in a basin, season with cayenne and salt, mix with it a teaspoonful each of finely chopped onion and parsley; melt one-half ounce of butter in an omelette pan, pour the mixture into this, and keep stirring over the fire until it sets; then roll and serve. About three minutes will do to cook this omelette, which should be of a delicate brown when done.

TOMATO CATSUP.—Skin one peck of ripe tomatoes; put into a kettle and boil them; then strain through a sieve. Return to the kettle, take off the scum that rises, then add one teacup of brown sugar, one-third of a teacupful of salt, a dessertspoonful of cloves, the same of cayenne pepper, and cook till quite thick; then add one and a half pints of vinegar. Keep well stirred toward the last.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. If sent by mail, extra will be added to the above for each THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. \$3. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, July 29, 1882.

TABLE OF CONTENTS.

EDITORIALS—A Curious Aquatic Bird; Steam Digging Machinery; Glucose in Wine, 65. Patents and Inventions; Notices of Recent Patents, 69. The Week; Notes on Taxation, 72. Artesian Wells on the Great Plains; Water Rights in California, 73.

ILLUSTRATIONS—The Grebe and its Floating Nest, 65; The Red Spider or Red Mite—Magnified, 72.

CORRESPONDENCE—A Trip to Southern California, 66.

HORTICULTURE—California Lemons, 66-67.

FORESTRY—Forest Trees of California—No. 6, 67.

SHEEP AND WOOL—The Mohair Industry, 67.

PATRONS OF HUSBANDRY—Grange Leaflets, No. 5; Work in the Subordinate Granges; What is Said of the Grange, 68.

AGRICULTURAL NOTES, from the various counties of California and Nevada, 68-69.

NEWS IN BRIEF—On Page 69 and other pages.

HOME CIRCLE—Five and Forty (Poetry); "Just Like a Man," Temperance; Chess, 70. Kindness, 71.

YOUNG FOLKS' COLUMN—A Girl's Life One Hundred Years Ago; Mary's Dolly, 71.

GOOD HEALTH—The Nostrum Fallacy; Something New in Consumption, 71.

DOMESTIC ECONOMY—Tomato Soup; Sally Lunn; Something About Summer Dinners; Cheese Fritters; Pea Soup; Plum Tart; Cherry Pie; Savory Omelette; Tomato Catsup, 71.

ENTOMOLOGICAL—Red Spider on Fruit Trees; Ants and Apple Worms; Ants in the Chinese Orange Groves; The Peach Worm; Slug on the Cherry Trees; Grasshoppers Extending their Work, 72.

Business Announcements.

Pioneer Barley Crusher, M. L. Mery, Chico, Cal.
Sutkies, Jacob Price, San Leandro, Cal.
Improved Egg Food, B. F. Wellington, S. F.
Ram; for Sale, Mrs. E. McConnell Wilson, Elk Grove, Cal.
Poultry, J. C. Byce, Petaluma, Cal.

The Week.

Most of our advice speak this week of better returns from the thrashers than have been anticipated, and the consequent satisfaction of the growers. Although this is true, there is no reason to magnify the aggregate. There will be but a moderate surplus, which will be taken at good rates, no doubt, as the European consumers will need wheat.

The week has been uniformly delightful. The harvesters have been pushing work, as well as possible, with the small force of men available. The fruit growers are laboring with the heavy peach crop. The canneries are calling for more help and people generally are busy. The days are fine for travel as well as for labor. Many strangers are now enjoying a California visit, and not a few are being daily captured by the delight of a California home. Both city and country is enjoying the request for homes by new comers, and California is already pluming herself for the census of 1890.

Abroad the war-cloud still portends, and England has still much to do before a permanent peace can be conquered. Preparations for a conflict are going forward and issues will, no doubt, soon be joined.

HARVEST HANDS.—The scarcity of help for harvest work is still reported from all directions. From Nevada a similar condition is reported. The Winnemucca *Silver State* says: "Haying is in full blast all over the county, and there is a general complaint of a scarcity of hands. We are informed that 100 men could get work in Paradise valley, and at least 50 in the Willow Creek and Quinn River countries. In the meantime, numbers of able-bodied men are risking their lives and getting maimed and killed beating their way on the Central Pacific railroad."

Notes on Taxation.

How many people know that the money collected by the United States as taxes amounts to \$150,000,000 each year in excess of all necessary demands for Government purposes? that is, there is that much money brought annually into the Treasury of the United States over and above all that is required for governmental expenses, for interest on the public debt, for pensions, and all other outlay.

This somewhat startling fact is made the theme of an article on "Taxation Reform" in the last issue of the *International Review*, by W. C. Ford. He shows forcibly that this excess of money drawn from the wealth of the people is a severe burden upon industry and enterprise. It amounts, on the average, to a tax on each individual of about three dollars per year in excess of what is required for good government. The effect of such a drain upon the productive strength of the country, and the true principle which should hold in fixing taxes, are well portrayed by Mr. Ford as follows:

A tax, under whatever guise it may be imposed, is a burden, and is so far a hindrance to free movement and development. If we adopt the most elementary division of the factors which create wealth—land, labor and capital—and of the revenues derived from them in the form of rent, wages and profits, these revenues are alike diminished by whatever taxation falls upon them, and no one can escape its share without shifting it upon one or both of the others. In other words, a tax must fall upon some revenue or capital, and taking a portion of it, transfers that portion to government, which consumes it unproductively. All wealth is due to productive labor, and a tax thus takes from the producers to give to a non-producer, and is a loss to the community. It is true that, when the influence of government is considered, it renders an adequate return for this portion which it takes, yet in the abstract a tax is a burden and a loss to the general community, and every such charge should be jealously scrutinized to see if an adequate return is made to the taxpayer for his loss. Although government is essential to a political society, it should be furnished as cheaply as possible, and only such charges should be laid upon the community as are essential to carry out the legitimate ends of the Government. Every dollar beyond that limit is so much subtracted from what might be available for production, and to that extent diminishes national wealth. It is more robbery than taxation, and in no way is the monopoly of Government, for it is a monopoly of the strictest kind, more subject to abuse than in the exercise of the right of taxation.

The question arises, what is done with this

Fig. 1.



Fig. 2.



Fig. 3.



THE RED SPIDER OR RED MITE—MAGNIFIED.

vast sum of \$150,000,000 per year which is not needed for carrying on the Government, paying the debt and rewarding the soldiers? It is in part allowed to accumulate in the U. S. Treasury and the remainder is appropriated by the Government for various public improvements. Many of these are no doubt of public benefit, but cannot be doubted that this vast sum of money coming to Congress each year for disposition makes them free with appropriations than the public interest requires, and prompts a host of cormorants to besiege the Capitol in the hope of profiting by assisting Congress to spend its immense pile. The tendency toward extravagance, when one has a pocket full of money is generally recognized among individuals. It is not otherwise with legislative bodies.

Whence comes this vast excess of money into the National Treasury. Let Mr. Ford answer.

So far from recognizing the principle that national revenue should be governed by expenditure, until very recently an exactly opposite principle has been adopted that expenditure should be governed by revenue. Raise all the revenue that can be raised with the present taxes, and Congress will see that there is no difficulty in spending it. Is this just to the taxpayer? Is it defensible on any grounds whatever, whether of a political or economic nature? One million, fifty millions, or one hundred million dollars of revenue may be raised in excess of all that the Government can, under any possible contingency require, yet no serious attempt is made to reduce the revenue. The taxes under which this revenue is raised may be opposed to all the principles of economics, yet no attempt is made to reform them. They may be unequal in their incidence, and weigh more heavily upon particular classes or interests, yet no change is proposed by which they may be made more equal. Their effect may be to favor certain interests at the expense of others, yet no outcry against such legalized robbery is raised. These circumstances may point to two conclusions. First, that, heavy as the load of taxation is, it has not as yet acted injuriously upon the general welfare of the country, a striking illustration of the wonderful resources and productive power of the nation; and, secondly, that the people are, on the whole, indifferent to the subject of tax reform, and either from ignorance or from inclination are content to leave well alone.

It must strike the thoughtful as a peculiar circumstance that in many of the States the annual taxes are made to meet certain well-known and recognized expenditures, while in the United States the taxes go on without any reference at all to the needs of the Government at the time, and that Congress does its best to spend the money in some way. Mr. Ford, in his article, makes good use of Great Britain as an illustration of a better system. There the budget is prepared by the Minister of the Exchequer to cover specified expenditures, and the rate of taxation is varied according to the needs of the country at the time. In this country the tax goes on year after year, except as Congress

occasionally tinkers the tariff, no matter whether the immense revenue is needed or not.

The time now seems ripe for revenue reform in this country, and it should receive general attention from the thoughtful. It is certainly not wise to keep heaping up surplus revenues—rather should the money be left with the people to whom it belongs, increasing their comforts, developing their industries, so that if the time should ever come for extraordinary expenditure, the people will be so strong and able that the added burden will not be oppressive.

ENTOMOLOGICAL.

Red Spider on Fruit Trees.

We have received several letters of late which lead us to think that the red spider or red mite is extending its area considerably, and the red-dish coating on the twigs and limbs of the orchard trees is apparently not understood by our correspondents. In order that our readers in the new districts, whence this pest has come, may understand the evil and how to destroy it, we shall give a description of the insect, and drawings of it, as made by Mr. Cooke, Chief Horticultural Officer:

The red spider has been generally known as a green-house insect, but in this State it has taken to the open air until many orchards in this State are seriously infested by it. This pest is especially noticeable on the almond trees, and is found on the apple, pear, plum and cherry, etc. Appearance of almond trees infested by red spider: The body, or trunk of the tree, limbs and branches, are a red color, and foliage sparse; on others, the limbs and branches appear covered with iron-rust (Fig. 1); these signs denote the presence of myriads of these pests. On trees not seriously infested, they are generally found around the buds and branches. They are also found in trees infested by the scale insect. The red color mentioned is the color of the myriads of ova covering the

days ago, says the *Record-Union*, Mr. Cooke was at the orchard of C. W. Reed, and finding some pears minus the larva, etc., mentioned the experience at Oak Shade to Mr. Reed, and in company they commenced investigations. In one section of the orchard they found some pears (Beurre-Claire) that showed signs of the presence of larva of codling moth, and also noticed a number of ants around the calyx of the fruit. In every pear they found, as described, the larva had been taken out. In order to have further proof Mr. Cooke procured a pear in which he found a larva. He placed the larva on a leaf on which there was an ant; result, the ant carried the larva away. This is the first instance in which Mr. Cooke has found an insect enemy of the codling moth.

Ants in the Chinese Orange Groves.

Dr. C. T. Macgowan has sent Prof. C. V. Riley, of the Agricultural Bureau, Washington, from Han Chow, an account of a curious use made of ants in that part of China. It seems that in many parts of the province of Canton the orange trees are injured by certain worms, and to rid themselves of these pests the inhabitants import ants from the neighboring hills. The hill people, throughout the summer and winter, find the nests of two species of ants, red and yellow, suspended from the branches of various trees. The "orange ant breeders" are provided with p/g or goat bladders baited inside with lard. The orifices of these they apply to the entrance of the bag-like nests, when the ants enter the bladders, and, as Dr. Macgowan expresses it, "become a marketable commodity at the orangeries." The trees are colonized by placing the ants on their upper branches, and bamboo rods are stretched between the different trees so as to give the ants easy access to the whole orchard. This remedy has been in constant use at least since 1640, and probably dates from a much earlier period. It is certainly a new way of utilizing ants, which, as a rule, are deservedly considered a nuisance by the horticulturist.

The Peach Worm.

The worm in the peach is apparently quite common and is attracting much attention. Mr. Cooke reports that the egg is generally deposited near the stem of the fruit. The larva (worm), when full grown, measures about five-sixteenths of an inch in length. The rings of the thorax and abdomen are a smoky brown color; the sutures between them a dirty yellow. It is full-grown in 17 days. It remains in the pupa state 11 days; the imago (moth) measure about one-quarter of an inch in length; spread of wings, seven-sixteenths of an inch; color, bluish-gray. It belongs to the tortricids, but has not been identified, so far as we know. The pest can be detected by a small brown mark (castings) near the stem end of the fruit; in some cases, the larva has eaten into the pit (or stone) of the peach. It can also be found in apricots.

Slug on the Cherry Trees.

A correspondent of the *Santa Cruz Courier-Item* writes: We have discovered in our orchard in the last week, the presence of a small black slug or snail, from a fourth to a half inch in length, which preys upon the leaves of the tree—two or three sometimes upon one leaf—which they completely desiccate, eating off every vestige of the green covering of the leaf, leaving only the skeleton lace-work behind them. Leaves are the lungs of a tree; deprive it of them and it dies. With two or three of these black, slimy fellows at work on every one, the death of the tree is simply a question of time. Salt dissolves an ordinary snail, even of large size; why would not a shower of strong salt water from a hand pump dissolve these lesser ones?

Grasshoppers Extending their Work.

We learn from the *Eureka, Humboldt Co. Standard* that the grasshoppers on Kneeland prairie have started in with a vigor that threatens destruction to everything. They have commenced on the top of the ridge and are working down. All the crops on Mr. Bolger's place are destroyed or are in a fair way to be. Besides the grasshoppers a big black beetle has appeared which goes for the carrots and does not leave them till everything above ground is eaten up. Somebody can make a fortune if they will invent a method of destroying this pest. There are large sections inland that are yearly ruined by the grasshoppers and crickets.

A ROCK-FENCED RANCH IN CALIFORNIA.—We had an item recently about a Colorado ranch fenced in by natural cliffs, save at a narrow opening. We now find accounts of a rock-fenced ranch in California, or, in other words, a farm inclosed with a stone wall—a thing which the tourist might long search for in this land of freedom from field stones. The *Santa Barbara Press* tells of the ranch of O. A. Stafford, where the improvement which first attracts attention is a massive stone wall, built around two sides of the farm. The large stones of which it is composed were removed from the land, apparently having been sprinkled over and through the rich sandy soil by some great primeval convulsion. The removal of these stones, and the building of a fence which will last for ages, was but the beginning of the gigantic task undertaken by Mr. Stafford when he purchased the place in October, 1877. Trees were felled, jungles of undergrowth cleared away, and a veritable paradise created from what was four years ago a rocky, unpromising wilderness.

Ants and Apple Worms.

About one year ago the late J. B. Saul, of Oak Shade orchard, Davisville, reported to Mr. Cooke that he had found a number of pears in the orchard that apparently had been abandoned by the larva of the codling moth, but did not show the usual opening by which the larva escapes. Considerable time was spent investigating the subject, and they finally concluded that the larva was taken from its burrow in the pear by a species of ant. A few

Artesian Wells on the Great Plains.

The interest in artesian wells in California is continually on the increase. Both for city water supply and the irrigation of farming lands, new wells are continually being bored, and gratifying successes are being secured. We have a country peculiarly adapted to the flow of artesian water, the geological formation presenting water-bearing strata at a comparatively little depth. Just now, the greatest activity in well-boring is in Tulare county, and most gratifying results are being attained. The wells will soon change the face of the country from the yellow of dry plains to the perpetual green of a well-watered land.

We have alluded several times to the Government enterprise in boring experimental wells on the great plains on the eastern slope of the Rocky mountains. One of the Government Commissioners, Prof. C. A. White, has just given an account in the *North American Review*, which furnishes the best review we have seen of the conditions affecting the flow of artesian water on these plains. We propose to outline Prof. White's conclusions, for, aside from their local bearings in relation to the districts described, they contain certain general deductions concerning artesian wells which will be of interest to many of our readers who are considering the subject.

Prof. White confines his statements to the region which he has personally examined as a member of the Government Commission, namely, to that part of Colorado which lies east of the eastern base of the Rocky mountains, and to adjoining portions of Kansas, Nebraska and Wyoming.

The geological structure of this portion of the great plains and of the adjacent mountains is very simple, and it may be readily understood by those who are not geologists. The mountains are almost entirely composed of archæan unstratified rocks, which are mostly of coarse, irregular texture, and similar to the granites in composition. The plains are underlain by six or seven separate formations of stratified rocks, which lie in successive order upon each other, and extend like broad sheets beneath the whole district, the whole being covered as with a mantle by the superficial deposits of the plains. These formations range in geological age from the Tertiary to the Triassic, inclusive. They have an aggregate thickness near the mountains of about 8,000 ft.; but they evidently thin out rapidly to the eastward, so that borings would pierce them at a less depth in the eastern part of the district than in the western. The whole series of these strata is flexed up abruptly against the mountains, and their upturned edges enter largely into the structure of the foothills there. The lowermost formation of the series is there seen to rest directly upon the archæan rocks; but, whether beneath the plains other formations intervene between the archæan rocks and the lowest group of the series of stratified rocks just mentioned, is not known. This, however, has little practical bearing upon the question of artesian water supply, because it is believed that, if water should not be obtained in the Triassic formation, the probabilities for success by deeper boring are not encouraging.

The three uppermost of these formations, or groups of strata, which are known as the Laramie, Fox Hills and Colorado groups, respectively (the two latter being of Cretaceous age, and the former occupying an intermediate position between the Cretaceous and Tertiary), are such in composition and character that they may be regarded as practically impervious to water. The fourth formation in the descending order is the Dakota group, of the Cretaceous series. This is composed of coarse, rough sandstone, and being but slightly compacted, it is doubtless as pervious to water as any of the ordinary stratified rocks. The fifth formation, the Jurassic, is of an impervious character; and the sixth, the Triassic, is, in part at least, a pervious one. In view of the facts which are yet to be stated, it may be reasonably presumed that both these pervious formations are really water-bearing. In the valley of the South Platte river the first of these formations has been removed by erosion, exposing the second. In that of the Arkansas, the first and second have been thus removed, and in a part of that valley the third formation has also been removed, exposing for a few miles the fourth, which has just been spoken of as a pervious one.

If borings were to be made upon the plains between the Arkansas and South Platte rivers in the neighborhood of the mountains, it is estimated that the first of the presumably water-bearing formations that have been mentioned may be reached at a depth of not less than 2,000 ft., and the second at from 600 to 800 ft. deeper. In the eastern portion of the district these two formations may probably be reached by boring at a much less depth, respectively, than in the western; because, as before remarked, the formations become thinner in that direction. Near the mountains, there are in this district some isolated Tertiary deposits not referred to in the series just described. These are of limited extent, and rise from 100 to 200 ft. or more above the general level of the plains. They are nearly level, composed of coarse, pervious material, and are drier, if possible, than the plains around them.

We have seen that the three uppermost of the formations which underlie the plains, having an aggregate thickness of probably not less than 2,000 ft., are practically impervious to water. Because of this, and of the excessive

dryness of the atmosphere during a large part of the year, which causes the evaporation of the scanty rainfall almost as soon as it is precipitated, none of that water can be expected to accumulate in the strata beneath. Beside rainfall, there is no other primary source of water supply in all that great, elevated region. Therefore, any supply of water that may exist in the strata beneath the district I am here considering must be derived from the rainfall that is precipitated, not upon the district itself, but upon the adjoining mountain district—that is, that supply must come from the water that falls upon the upturned edges of the formations at the foothills, and from that which constantly flows across them in the mountain streams that reach the plains. While, as is evident, the greater part of that water will flow off to the rivers, a part of it will soak down through the two pervious formations that have already been mentioned. The dip of all the strata being continuous to the eastward, it is plain that this water will, by gravitation, become widely distributed in the two pervious formations, and be held there by the impervious ones which overlie them respectively. If the latter are pierced by borings from the surface of the plains, the water which has thus been confined there will, as is well known, rise by hydrostatic pressure.

Now, let us consider the views that have been expressed by various persons, both publicly and privately, upon the subject of artesian wells upon the great plains. Some have expressed the opinion that those plains may be everywhere irrigated for cultivation by means of artesian wells; but they are mostly of the class who believe that "water may be obtained anywhere, if you only go deep enough." If such a result were possible, even in the most favored districts, the absurdity of the idea as applied to the district in question is apparent when it is remembered that the annual mean of the rainfall of this district, together with that of the adjoining mountain district which is drained upon it, is much less than the minimum amount that is necessary to raise a farm crop. Beside this, much the greater part of the annual rainfall referred to runs off by the rivers where, however available it may be for purposes of irrigation, it is not to be considered in connection with artesian wells. It is plain, therefore, that if all the wells that might be successfully bored in this district were in operation, it would not be practicable to irrigate more than a small portion of the land by that means.

But is it practicable to irrigate lands for successful farming by means of artesian wells? Perhaps the best accessible information upon that subject is contained in the report of the State Engineer of California for 1880, from which the following data are taken. Up to that time about 1,000 wells had been bored in Los Angeles and San Bernardino counties, and too small a number seem to have been bored in other parts of the State to receive especial discussion in that report. The deeper wells are 500 ft., but the average depth is from 150 to 200 ft.; average cost, \$400 each; average discharge of water per well, 0.1 cubic foot per second. Experience there shows that it takes a flow of one cubic foot per second to irrigate one hundred acres of land. The average well will therefore irrigate 10 acres, and the average cost of such a well will add \$40 per acre to the original cost of the land. The greatest flow from any of these California wells is that of the Burlingame well near Compton, which amounts to 1.7 cubic ft. per second; enough to irrigate 170 acres. The water of those wells has been found suitable for agricultural purposes, but all artesian water is not so.

Let us apply the data furnished by the California wells to the subject of similar wells upon the great plains within the district under discussion. The character of the superficial and Tertiary deposits within this district is such that it does not seem probable that any successful artesian wells may ever be obtained in them. If this judgment is correct, no wells are likely to be obtained in this district as little depth as the deeper of those California wells that have been referred to. It has been explained that the uppermost of the two presumably water-bearing formations which underlie the district cannot probably be reached between the valleys of the Arkansas and South Platte rivers at a less depth than from 1,200 to 2,000 ft. The cost of a well of the lesser depth in this district need not, even under favorable circumstances, be estimated at less than \$6,000. If such a well should yield water at the rate of one cubic foot per second, an average result as favorable as can be reasonably expected, it would irrigate 100 acres of land; but the cost of such a well would add \$60 per acre to the original cost of the land. These facts are certainly very unfavorable to the proposition to irrigate the soil of the plains for cultivation by means of artesian wells; especially when we consider the great risk of failure to get an adequate supply of water, if any at all, the risk of obstruction of the flow, and the probability that a greater depth than 1,200 ft. must be bored.

These facts, opposed as they are to the hope of profitable irrigation of farming land upon the plains, do not necessarily prove that wells may not be profitably bored at many places there, to be used for other than irrigating purposes. A well giving no more than one-quarter of a cubic foot per second would be sufficient to water large herds of cattle, beside supplying the wants of a small hamlet of people. There are many portions of the plains bearing an abundant growth of grass, but distant from any constant supply

of water, where the value of such a well would be many times greater than that of any well could be for purposes of irrigation alone. That many wells of satisfactory capacity may be obtained upon the plains east of the Rocky mountains, there appears to be no good reason to doubt. Neither is it improbable that in the vicinity of some of the mountains there may be found districts where wells as numerous, copious and as shallow as those of California may be obtained. But the risk of failure has hitherto proved to be so great that no boring ought to be undertaken upon any portion of the great plains, without the known results of a careful geological examination of the region by competent persons.

Water Rights in California.

Now that the resources of the State are being so rapidly developed by the aid of irrigation enterprises, all intelligent contributions to the literature of water rights should be put on record for the consideration of those interested. In this matter, as in most other matters of industrial importance, there are conflicting interests and claims, and it is essential that there should be a clear and general understanding of existing laws affecting the points in question. Hon. J. W. Shanklin, Surveyor-General of the State, has prepared a review of California irrigation laws, which was published in the *Record-Union*, of Sacramento. That his understanding of the standing of rights before the law may be generally considered and discussed, we reproduce his statement, as follows:

The Legislature of California has legislated on four different methods of irrigation.

First, for the control of the water courses, the building of canals or ditches, and the distribution of the water for the people in the counties where irrigation was considered necessary. This law was passed May 15, 1854, and can be found on page 76 of the statutes of that year, and was applied to the counties of San Diego, San Bernardino, Santa Barbara, Napa, Los Angeles, Solano, Contra Costa, Colusa and Tulare, the present county of Kern being then included in Los Angeles and Tulare, and governed as to irrigation by the same law.

This law, as to Los Angeles county, was never modified or repealed until March 10, 1874 (Stat., p. 312); and as to Tulare county, for one line of canal, a special board of commissioners was created March 15, 1864 (Stat., p. 167), independent of the board created by the Act of 1854, but for the county generally on April 4, 1864 (Stat., p. 375), a law modeled after the law of 1854, though modifying it somewhat, was passed. Again, on the 20th of March, 1866 (Stat., p. 313), the law of April 4, 1864, was amended. Thus the law of April 4, 1864, as amended, applying to Tulare county, and the law of May 15, 1854, applying to Los Angeles county, pointed out the only mode of irrigation applicable to the territory out of which Kern county was created on the 21st of April, 1866 (Stat., p. 777).

So careful was the Legislature, or rather the Representatives of Tulare county, to guard against the introduction or recognition of any other mode of irrigation in the county, that Section 12 of the Act of April 4, 1864, provided that "all acts of a general character conflicting with the provisions of this, so far as applicable to the county of Tulare, are hereby repealed," thus guarding effectually against allowing corporations to operate in the county under the assumption that they had authority given them under the Act of May 14, 1862 (Stat., p. 540), which was the second law providing for irrigation.

Again, so careful were the Representatives of Kern that when the law of April 1, 1872 (Stat., p. 945)—the third law providing for irrigation—was passed, allowing districts susceptible of one mode of irrigation to be created, Kern, as well as Fresno, Tulare and Yolo counties, were excepted from its operation. (See Section 20, Stat., p. 948.)

Again, when the fourth mode providing for irrigation was created by the adoption of the codes (see Civil Code, Sections 1410 to 1422), Section 19 of the Political Code expressly said that "nothing in either of the four codes affects any of the provisions of the following statutes," viz. (subdivision 6): "All acts creating or regulating boards of water commissioners and overseers in the several townships or counties of the State."

This brings us up to the last law passed on the subject of irrigation for Kern county, viz.: the Act of March 29, 1876 (Stat., p. 547), which does not differ materially from the previous acts, except that it changes the organization controlling the water courses from a board specially elected for that purpose to the Board of Supervisors, who have general charge of all county matters. This shows that the county did not intend to lose control of its water rights, the prevention of waste and the economical and equitable distribution of the water for the general good of its people.

Following this, the next Legislature memorialized Congress by joint resolution, passed March 6, 1878 (Stat., p. 1,070), "to reserve from sale, or grant no exclusive ownership," all streams of sufficient magnitude to supply more than one family, so that the water might be free, and "for the common use of all the inhabitants, for the natural purposes of drinking and washing, for man and domestic beasts, for irrigating the soil, and for mining purposes."

Of what use would a memorial like this have been if the State had already allowed private appropriation to seize or absorb under corporate control the waters of this State capable of being

utilized for irrigation? It clearly shows that the people of the State, expressing their will through the Legislature, did not consider that they had granted away their right to control the waters of the State for the general good, and that corporate interests had become paramount in controlling the water courses. Following up this line of action, the Constitutional Convention, by Art. 14, Sec. 1, declared "the use of all water now appropriated or that may hereafter be appropriated, for sale, rental or distribution, is hereby declared to be a public use and subject to the regulation and control of the State in the manner to be prescribed by law." This emphatic declaration, that the use of all the water of the State is a public use, was ratified by the people; and the manner of its use is not left to laws of the past, but in the language of the Constitution, is to be prescribed by law. Where, then, are vested rights over the control of water and rights by presumption so loudly asserted by corporations? And as though either principle could prevail against the sovereign (the State) when the very Act granting them an existence (stat. 1850, p. 350, sec. 30) declares that "the Legislature may, at any time, amend or repeal this Act and dissolve all corporations created under it." The creation is not above the creator, and the commonly expressed fear of corporations or other organizations in controlling the waters of the State to the detriment of the people, only argues the imbecility of the people in not regulating the matter through the Legislature to suit themselves, or in not forcing the Supervisors, or Boards of Water Commissioners in counties where such organizations are provided for regulating the distribution of waters, to discharge their duties according to the present laws.

But not to speculate upon what Legislatures may or can do in the future, so that the greatest benefit from the use of water may be extended to the greatest number, the question naturally arises, how many of the present organizations in Kern county, or in the other counties in which similar laws exist, have been formed under either or any of the laws referred to for the distribution of water in such counties, or are operating in accordance with the provisions of these laws? If they are not so organized, by what right do they claim the use of water as against other users? For this is not a case in which the principle of "first in time first in right" prevails, but where first in time, in compliance with the law provided for the subject matter in that county prevails.

The confusion and misunderstanding of the principles which, in my opinion, govern the distribution of waters for irrigating purposes in those counties named in the Act of May 15, 1854, and kindred laws, arises from the supposition that any man could take water, wherever he might find it, for any purpose, provided he did not interfere with his neighbor. This was the common rule in the mines, and when the miners left the mountains to make homes for themselves and families in the valleys, they naturally adopted the same rules they had learned in the mines, not knowing that different laws had been provided for regulating the use of water in the valleys, where irrigation was and will become more and more essential as our population increases. The two modes of regulating the use of water are necessarily different, and Mexico, from whom we secured this territory, has long been using both modes, one for the mines and the other for agriculture, but never allowed the law for regulating water in the mines, to operate where its use was necessary for farming. Hence, we notice that our legislators, as early as 1854, by adopting the Mexican rules for irrigation, prohibited the customs of the miner, in using the water courses, from gaining any foothold in the agricultural counties.

But, as the principal business in early days in this State was mining, all the decisions of our courts related to the use of water in the mines, and not one can be found which takes up and discusses the use and regulation of water for irrigation purposes in the agricultural counties under the Act of 1854, and kindred laws specially provided therefor in the counties named.

Precedent is so powerful a principle with our courts, that instead of recognizing the fact that it is as impossible for the customs and laws of miners, concerning the use of water, to operate harmoniously with the irrigation law of 1854, in the same county, as it is for oil and water to unite; they are constantly trying to find some analogous principle in them governed by these old decisions that will permit corporations or individuals, as first appropriators, to control the water courses of the State, without recognizing the fact that this is a growing State, and that the laws and the decisions must keep pace, to some extent, with the increasing wants of the people.

The sooner this water question is settled by legislation and legal construction on broad and liberal principles, which will keep the control of the water where it properly belongs, viz.: with the people, so that it can be distributed anywhere and at any time in proportion to the wants of the people, when they have provided the necessary ditches, canals and reservoirs to utilize it economically, the better it will be for all. The laws on this subject must be sufficiently elastic to meet the increasing wants of the people; and there would be no more sense in restricting the distribution of water to the present users than there would be to pass a law that no one should be allowed to raise wheat in California except these at present engaged in that business.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Logonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

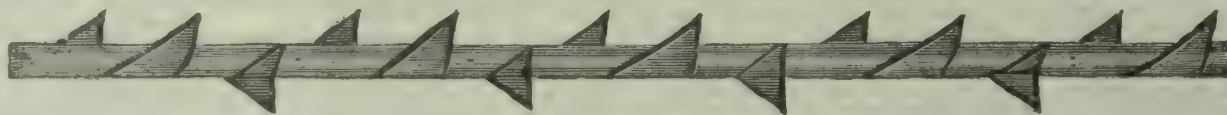
Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kibler, Redlands.....	10
J. F. Welsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Isaac Post, Redlands.....	10
C. E. Tinsdell, Redlands.....	20
R. B. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. E. Seymour, Redlands.....	20
P. R. Brown, Redlands.....	20
A. G. Simms, Redlands.....	10
Simon Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassady, Redlands.....	10
Green Van Leuven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	50
A. S. White.....	20
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
J. W. Bogg, Riverside.....	10
A. W. Bogg, Riverside.....	20
S. R. Weir, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Aunabel, Riverside.....	50
J. P. Greeves, Riverside.....	10
D. P. Flindley, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. B. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10
B. F. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westhook, Riverside.....	20
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. B. Inch, Eureka Mills, Plumas county.....	20
J. Howding, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	20
Mrs. Sarah J. Morer, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	30
P. P. Morrison.....	25
A. T. Dewey, San Francisco.....	12
W. B. Ewer, San Francisco.....	12
B. F. Watrous.....	10
H. L. Rutgers.....	20
J. W. Bashford.....	5
S. Comey.....	5
Mrs. B. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cutts, Carson, City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20

Total sold.....1,004

Judson & Brown (San Bernardino, P.O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other, as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

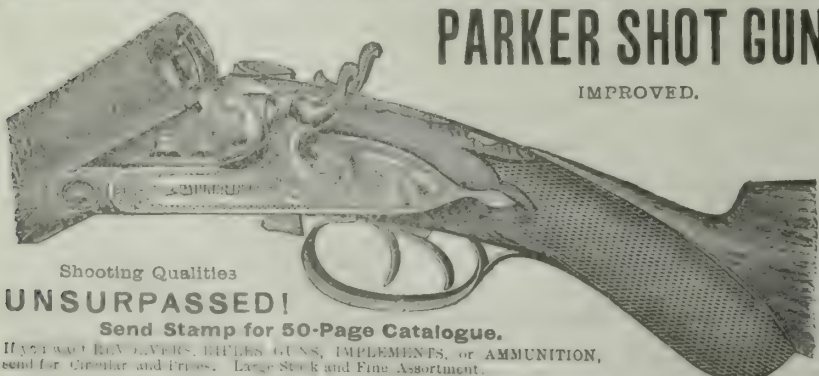
THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.



PARKER SHOT GUN.

IMPROVED.

Shooting Qualities
UNSURPASSED!

Send Stamp for 50-Page Catalogue.

Have also REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION, send for Circular and Prices. Large Stock and Fine Assortment.

E. T. ALLEN, Agent for the Pacific Coast.

NO. 416 MARKET STREET,

SAN FRANCISCO, CAL.

DEWEY & CO.'S

Scientific Press



Patent Agency.

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. B. EWEL.

GEO. H. STRONG.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Jerseys.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$5.00 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

LAUREL RANCH.

Thoroughbred Spanish Merino SHEEP.



First Premium for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop. Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPER, Sonoma, Cal.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

CAUTION!!

THE MOST PALPABLE FRAUD!!!

THE IMPERIAL EGG FOOD

Unscrupulous Persons Envious of the Fame and World-wide Reputation Fairly Won by Are, by fraudulently imitating the style of packages even to forging the very Trade Mark of the Imperial, endeavoring to put upon the market

WORTHLESS STUFF OF NO VALUE WHATEVER TO FOWLS.

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud until the law has time to take the perpetrators into its own keeping. The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. Numerous preparations have from time to time appeared called "Egg Foods," but as they did not conflict in name or trademark, were perfectly allowable, and, after due time, failing in their purpose, passed out of the market, while the Imperial continued to gain favor everywhere. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and Testimonials.

RETAIL PRICES OF IMPERIAL EGG FOOD:

1 Pound Package, 50 Cents.	6 Pound Box, \$2.00.
2 1/2 " " " \$1.00.	25 " " " 6.24.

Sold by the trade generally, or address,

G. G. WICKSON, 319 Market St., S. F.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & HOMER P. SAXE.

PETER SAXE & SON

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65
No. 3, " 180 " " 45

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to

GEO. B. BAYLEY, Box 1771, San Francisco.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHBRED



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHA. DUISENBERG & CO. Sole Agents, 314 Sacramento St., San Francisco.

LANGSHANS.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.



PURE BRED POULTRY.

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Borkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock. For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black B's, Bismarck, and other noted families. Imported boars King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

ONE HUNDRED

SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

Cornwall Station, Contra Costa County.

BADEN FARM HERD.

R. ASHBURNER.

Baden Station, - - San Mateo Co.,

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

NEW CATALOGUE

-OF-

SEWING MACHINE NEEDLES,

Oil and Other Supplies.

Just out. For Dealers only. Mailed free.

MARK SHELDON,

9, 11 & 13 First St., - - San Francisco, CALIFORNIA.

C. E. CASE, M. D.,

Consulting and Operating Physician,

1116 Broadway Oakland,

Will visit patients at a distance for consultation or to perform operations.

50 LARGE SIZE New Chromos, with name, 10c. TODD & CO., late Wise & Co., Cliftonville, Conn.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTEPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
T. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER.

Vacaville, Solano Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop. Worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,

410 Montgomery St.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place, WM. C. PRINCE.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$8 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.

BOONE & MILLER, Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 820 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

Commission Merchants.

JAS. P. HULME,
Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,
SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange).

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange.)

30 California Street, San Francisco.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders.

P. O. Box 1940.

R. W. O'NEAL,

Late of Point Arena.

JOS. L. NUGENT,
of P. A. Graham & Co., Bernardo.

NUGENT & O'NEAL,

Commission Merchants

and wholesale dealers in

GRAIN, WOOL, BUTTER, EGGS, HONEY, AND

PRODUCE OF ALL KINDS.

227 and 229 Washington, bet. Front and Davis Sts., S. F.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce,
Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs,
Butter and Honey.

Brick Stores: No. 402 Davis Street, and

120 Washington St., S. F.

Prompt Returns. Advance Liberally on Consignments.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ell-
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra-
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

SEND YOUR CONSIGNMENTS TO



Silos, Reservoirs, Head Gates,

ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular.

Summer Resorts.

ANDERSON'S SPRINGS,

LAKE COUNTY, CAL.

Nineteen miles from Calistoga, Napa county. Five miles from Middletown, and ten miles from the GREAT GEYSERS, between which and Anderson Springs, there are good Wagon Roads.

Hot Sulphur and Steam Baths

For the Cure of Rheumatism, Paralysis, St. Vitus' Dance, Dropsy, Etc. Cold Sulphur for Dyspepsia, Diseases of the Stomach and Kidney.

Scenery Unsurpassed. Climate Mild and Equable.

Consumptives generally improved in health, and asthmatics are invariably relieved. Trout Fishing in the grounds. Deer hunting in the immediate vicinity. New Cottages for the better accommodation of guests. Cooking good.

IMPORTANT RECOMMENDATIONS.

Remarkable Cure of Dropsy.

VALLEJO, June, 1882.

I suffered intensely with dropsy, and was induced by Mr. Edgecomb to try Anderson's Springs, he having been cured there, after undergoing frightful agonies, being tapped three times before he reached there; and I am deeply grateful for taking his advice, for such a beneficial effect had the Springs on me, that I am now entirely cured, and advise all who may be suffering to try Anderson's Springs.

KATE MACRAY.

Sight Restored.

A candid and well-known gentleman of San Francisco certifies briefly as follows:

May 1, 1882.

"I was cured of inflammation of the eyes at Anderson's Springs, Lake county." M. J. DURNAY, 425 Brannan St., S. F.

Many other cases of Dropsy and Paralysis, Rheumatism, Swelling of Limbs, and various other obstinate cases of chronic diseases have been cured from year to year, at the above-named springs, which are located in Lake county, 19 miles from Calistoga. Special regard is paid to the diet of guests, who are liberally furnished with good home cooking, etc. Send for further information. Address

ANDERSON & PATRIQUIN,

Anderson's Springs, Lake Co., via Calistoga, Cal.

A Song of Nature.

By the gurgling stream as it winds along

On its way to the valley below,

It sounds in my ears like a long lost song

Of childhood's sweet day, long ago.

The smooth worn boulders, like long-lost friends,

Familiar in times long past,

Stand forth to my view and with my vision blend,

And my youth seems again in my grasp.

Like life's blood a dancing through eager young veins,

The water runs rapidly past,

Portraying this life, with its joys and pains;

Returning, no, never, 'as'

But here, by this stream, is a treasure more rare,

That will heal all diseases and pain,

Even fountains of life giving water are there,

Not supplied by the winds nor the rain.

But dear mother earth, from her bosom supplies

These springs that were hid from our sight;

They strengthen our heart and open our eyes,

And fill us with youthful delight.

And even the rocks at this wonderful spot

Breathe soft on our bruises and pain,

Their medical vapor, exceedingly hot,

And this bath ng is never in vain.

These waters of life and this medical breath,

Are free to the great and the small,

At Anderson's Springs, saving from death

The blind, halt and maimed, one and all.

Unto God be all praise who created the earth

With these blessings so rich unto men,

Who even now slowly are finding their worth,

And do bless Him in return again.

—W. A. CLARK

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, Proprietors.

These Springs are particularly beneficial in purifying the blood, and unsurpassed by any in the State for the cure of rheumatism, dropsy, scrofula, weak lungs, dyspepsia, costiveness, catarrh, liver and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Board and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake. Two and one-half miles from the Siegel Springs, two and one-half miles from "Bassett's" place, in Cobb Valley, only six miles (by a good trail) from the Harbin Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, \$1.50. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

BARTLETT SPRINGS.

Situated 16 Miles Northeast of Clear Lake, in Lake County,

Forty miles West of Williams, Colusa county, on the main traveled road from Colusa to Mendocino.

Three Different Routes to the Springs,

One via WILLIAMS, one via CLOVERDALE LAKEPORT and UPPER LAKE, one via CALISTOGA and LOWER LAKE, and all connecting with the train

LEAVING SAN FRANCISCO AT 8 A. M.

Fare will not exceed TWELVE Dollars either way. Daily Mail via LAKEPORT, RT. Semi-weekly mail via WILLIAMS. Post Office, Express Office and Telegraph Office here all the year through.

C. R. CLARKE, Proprietors.

J. G. CRIGLER,

GILES H. GRAY.

JAMES HAYEN.

GRAY & HAYEN,

Attorneys and Counsellors-at-Law,

30 California St., SAN FRANCISCO.

Highland Springs
SANITARIUM.

This popular and healthful summer and winter resort for families, pleasure seekers and invalids, is situated in Lake County, 25 Miles from Cloverdale,

Seven miles south of Lakeport, four miles of Kelseyville, and in sight of Clear Lake, at an altitude of 1700 feet, and is sheltered from the chilling Coast Winds and Fogs by mountains 1600 feet in height, which for

Grandeur and Beauty of Scenery are Unsurpassed on the Pacific Coast,

While the Beneficial Effects of its Mineral Waters are equal to any in the United States or Europe.

MAGIC SPRING,

Analyzed by Prof. W. B. Rising, University of California.

TEMPERATURE.....86°

Grains per U. S. Gallon,

Chloride of Sodium.....1.290

Bicarbonate of Potash.....0.544

Bicarbonate of Soda.....21.763

Bicarbonate of Lime.....50.411

Bicarbonate of Magnesia.....70.243

Bicarbonate of Iron.....0.973

Bicarbonate of Manganese.....trace

Silica.....7.398

Alumina.....0.169

Organic Matter.....trace

Free Carbonic Acid.....74.462

Total.....237.282

W. B. RISING, Berkeley, April 3, 1882.

Dr. C. M. BATES (formerly of San Francisco), having become sole proprietor, by purchase and lease, of these justly celebrated Springs, will devote all necessary time and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations.

Carriages, Buggies and Saddle Horses

Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily.

Post Office and Telephone connected with hotel.

Direct Route via San Rafael and Cloverdale 7:10 A. M.,

will arrive at Springs 5:30 P. M.

By steamer "DONAHUE," via Donahue Landing, 2:30

P. M., will arrive over night in Cloverdale; and via Napa

and Calistoga, 8:00 A. M.

On Tuesdays, Thursdays and Saturdays

Will be met at Kelseyville with private conveyance, if notified.

For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

Lane's Mineral Springs,

CALAVERAS COUNTY, CAL.

Pine and Hemlock Chemical-Vapor and Electro-Thermal Baths.

Connected with these Springs are Hot and Cold Baths. The Water of these Springs is Cold, Clear and Palatable, having been used 20 years for Medical purposes.

These Fountains of Health are located 35 miles east of Stockton, in the foothills of the Sierras; at an altitude of 1,000 feet above the level of the sea. Always ready, Winter and Summer, for the reception of patients, on account of the even temperature of this most genial climate.

The accommodations consist of a Hotel, Cottages, Camp Grounds and Stables.

Stage leaves Commercial Hotel, Stockton, at 7 A. M.,

Tuesdays and Saturdays.

P. O. Address, Knight's Ferry, Stanislaus Co., Cal.

JAMES HUTCHINS, Proprietor.

COMPOUND OXYGEN

NEW TREATMENT BY INHALA-

tion, for Consumption, Asthma,

Bronchitis, Dyspepsia, Catarrh,

Headache, Debility, Rheuma-

tism, Neuralgia, and all Chronic

and Nervous Disorders. Prepared by

DRS. STARKLEY & PALLEN, Philadelphia,

Pa. Package contains all directions, and is

easily sent by express, ready for USE AT

HOME. H. E. MATTHEWS, Forwarding

Agent, 606 Montgomery street, San Fran-

cisco, Cal. Send for Free Pamphlets.

FOR SALE.



Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

DEWEY & CO'S

SCIENTIFIC PRESS

PATENT AGENCY

No. 252 Market St. (Elevator, 12 Front), S. F.

Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco.

Educational.

The Harmon Seminary,

BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR

YOUNG LADIES.

Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

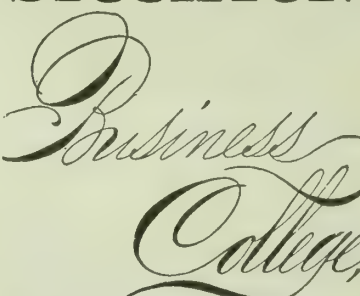
The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,

Or. E. J. WICKSON, 414 Clay st., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study: Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers' Course, Preparatory Course, Telegraphy, Languages. The College Journal, containing full information, will be sent post paid to any address. F. R. CLARK, Principal.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1882:

252 Market Street, Elevator 12 Front,
SAN FRANCISCO.

Branch Offices in all Foreign Countries,

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE ON APPLICATION

GEO. H. STRONG.

W. B. EWER.

A. T. DEWEY.

The Pacific Rural Press.

(Established in San Francisco in 1870.)

This is the leading farming journal on the western half of the continent, and second to none in America. It is well printed and illustrated, weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and other timely and important subjects of live interest to farmers and their families; agricultural, and other useful and ornamental illustrations; correspondence from various quarters of our new and rich developing fields of agriculture on the Pacific coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; God's Health; Entomological; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; The Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations of new and improved machinery); Agricultural Notes; Items of General News, etc. Its columns are studiously filled with chaste, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Send for sample copies.

Subscriptions, in advance, \$3 a year. Agents wanted, on liberal pay. DEWEY & Co., Publishers.

No. 252 Market St., S. F., Cal.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,000 ft. in length, and have a floor surface of 105,422 square feet, or nearly 2½ acres. The warehouses connected with the works by rail, are over 50 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Plain and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the celebrated Hill's Eureka Sully Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiber Plow
Improved Granger Gang
Im'd Single Sulky and Tule Plow
Sulky Plows
Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers
Plows
Sulky Hill Gang
Double Deep Tiber
Fresno Ditching and Grading Plow
Cultivators
Gang Seed Sowers
Hill's Improved Headers
Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freight. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the Benicia Agricultural Works, either direct, or through Messrs. BAKER & HAMILTON, Agents, San Francisco, and Sacramento. The overland trans-shipment between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and in harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,Or Agents, **BAKER & HAMILTON**, San Francisco and Sacramento**NEW STORE AND LARGE STOCK!****AUSTIN BROTHERS,**

IMPORTERS OF

HARDWARE, IRON, AND BLACKSMITH SUPPLIES.**Rope, Wire, Belting, Pumps, Pipe and Steam Fittings.**

310 and 312 Main Street, Corner of America,
STOCKTON.

Agents Halladay Wind Mills.**HORTON & KENNEDY'S****FAMOUS ENTERPRISE**Self-Regulating
WINDMILL

Is recognized as the best



Always gives satisfaction. SIMPLE, STURDY AND DURABLE in all parts. Solid Wrought-iron Crank Shaft with NOBBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES as always before.
LIVERMORE, ALABAMA CO., CAL.
San Francisco Agency, **LINFORTH, RICE & CO.**, 323 & 325 Market St., S. F.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

Dewey & Co. { 252 Market St. } Patent Agt's**CLEAR LAKE**AND
CALISTOGA STAGE LINE.

San Francisco

—TO—
LAKEPORT

In Eleven Hours.



Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays, stages leave Calistoga for Lakeport via Middleton, Glenbrook, Kelseyville and Soda Bay; returning alternate days.

This is the Most Direct Line from San Francisco to Lakeport.

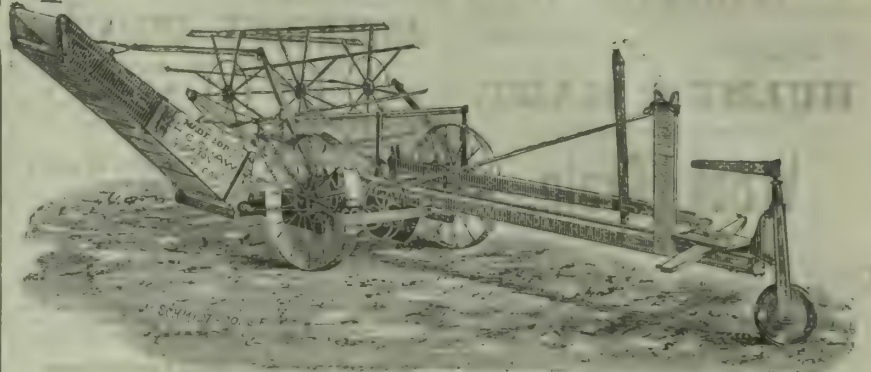
Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegler, Howard Springs and Soda Bay. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middleton, Guenoc, Lower Lake, and Sulphur Banks; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!
Driven by the most skillful drivers on the coast. For full information and tickets apply to **SAM. MILLER**, Tourist and Ticket Agt., 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50.
Lakeport office at W. W. Green's Hotel.
JOHN CLARK, Agent. W. F. FISHER, Proprietor.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. F. MERRILL, Florin, Sacramento Co., Cal.

H. C. SHAW PLOW WORKS.

GENERAL AGENTS

IMPROVED RANDOLPH HEADERS,
LIGHTEST DRAFT!! BEST ELEVATION!!!

Three Hundred Sold in Two Years.

Chieftain Sulky Hay Rakes,**H. C. SHAW Stockton Gang Plow,**

ALSO, AGENTS FOR

WALTER A. WOODS' IRON MOWERS,**FISH BROTHERS' FARM AND SPRING WAGONS.****FURST & BRADLEY SINGLE AND SULKY PLOWS,****Powell's Electric Hay and Grain Elevator.****HEADER EXTRAS! MOWER EXTRAS!! PLOW EXTRAS!!!**

(Send for Illustrated Catalogue and Price list.)

201-3 El Dorado Street,

Stockton, Cal.

NOTICE!**To Farmers and Stockmen!**

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-raiser, once having used our medicines will ever be without them in the house. For sale everywhere.

Trade { **H. H. H.** { Mark Trade } **H. H. H.** { Mark Trade } **H. H. H.** { Mark

Hoof and Healing Ointment Horse Liniment Condition Powders.

For Brittle Hoofs,	The most effectual	For Inward Strains,
Fever in Feet,	liniment ever used for	Hide Bound,
Founder,	Ringbone,	Loss of Appetite,
Contracted Hoofs,	Spavin,	Yellow Water,
Sand Cracks,	Sweeney,	Poll Evil,
Quarter Cracks,	Callous Lumps,	Scratches,
Collar Galls,	Old Sores,	Mange,
Harness Galls,	Sprains,	Rheumatism,
Scratches,	Stiff Joints,	Epizootic,
Mud Fever.	Bruises,	Coughs,
Etc., Etc.	Windgalls, Etc.	Colds, Etc.

H. H. MOORE & SON,
Sole Proprietors.**H. H. MOORE & SON,**
Sole Proprietors.**H. H. MOORE & SON,**
Sole Proprietors.**PRESCOTT HOUSE.****S. W. Corner Kearny and Montgomery Ave., San Francisco.**

Free Coach to the House

O. F. BECKER, Proprietor

Seeds, Plants, Etc.

PEPPER'S NURSERIES.

Established in 1858.

For sale, all kinds of Fruit Trees, Vines and Fruiting Shrubs raised without irrigation. Also, a general assortment of Evergreen Trees and Shrubs, deciduous Flowering Shrubs; Roses in assortment. Conservatory and Bedding Plants in great variety. Send for Catalogue and List of Prices. Address W. H. PEPPER, Petaluma Sonoma County, Cal.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.,
Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.

True to name and reliable. Persons intending to plant JUNE BUDDED or other trees, next season, should
WRITE FOR MY TERMS

JUNE BUDDED TREES A SPECIALTY.

Principal Nursery located just south of Colton.
DAVE TURNER.

HIRAM SIBLEY & CO.



TURNIP
SEED
NEW CROP
READY
IN JULY.

SEND FOR
CATALOGUE
AND
PRICE LIST
HIRAM SIBLEY & CO
179-183 MAIN STREET,
ROCHESTER, N. Y.
200-206 Randolph St. Chicago, Ill.



B. K. BLISS & SONS,

Importers, Growers and Dealers in Garden, Field and Flower Seeds, Dutch Bulbous Roots, Summer Flowering Bulbs and Garden Requisites of every description. Catalogues mailed to all applicants. Address

B. K. BLISS & SONS, 34 Barclay Street, N. Y.

NEEDHAM'S RED CLOVER

Blossoms and extracts of blossoms, the greatest blood purifier known. A sure cure for Cancer, Salt Rheum, and all blood diseases if taken in time. Many also have been cured of Catarrh, Rheumatism, Poison Oak and other diseases. For full particulars, circulars and testimonials address, W. C. NEEDHAM, sole agent for Pacific Coast, P. O. Box 422, San Jose, Cal.

SEEDS AND SEEDS TRUE TO NAME.
APPLES—1 lb. 10 to 20¢, Anjou, Baldwin, Bosc, Lawrence, Macintosh, Pippin, Red Delicious, Rome, St. Hubert, Winesap, etc.
PEACHES—1 lb. 10 to 20¢, Alexander, Breeze, Foster, Greengage, etc.
PLUMS—1 lb. 10 to 20¢, Early Golden, etc.
PRUNES—1 lb. 10 to 20¢, Early Golden, etc.
RAISINS—1 lb. 10 to 20¢, Black, etc.
ROSE HIPS—1 lb. 10 to 20¢, etc.
SWEET POTATOS—1 lb. 10 to 20¢, etc.
TOMATOES—1 lb. 10 to 20¢, etc.
W. C. NEEDHAM, Sole Agent for Pacific Coast, P. O. Box 422, San Jose, Cal.

Moore's Prepared



The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Eureka! Found At Last!

A. W. LOCKHART'S

SEPARATOR ATTACHMENT.

To Threshers.

It is light, can be attached to any threshing machine, and will keep it in repair. By its use 500 bushels more per day can be threshed and cleaned, saving to the farmer enough to pay his threshing bill, also putting the grain into merchantable condition, saving time lost in rethreshing and cleaning over. Farmers and Threshers will please call and see for themselves at No. 128, 15th street, between C and D streets, Sacramento. Also, my Feeder and Elevator Attachment, so well and favorably known as to need no comment.
A. W. LOCKHART.

Mission Rock Dock and Grain Warehouse.
San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - - Proprietors.
Office—315 California Street, Room 2.

GARDEN SEEDS.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

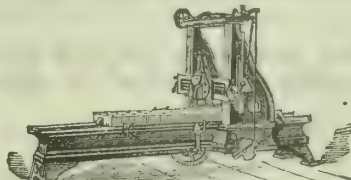
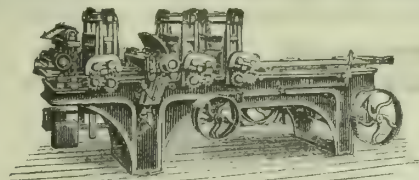
Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - - San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

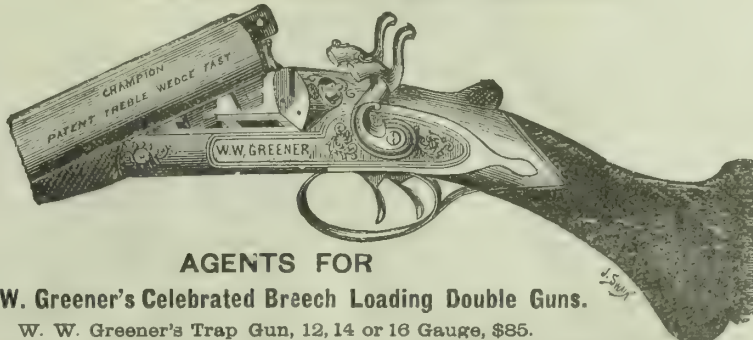
Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

Nathaniel Curry & Bro..

113 Sansome Street, San Francisco.



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit. A liberal discount to the trade. Price List on Application

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.



Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store.
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, etc.

POP CORN.

WAREHOUSES. Office, 115 Kinzie St.,
115, 117 & 119 Kinzie St. CHICAGO, ILL.
104, 106, 108 & 110 Michigan St.

SEEDS

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL
DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO..

40 Merchants' Exchange San Francisco, Cal.



FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.,
SAN FRANCISCO, Cal.
OFFICE 5, 17-18

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge

This paper is printed with ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph H. Dorety 527
Commercial St., S. F.

EXTRA QUALITY RUBBER HOSE,

BELTING and PACKING, CRACK PROOF BOOTS.

GOODYEAR RUBBER CO.,

R. H. PEASE, Jr., Agents.

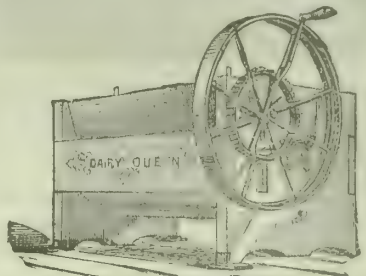
S. M. RUNYON, Agents.

Nos. 577 and 579 Market Street.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Oakland, Cal.

Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.



Is the Best Pump in the World. Another
New Improvement is Lewis Patent
Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$8. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

CHEAP CASH GROCERIES

— AT —

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —

1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

STEAM PLOWS.

For sale—Two sets S'eam Plows, manufactured by the world-renowned firm of John Fowler & Co., of Leeds, England, with all latest improvements and duplicate accessories. These plows are capable of plowing from 15 to 50 acres per day per set, at a depth of from one inch to two feet, or more. The four powerful traction engines belonging to the outfit were expressly constructed for use on the Pacific Coast and colonies, with a view, not only to economy in fuel, but also for transportation purposes, and for all kinds of farm work where steam power is advantageous or requisite. Apply to

H. N. CHAUNCEY,

Room 10, No. 109 California St., S. F.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

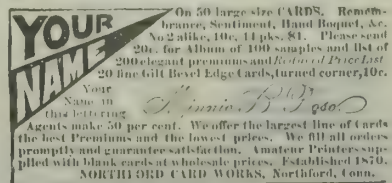
Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

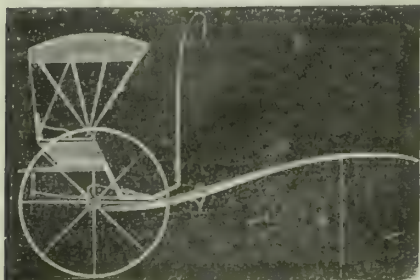
COOKE & SONS, Successors to COOKE & GREGORY



25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, etc. Clinton Bros., Clintonville, Co

SAN LEANDRO SULKIES,

WITH PHAETON OR PIANO BOX BODY.



The above cut is a diminished copy of the scale drawing from which my Phaeton Sulkies are made.

It will be seen that for elegance of design, grace and proportion, it is superior to anything yet made having only two wheels.

It is mounted on platform springs, and has the patent leveling device used in my Piano Box Business Sulky.

It is guaranteed to be free from that bobbing motion common to all other Sulkies, and which renders riding in them a toil instead of a pleasure, and is warranted to ride easier than most buggies.

This important result is obtained by my method of hanging the body free from the shafts, so that their motion, or the motion of the horse, is not communicated to the seat or body at all.

This method of hanging the body also allows it to move up and down level, when it has a heavy or light load.

The leveling device enables the rider to instantly change the level of the bed should it become necessary to change from a small to a large horse, or vice versa.

With a 10 other Sulkies, if a large horse is used or a heavy load is carried, the Sulky tips back, thus throwing it out of balance and making it ride uncomforably.

This method of making two-wheeled vehicles is new, both in this country and Europe, and is destined to bring them into favor rapidly, both as business and pleasure carriages.

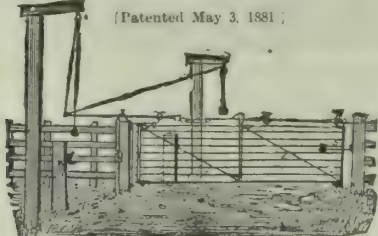
The Phaeton style (with or without top) is designed for ladies and children, or for doctors and commercial travelers. They are thoroughly well made, and range in price from \$30 upwards.

My Piano Box Business Sulky and Breaking Cart, of which a cut appeared in these columns a few weeks since, has recently been somewhat improved in its proportions, and is the best thing that can be obtained in its line for mail carriers, carriers of large ranches, paper carriers, hunters, advertising agents, etc. Prices, from \$75 upward, according to style and finish. For circulars, giving fuller information, price lists, etc. Address:

JACOB PRICE,

At Works of San Leandro Plow Co.,
San Leandro, Cal.CAMPTON'S
Self-Opening Iron Farm Gate

(Patented May 3, 1881)

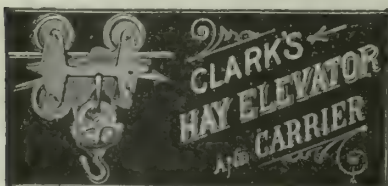


It is the Champion Gate of the World for its Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co., June 3, 1882.

A. P. CAMPTON, Esq., Dear Sir: The two Automatic Iron Gates of your patent (one 12 and the other 10 ft. in width) erected by you on my farm, two miles west of Davisville, have given me entire satisfaction. They are all you represent them to be, the most substantial, the neatest and the most easily operated of any gate that I know of. They are just the gate that every farmer should have; in fact, they cannot afford to do without them. Respectfully yours,

H. M. LARUE.
A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee;
John Aylward, manufacturer, P. O. Box 88, Livermore, Ala-
meida Co., Cal., and Jas Stanley, Mission San Jose, Cal.,
agents.



Guaranteed to do better work and give better satisfaction than any in use. Sent ON TRIAL to responsible farmers. For circulars and terms to agents address

G. T. BROWN,
Stockton, Cal.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Lash, Marysville; T. B. Wait, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

RAMS FOR SALE.

350 THOROUGHBRED

And Graded

SPANISH MERINO

Rams For Sale.

Bred from the first import-

ation of Spanish Merino

Sheep to California, in 1854.

Thoroughbred and High-

Grade Ewes for sale. Prices reasonable. Reside one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, MRS. E. McCONNELL WILSON,
Elk Grove, Sacramento Co., Cal.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES-HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING

CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

IMPROVED ECC FOOD.

This Egg Food, which is attracting so much attention with the public generally, as well as POULTRY DEALERS, in particular, is called "IMPROVED" because it is an improvement on any and all similar articles offered for sale—an improvement in Composition, Quality, Quantity and Result, and Particularly in Price.

The Improved Egg Food has a strictly Test Reputation, having been thoroughly tested by each and every one who is using it, and not in one instance has it failed to give perfect satisfaction where instructions are followed.

Notice to Poultrymen.—For ninety days I shall put up 500 packages (4 lb. each) each month of the Improved Egg Food, to be given FREE to such persons as do not know its value, and do not care to try the 1-lb or 3-lb boxes at first.

Remember the Name. "IMPROVED." Note the Price.

1-lb. box, 40 cts.

3-lb. box, \$1.00.

10-lb. box, \$2.50.

25-lb. box, \$5.00

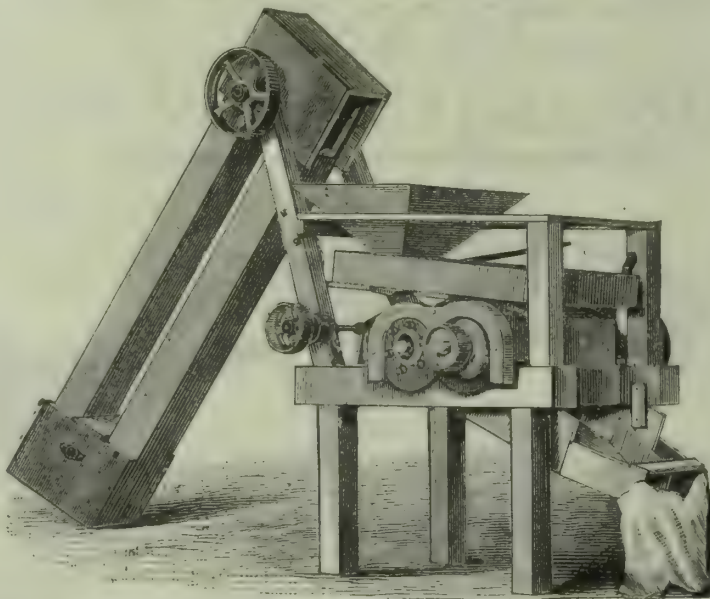
Can be had at almost any Grocery or Drug Store on the Coast. Give it a trial; save the lives of your poultry and increase their egg production, and thereby increase your profits in both.

B. F. WELLINGTON, Proprietor,

Importer and Dealer in Seeds, and Agent for the Perfect Hatcher Co., of New York.

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

REED ORGAN MUSIC.

The Emerson New Method for Reed

ORGANS. (\$2.50) is one of the newer methods, has a fine "method," is by two well-known writers (Emerson and Mathews), and has a goodly quantity of very pleasing music, instrumental and vocal.

Clarke's Harmonic School for the Organ (\$3.00) is for church organs either Reed or Pipe, and is an admirable school for voluntary playing.

Clarke's Reed Organ Melodies (\$2.00) constitute one of the best arranged and interesting collections ever put to ether.

The Organ at Home (\$2.00) has about 200 easy Reed organ pieces. A well-known and popular book.

Clarke's Dollar Instructor for Reed Organs includes all the good music and instruction that can be placed in a "dollar" book.

Winner's New School for Cabinet Organ (75cts) is one of his series of very convenient cheap instructors for all instruments. They are only for beginners and amateurs.

Johnson's Parlor Organ Instruction Book (\$1.50) is highly approved, as teaching in a simple manner the playing of Sunday School, School and Church music on the Reed organ.

Any book mailed for the price above mentioned.

OLIVER DITSON & CO., BOSTON.

Established 1834.

C. H. Ditson & Co., 843 Broadway, N. Y.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1880. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS AND PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

New Crop Insect Powder.
BUHACH! BUHACH!

None genuine without this trade mark.

SURE DEATH TO ALL INSECTS.

An imported powder of a bright yellow color is sometimes sold as Buhach. Buy only that which bears our trade mark. All druggists and grocers not keeping it send for price list. BUAHACH PRODUCING & MANUFACTURING CO., 154 Levee street, Stockton, Cal.

JOHN BERGSTROM,

ORGAN BUILDER.

29th. and Mission Sts.

PACIFIC BRANCH.



GEO. D. DORNIN.....Manager.

WM. SEXTON.....Asst. Manager.

INSURES ON GROWING CROPS under a plain and easily understood Contract, also on Grain in Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

CALIFORNIA'S
Exposition.

The Twenty-ninth

Annual State Fair

Begins at

SACRAMENTO, CAL.

On the 11th, and ends on the 16th of September.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

LIVE STOCK, MACHINERY, IMPLEMENTS, ETC., TEXTILE FABRICS, MECHANICAL, AGRICULTURAL, HORTICULTURAL PRODUCTS, and FINE ARTS, ETC.

Any further information may be had upon application to the Secretary, from whom Premium Lists may be procured.

RUGH M. LARUE, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacramento, Cal.

Excelsior Fruit Pitter.

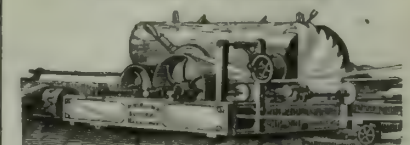
Invented by A. Donatella.

This machine recommends itself by the following good qualities: Rapidity of work, one operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the riddle for the dryer. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Apples, Apricots or Nectarines pitted with this machine dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address:

A. DONATELLA, Healdsburg, Cal.

WIESTER & CO., General Agents, 17 New Montgomery Street, S. F. Francisco.

THE MASSILLON PONY MILL
STRICTLY PORTABLE.

Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent.

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO.,

Agents for the Pacific Coast.



Volume XXIV.]

SAN FRANCISCO, SATURDAY, AUGUST 5, 1882.

Number 6

Beside the River.

We give herewith a quiet riverside scene appropriate to the height of the summer season through which we are now passing. The angler has chosen a charming spot for his sport and meditation. We will suppose that he is of philosophic mind and is enjoying his situation, thinking such thoughts as the following, which we find in "Halcyon Days," a new book, by Wilson Flagg:

I never look upon a clear stream of narrow dimensions, without thinking of the thousand beautiful scenes it must visit in its blue course through the hills and plains. What a life of perpetual delight must be led by the gentle river goddess, as she is wafted up and down the stream in her shallop of reeds! Now coursing along under banks sprinkled over with honeysuckles, while their fragrance follows the current of the stream, to entice the bees and other insects to their fragrant flower-cups; then passing through a pleasant forest, where she is regaled by the terebinthine odor of pines mingled with that of flowering lindens, whose branches resound all day with the hum of insects and the warbling of birds. Every green bank offers to her hand a profusion of wild strawberries, and every rocky declivity hangs its brambles over the stream, and tempts her with delicate clusters of raspberries and other delicious fruits. How, if she takes pleasure in the happiness of human beings, must she be charmed by witnessing the plenty which is everywhere diffused by the crystal waters of her own stream, the countless farms rendered fertile and productive through its agency, the numerous mill seats that derive their power from its falls and rapids, and gather the industrious inhabitants in smiling hamlets upon its banks! A river, when pursuing its winding course along the plain, alternately appearing and disappearing among the hills and woods, suggests the idea of a pleasant journey, and is peculiarly emblematical of human progress. It always seems to me that it must conduct one to some happier region, and that if I traced it to its source, I should be led into the very temple of the Naiads!

With the pleasant forms of water are associated nearly all the pleasant images of rural life. To one who is tired of his busy employments in the city, a rural retreat is like a cool breeze to the traveler in a sultry desert. A little arbor that overlooks a river, a lake, or an arm of the sea, derives its charms almost wholly from the water, which is at the same time the symbol of peace and plenty, and the mirror of heaven. A hermitage by the side of a stream affords a secret retreat, still more delightful from its fancied association with pious seclusion from the world. Every flower that looks up to us from the green, mossy turf, every bird that warbles in the neighboring copse, and every insect that hums in the herbage at our feet has a soothing influence that, for a season, dispels every care and every feverish excitement. Then do we feel that nature only has power to administer that solace which is balm to the soul when one is vexed with care and weary of men.

THIS week will see nearly all the schools at work. The public schools first attacked the demon of ignorance, and then the many good private schools opened their doors to the hosts of young men and maidens who come from all parts of the coast to California to secure the benefits of education. The spread of prosperity is leading many to give their children the best of all legacies—a cultured mind—and the outlook for manhood and womanhood, and citizenship grows continually brighter.

RABBITS IN VINEYARDS.—At the meeting of the Santa Clara Viticultural Society last week, a communication was read from C. P. Eckhart, of Uvas, asking what could be done to prevent the ravages of rabbits in vineyards. The sense of the meeting was that traps and tight board fences are the only effective preventives.

ANGLERS in Montana predict that in a very few years trout will all disappear from the valley streams, owing to the immense numbers carried out into irrigating ditches and into the fields.

Agricultural Lands in Arizona.

The Tombstone *Republican* claims that most erroneous and damaging impressions exist abroad in relation to the agricultural and grazing capacity of the southern and eastern portions of Arizona. Men who have read of the Gila and Mohave deserts naturally conclude that those arid plains constitute a large portion of the whole Territory. Nothing, says the

ible of the highest state of cultivation and productiveness. That broad belt along the eastern slope of the Huachuclas, which extends in unbroken continuity for the whole length of the range, a distance of 25 or 30 miles, is an example of this sort of land. Mowers were run over hundreds of acres of it last year and hundreds of tons of hay put up for winter use.

CLOSING THE GATES.—On Friday of this week, August 4th, the new Chinese exclu-



THE QUIET OF MIDSUMMER.

Republican, could be wider of the mark than such a conclusion. While there are tracts of large extent covered with cacti and prickly brush and insufficiently watered, there are other tracts infinitely larger that are free from all such obstructions, and covered with a thick growth of rich, nutritious, perennial grasses, with either flowing water, springs or subterranean water at from 6 to 50 ft. from the surface. Even much of the brush land is well grassed, with water easily accessible to stock. Notably is such the case for nearly the whole length of the San Pedro river. There are in Cochise county three large valleys, which cover an area of several millions of acres of fine grazing and agricultural land as can be found in almost any country. These are the San Pedro, Sulphur Springs and San Simon valleys. Independent of these valleys, there are immense tracts of level or gently undulating mesa that skirts the base of the various ranges of mountains in this county, that constitute vast natural pastures and meadows, and which, by the introduction of water for irrigation, are suscep-

tion Act will go into effect. We have stored up a surplus of this material during the last few months, for about 30,000 have come in since last New Year's. Now let us see where a better class of immigrants can be obtained—men who will work faithfully, and not expect to earn enough in a year to buy out their employers. We must have laborers, or our diversified industries will be checked. In this connection we may mention that Col. Preston, Secretary of the Immigration Association, offers to do what he can to furnish help as needed. He has issued the following circular:

As it is the object of this association to encourage immigration into California, not only of agriculturists of some means, but of skilled artisans, laborers, etc., seeking employment; and, as we receive many applications by such, we would like to keep information on file as to whether or where such laborers are wanted. We therefore ask you to make your wants known now or at any time, that we may be able to assist deserving persons in finding employment they are fitted for.

A FREIGHT train of 29 cars left San Francisco July 13th, and made the run to Kansas City in five days and six hours.

False Dairy Products.

We alluded some months ago to the effort making in Congress to prevent or restrict the manufacture and sale of oleomargarine and other false dairy goods, by the placing of a national tax upon the business. As was expected, those who are being profited by this style of business have brought great influence to bear upon Congress, and have secured the killing of the original bill. There is still, however, some slight ground for hope of protection to the legitimate product, for the Committee of Ways and Means has consented to report a substitute for the bill, which, if passed, will do something to mitigate the evils of which dairymen make just complaint. This substitute provides that the manufacturers of the substitutes for butter and cheese, or the substances used for adulterating these articles, shall pay a tax of \$15 as manufacturers, and a dealer's tax of \$2.40, and that each package or parcel of their compounds shall be stamped with a one-cent revenue stamp before removal from the place of manufacture. Selling, or offering to sell, an unstamped package or parcel, subjects the offender to liability to the proper tax, and \$100 per cent in addition, and a fine of \$1,000 for each offense.

The *Prairie Farmer* says there is now no hope for the passage of the bill at this session. The obstructionists have delayed the matter too long. The only thing left for the dairymen and the people interested in genuine dairy products is to wait until the meeting of the new Congress next winter. In the meantime it will be best for them to find out the opinion of candidates upon this question before the fall elections take place, and to secure, if possible, a clear working majority for a bill of this kind. They will do this if really in earnest in the matter.

Wild Pests on Tame Plants.

There are many instances of the disposition among many pests to transfer their abode from the wild growth of tree, shrub or plant to the cultivated growth in our gardens and orchards. Insects, both large and small, are moving their families from the hard forest forage to the tenderer foliage and fiber of fruit trees. Fungi show a similar disposition, and the agriculturist is often well nigh disheartened when he thinks that he may have to fight all the pests which may be lurking in the forests. A similar problem has assailed farmers everywhere. A new instance is reported from Massachusetts, for we read in a Boston exchange that a very serious charge has been brought against the red cedar, by those who are close observers, and who possess high intelligence. It is stated that the cedar apple is produced by a species of fungus, which is the same that causes the leaves of the apple and pear trees to spot, turn yellow, and drop off prematurely; it is said to be the same that settles on the ripening apples and causes mouldy spots, which results in the early decay of the fruit. When this was first suspected by scientific men, many doubts were expressed as to its truth; but careful observation and experiment seemed to confirm its correctness. It is now the opinion of close observers, that the fungus of the cedar apple will settle on the leaves of both the apple and pear tree, and cause their early decay. As the red cedar is one of the most hardy, as well as one of the most beautiful trees of eastern Massachusetts, and one, too, that furnishes a material the most durable for fence posts, this serious charge against it will have to be proved, beyond the possibility of a doubt, before the woodman's axe will be permitted to remove it.

COLOSSAL HOLLYHOCK.—The Los Angeles *Times* says that on W. B. White's place, about three miles south of that city, is to be seen a hollyhock plant, raised from the seed since last April, measuring 16 ft. in height. The body of the stalk is nearly flat, and at a distance of five feet from the ground is five and one-half inches in width and in full bloom.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—*Eds.*

Arizona Potanical Notes.

Native Potatoes.

EDITORS PRESS:—Would any of your readers like to experiment with the cultivation of native potatoes? We have found two species here, each of them bearing tubers as large as almonds, and very delicious to the taste. One is *Solanum jamesii*, and it bears small, narrow leaves and whitish flowers. Its tubers are whitish and usually smaller than the next. The other species is called *Solanum thurberi*, and it bears larger, ovate leaves and bluish flowers, while its tubers are likewise blue-black, and generally of larger size. This species especially bears a strong likeness to our cultivated potato. Both species grow to the height of a foot or less, and the tubers are produced on longer subterranean stems than we are wont to find in our common potato, but cultivation may change this.

The plants are found in newly-disturbed soil, and seem to thrive by being annually submerged by layers of alluvium from mountain torrents. These conditions suggest the culture which intelligent persons might give to these native species and so bring out, who knows what valuable results. As we shall remain here until autumn, we can dig and preserve tubers of these potatoes and forward to any applicant. If circumstanced so that we could give the time and requisite care to this experiment, we should not ask for aid, but busy as we are every summer, we can only offer to furnish the tubers of these potatoes for others to cultivate and reap the reward. Persons can apply by mail addressed to Fort Huachuca, Arizona, or through the columns of the *RURAL*, which, by the way, regularly arrives and is eagerly perused.

Chiricahua.

Last season, your readers may remember, we botanized the Chiricahua mountains, 80 miles to the east of this range and directly in the region of the hostile Apaches. Alarms of various kinds—true and false—annoyed us so that our explorations had to be limited to the vicinity of Fort Bowie, and then could only be prosecuted by terrible exposure and over-work. This season we seem to be more fortunate in selecting a most interesting locality for exploration, which is also unmolested by savages or cowboys—as yet.

The range lies nearly north and south, and is 70 miles long by half as wide. The formation is lime, granite and syenite in superposed layers, all broken across by frequent canyons of vast depth and unparalleled scenery. In the northernmost of these, a long, cool, shady and well-watered ravine is nestled at its very mouth—the new fort of Huachuca. As a strategic point, this locality is unexcelled on all the boundary, while for coolness and healthfulness this fort is most fortunately placed. Although the hottest days of this almost torrid climate are now passing, yet the soldiers omit but few of the usual movements of a garrison, and are often seen in full force on the parade ground during the middle hours of the day. But the plains of the San Pedro, only a few rods distant, are red and shimmering with heat.

The fort is now garrisoned by four companies of troops, but soon the number will be raised to eight companies. A large and beautiful building is now nearly completed for the accommodation of two of these companies. The building is 230 ft. long and will cost nearly \$10,000. It is pretty enough for an exposition pavilion. Two more are projected, and soon this will be a large and important post, having especial relations to the Mexican border long after the Apaches are repressed. The commander kindly supplies us with tents and certain stores that we could not bring along, and it was not many days ere we were climbing the peaks about or threading the narrow canyons for plants. Though the season has been dry, yet along the streams of living water some plants are always to be found coming into bloom one after another.

Yesterday we moved temporarily over to Tanners' canyon, 10 miles north of the fort. Here we meet with many novelties, including Dr. Parry's lily, here growing five ft. high. This lily is abundant in a small locality on the southern slope of the San Bernardino mountains, in California, and, strangely enough, it is also found—only a few bulbs in a place—in two far-southern localities, viz.: In the Santa Catalina mountains, near Tucson, and in the still farther range of the Huachuca. The beautiful, large, yellow-flowered Arizona iris is found here also, and the curious golden columbine, with spurs to the corolla three or four inches long.

Our usual good fortune attends us still in the discovery of new ferns, and we have added two more species to the flora of Arizona. A new mammoth sedge, found by the living streams, seems to be a valuable forage plant. It is very large-leaved, and with flowering stems four to eight ft. high. In unprotected places the plants are found with the leaves closely eaten off by stock, leaving the long, large, wand-like fruiting stems waving in air.

Three out of the four "new trees" described

before the Academy of Sciences last winter are found here also, viz.: the two pines and the sycamore.

The rainy season has just set in, after which a new garment for the mountain slopes will appear. Then we hope to explore the other canyons, one after the other, to find many other new and rare things, of which the *RURAL* will be duly advised. J. G. LEMMON.
Fort Huachuca, Arizona.

HORTICULTURE.

State Horticultural Society Meeting.

The State Horticultural Society held a meeting Friday afternoon, July 28th, at the Academy of Sciences. The President was absent, and H. P. McKoon occupied the chair until the Vice-President, J. V. Webster, arrived. J. A. Bunting, of Centerville, J. S. Sherman, of Redwood, and General Theodore Wagner, of San Pablo, were elected members of the Association.

The first subject for discussion, "Propagation by Budding," was opened by James Shinn, of Niles, with the following essay:

Propagation by Budding.

Among the several methods employed in the propagation of fruits and the perpetuation of varieties, none occupies a more important place than that of budding.

The art of perpetuating varieties of fruits by grafting and by layering was understood by the ancients, almost as early as we have any authentic history. Budding was introduced for the same purpose at a much later period. This method was but little practiced in our own country until within a comparatively recent period. Many of the early settlers brought seeds with them from the old country, and from these were gradually obtained orchards of seedling fruits; and our people depended mainly upon these until enterprising individuals began to introduce the best European sorts, and to perpetuate these, and some of the best American seedlings, by budding and grafting. Soon nurseries for the growth of fruit and ornamental plants began to spring up in various places, and the facilities for obtaining choice fruits have been extended, until now no one thinks of planting any other than budded or grafted fruit trees. Without the knowledge of some such simple and easy method of increasing the number of any given variety of fruit trees as the practice of budding and grafting affords, it would be utterly impossible to supply the millions of trees now required every year for planting. If our whole dependence rested upon seedling plants, our supply of choice fruits would be exceedingly limited.

I hardly need remark that budding has no tendency to improve any variety of fruit; much less has it any power to produce new varieties. As before intimated, the object of budding is simply to perpetuate certain desirable varieties, and to increase the number of trees and plants as circumstances may require. Important as is the art of budding in the propagation of fruit trees and other plants, yet it has limitations. We cannot bud the rose on the lilac, nor the orange on the pear. All varieties of the same species may be budded upon each other interchangeably under all circumstances. Beyond this there is more or less uncertainty, and it is not easy to fix the exact limit within which budding may be employed with any certainty of success. Those species of plants most nearly allied may be most safely intermingled by budding. The plum and the apricot may be budded upon each other with good degree of success. So, too, most varieties of the plum and prune, and also of the apricot grow well and bear well upon peach stocks; yet there are some exceptions to this rule. A few varieties of the plum refuse to assimilate with the peach. The pear, also, may be grown on the quince; but the rule is limited to a few varieties; all others succeed better when budded upon their own stock.

The proper time to bud trees and plants varies with circumstances. It may be performed at any time of the year when good buds can be obtained, and when, at the same time, the stocks or branches that are to receive the buds, are in proper condition of growth to receive them. Those who carry on large nursery operations generally bud their young trees early in the autumn, or as late as they can safely depend upon a proper condition of the plants to be budded.

The art of budding as a mere mechanical process is very simple. The novice may acquire it by a few lessons with any experienced budder. The buds should be used soon after being taken from the parent tree, though they may be preserved in good condition for several days with proper care. The whole process should be quickly done. The bark opened, the bud cut from the "bud stick," quickly but carefully pushed into its place, the ligature bound moderately tight and tied, and the process is done.

Whenever the ligature begins to cause indentations in the stock by reason of the growth of the latter, the wrapping must be cut or loosened. Buds so put in are expected to remain dormant until the succeeding spring, and nothing more is needful to be done except to keep the stock free from sprouts or suckers, which are apt to start out below the new bud. Next spring, as soon as sap begins to swell the buds on the stock, cut it back to within about two inches of the bud, and keep down all

growth except that from the new bud. When the bud has made a growth of 10 or 12 inches, the stock may be further cut to within, say, three-fourths of an inch of the bud.

The whole process has now been completed. The tree has been changed from one variety to another, and this change is for life. Perhaps a worthless seedling has been changed to a choice Bartlett or Virgalieu, or, perchance, to a luscious Crawford or Salway peach.

In conclusion, I cannot forbear the remark that, with so simple and sure a method of changing poor and worthless fruit to good and valuable sorts as budding affords, no one is excusable who does not grow the best and only the best fruit.

Discussion.

Mr. Trumbull: Mr. Shinn, can you recommend any particular material with which to bind the bud?

Mr. Shinn: Well, we use strips of calico—cheap, five-cent calico. Take a piece 13 or 14 inches long and tear it into about 75 strips. Tie them with that. I find that a cheap way. I got some bass wood. It's a beautiful thing to use, but I couldn't get the Chinamen to use it. The calico is as good a thing as I know of. I received some dormant buds from the East last year. They had been tied with twine and they were damaged. Strips of calico do not indent it so badly.

Mr. Trumbull: I know one party who is using cord. I think he uses it because of the facility in handling, not because it is superior. I think it is likely to injure the bud. It restricts the circulation of sap. Mr. Lowelling stated that his plan was to use stocking yarn.

Mr. Shinn: I have used twine, but it is more likely to cut. We prefer the strips of something, which bear more evenly upon the surface.

Mr. Rock: I have used candle wicking, and like it first rate. I prefer it to cotton strips.

Mr. West: I always use candle wicking. I like it for all kinds of stocks. No kind of work should be done poorly. I believe it can be done better with candle wicking. It covers the whole surface well. I wind it around and make a loop at the top.

Mr. Lowelling: Wicking is as good as anything, but not quite so speedy.

Mr. Rixford: Where two species of plants are used, which is better to use, grafts or buds? For instance, two plants, which belong to different genera. I think the rule is, that where there is any difficulty in connecting, buds are the best and safest. It is said that it is safer to bud where the pear is to be grown on the quince. I know that is the rule in all the treatment of the subject of growing the pear upon the quince—buds, not grafts.

Use of Dormant Buds.

Mr. Shinn: The peach may be planted in dormant bud with a good deal of success. I have generally succeeded in getting three-fourths of them to make good trees. It has been my experience that the trees will not be so large. Dormant buds put in this spring, under the best circumstances, are not more than two-thirds the size of those that remained where they were budded. Peaches may be transplanted in dormant bud with a good deal of certainty. Beyond that, it is not desirable. I would not plant plums, apricots or pears in dormant buds. A couple of winters ago, I sold several thousand French prunes. That is a hardy plant. The man was determined to have them in dormant buds. I saw them a while ago, and they were about half growing. I don't recommend planting anything but ordinary buds, under ordinary circumstances. Dormant buds require a good deal of care. Plant as early as possible.

Mr. West: I seldom advise any one to buy dormant buds. This year I don't think there will be half the trees which will be wanted if they don't use dormant buds. We shall have to sell dormant buds. People will grow a great many peaches. I have seen dormant-bud apricots grow very well. Out of 1,000 which I sold to one man, 800 grew. Apricot trees from dormant buds are not quite so nice, because their growth is straggling. We have to tie them up. Peaches generally grow up straight.

Mr. Shinn: Some have good luck in planting dormant apricots. I sold some last winter to a gentleman at San Lorenzo. He told me he got about 95% of them to grow.

Mr. Hatch: A good deal depends on the management. There are a great many things to contend with. In the first place, there are the rabbits, the men and the horses—they run over the whole business. One would gain a great deal more by holding them in the nursery another year.

Mr. Trumbull: We became possessors of a large number of dormant-bud peach trees. We did not want them, but we had to take them. I have been surprised at their growth. I saw some that were set out by a gentleman, not an orchardist at all. We gave him instructions, as far as we could. He evidently carried them out literally, for 19 out of every 20 grew. Such a handsome growth, without the use of water, I never saw. I mention this because I am satisfied in my own mind that it was not because there is a trick in the trade, but a man who sets out a tree with the idea of making it grow will be successful. At the same time, I would not recommend them, but would set out the trees which had reached one year's growth from the bud. You can buy the dormant buds at a much lower rate, and you can pack them in a smaller compass. Both these considerations are sometimes important.

A gentleman came into our place the other

day. He made inquiries about the price of trees, and turned up his nose at each one. He said he didn't wonder California nurserymen didn't succeed. He said he got 115 trees for about \$5. The package weighed less than four pounds. Here they were, little fellows. He got an armful for about \$5, and he was setting those things up against our California stock, which I do claim is the best in the world. The person who hesitates to pay \$15 or \$25 or \$100 for our fine California-grown trees is ignorant, or has not the money.

Mr. Hatch: I would like to ask Mr. Trumbull to give us those instructions which brought such success. I would like to say that if a man is putting out several thousand trees, he cannot do all that work himself. He has to delegate it to others, who are not as careful as he. I have had men plow up as many as three trees in one row, and rub five on each side with the harrow.

Mr. Trumbull: The first thing that I told him was that he must do the work in person, or be present when it was done. You are the man who has the greatest possible interests. The man who doesn't value the life of a tree will not value the life of an animal. When they are set, care for them as Mr. Shinn suggests. Do not allow them to sucker too freely. On the other hand, you drown the bud if you remove all the shoots and allow the full force of the cap to go into the one bud. If possible, let a sprout or two come out above where your dormant bud sets. I recommended him to stake trees. He has trees which stand three and four feet high. They branch out beautifully. Those were Early Crawfords and Late Crawfords.

Budding the Rose.

Mr. West: I don't know much about budding the rose, except a few varieties. I do not see the use of budding, except with a few kinds; cuttings grow so well here. I have seen cuttings put in the ground which would never have grown for me, but they grew for the ladies. In old times, when there was a scarcity of roses, I used the Castilian stock. They grow a great many suckers.

Mr. Rock: I believe about the same as Mr. West. Some people are very successful, while some are not. The Lady Banksia is good stock for budding in some tea roses.

Mr. Klee: The same rules apply to ornamental trees as well as fruit trees. There is very little to be said on the subject. Roses may be budded almost any time, but July is the best month here. It varies according to the climate. It is hard to lay down a rule in California, where we have two or three months difference in the season. There are some climbers I have seen used with success as stocks. The La Marque is one. I think it is a new idea of using the La Marque. Of the others, I think the common dog rose has been successfully used.

Mr. Trumbull: We have been using the Banksia rose for stocks for budding. We like it very well. We like it for two reasons. It is a runner of vigorous growth, and it is free from thorns. Men like to handle them. They hesitate from budding thorny roses. Budding of roses should never be resorted to, if you can get along without it; but we have found that in trusting to cuttings, we sometimes fail on the roses which we have greatest demand for. For this reason, we bud, as the product is more secure than with cuttings.

W. B. West, of Stockton, read the following essay on

Fig Growing in California.

It was not my intention when I proposed this subject, to write an article upon the fig. I only wished to collect together in this hall the different varieties that we may have, in order to compare them and learn where are the most suitable localities for their growth, and to bring into notice new or valuable kinds. Also, to correct the nomenclature which is in this State, as well as elsewhere, very indefinite. In order to be as explicit as possible, I will speak first of figs as a table fruit, and afterwards consider them as a dried article.

Figs as a Table Fruit.—Figs have heretofore occupied a very unimportant place in our fruit market. They are not used so freely as they are in the countries of Europe and Asia, where they are produced. There, the fresh fig, when in season, is always seen on the tables of the hotels as a dessert fruit. Fresh and dried it constitutes an important part of the food of the poor. It is a gentle laxative, and therefore healthy in a warm climate.

The reason for this lack of appreciation of the fig as a table fruit in this State, I think, can be seen in the varieties which are offered in our markets. Only large, coarse kinds, such as the Brunswick, Brown Turkey and California, or Mission fig, will sell. It is really amusing to see with what indifference a customer will pass a box of good, delicate fruit, if it be small, and purchase only the coarser kinds. It is true, that the more delicate kinds are harder to grow, being more sensitive to frost; but there are localities where enough of them can be produced to supply any demand that there may ever be.

Some Leading Varieties Described.—It will be a difficult task to give correct names to the varieties that we have. Eastern nurserymen are unreliable, as they seldom see the fruit on the trees they propagate from. Those coming from Europe are often without name, or having only local ones. There are a few prominent sorts, however, which, although they may differ in different localities, cannot be easily mistaken. I will give a short description of a few of them:

The Brown Turkey. A large brownish fig often seen in San Francisco markets, sometimes called the Smyrna. It is only good to be used fresh. It will not dry well, as the skin becomes very tough and the pulp sour.

Brunswick—Color, dark olive, of large size, but very coarse.

These are favorite kinds to grow under glass in England, and are often seen in San Francisco markets.

California, or Mission—Too well known to need description. It is the only black fig that I am acquainted with that is of any value to dry. The tree is very thrifty and prolific, and, as they often attain a large size, the product is enormous. I have known as high as 1,500 lbs. of dried figs to be taken from three trees.

These three kinds are, with few exceptions, the only ones seen in our markets. The last is by far the most valuable.

Among the later importations is the San Pedro. This kind is known under various synonyms all through the south of Europe as the largest and most delicious of figs. It is ripe in the south of Italy and Spain by the 24th of June, and produces only one crop.

At Naples there is a fig which is much valued, called the Turiana. It occupies a place in the summer months after the San Pedro. It is like the preceding, very delicate and luscious.

There are other well known varieties, small, but of good flavor, such as the White Marcellis, White and Green Ischia, the Celeste, from New Orleans, and a host of others valuable as additions to our fruit lists.

Later in the season there is a variety which, for the want of a better name, I have called the Verdoni, which is its Italian name. The skin is green, but the pulp is dark red and very sweet. It hangs on the tree until winter. The tree is a very strong grower, forming a large shade tree.

The above is a list of figs which will give a succession of good fruit all through the season. Some may prove too tender for some localities, others are hardy anywhere in this State.

The True Smyrna Fig.—There are many kinds of figs dried in Spain, France and Italy, but I have never seen any of them that I considered of any value compared with the fig of Smyrna. They are much like the product of California—in fact, as a rule, inferior to those made from the Mission variety. Some of the French kinds look white and nice, but they are small and their skins quite tough. Through the enterprise of the San Francisco Bulletin Company, the true Smyrna fig has been introduced here. Fourteen thousand cuttings were imported, 5,000 of which were distributed through the Pacific coast. The balance are in the hands of some of the leading nurserymen of this State. I am indebted to G. P. Rixford for the following notes, made principally from an interview with Hon. E. J. Smithers, United States Consul for 20 years at Smyrna.

Cultivation of the Fig at Asia Minor.—The finest fig region of the world, as far as known, is the plain or valley of Aiden, Asia Minor, about 75 miles southeast of Smyrna. The appearance of the country is strikingly like the foothill region of the Sierra Nevada. Consul Smithers said, when here 18 months ago, that while traveling in this region on the Central Pacific railroad, he could scarcely realize that he was not riding through Asia Minor, so closely do the two regions resemble each other. The climate of the Aiden district is as similar to that of California as is the topographical appearance. There they have the same dry summers and rainy winters, with about the same degree of frost. It is a significant fact that the region in Asia Minor which is noted for producing the finest figs is also noted as growing the choicest apples.

It is not likely that the true Smyrna fig was introduced into this State until two years ago. Persons in this city who have visited the fig orchards of Asia Minor assert that they have never seen fresh figs in our markets that at all resemble the fruit they saw upon the trees in that country. The drying fig is never eaten fresh at Aiden, being dry and very sweet and cloying. The owners of the largest orchards always have a few trees of other varieties for supplying their tables with fresh fruit.

Curing, Grading, Packing and Shipping.—The Smyrna fig remains upon the tree until it falls off of its own accord, which occurs when nearly cured. To complete the drying, the figs are spread out in the sun upon a layer of dry grass for a few days. During this time the fruit attracts insects, which deposit the eggs that produce the worms so often found in the imported fig. No doubt the California grower, with more enlightened treatment and appliances, will be able to do away with this serious objection to imported fruit.

After the figs are sufficiently dried, they are packed into camel's-hair sacks, being pressed down into a solid mass, frequently by the feet of the operator, and are then shipped by rail to the merchants of Smyrna.

The work of grading and packing the fig is mostly done by women. The figs are dumped from the sacks upon the floor of the warehouse, to be separated into different grades. The operators are seated beside the heaps of figs, and each is provided with five baskets, or as many as there are different grades, into which the fruit is to be assorted.

The poorest quality is used only for distilling purposes, being mostly shipped to France. The next grade is ground up and made into fig paste. The next quality, most of which have a sun scald on one side, or other defect, is packed in barrels or kegs, as we frequently see them in this market. The number one and two grades are packed into boxes and drums, as we find them at all the retail fruit stands of the city.

The packing is done by a different set of hands from the graders, and in different apartments. The finest figs undergo a considerable amount of manipulation, being pulled and stretched out, in order, when pressed and flattened at the top of the package, that they may appear much larger than they really are. Smyrna figs are not dipped into lye or other solution; the only application, if it can fairly be called such, is that each operator is provided with a basin of sea water, into which the tips of the fingers are occasionally dipped, to prevent them from sticking.

The Climate—Artificial Fertilization of the Fruit.—As the climate of Aiden is much like our own, and we know that the fig is grown all over our State, we may infer that we can be successful with the culture of the Smyrna fig, but, like all other kinds of fruit, it will be better suited to some localities than others, probably in some rich, warm valley, either in the foothills of the Sierra Nevada or of the Coast Range, or perhaps in the warm belt of both ranges. My own experience with the finer varieties leads me to think that in a climate like Stockton, where the nights are always cold, it will not be a perfect success.

The winters of 1878 and 1879, 1880 and 1881 were unusually severe, killing trees that had never suffered before. The fig and olive are often injured in the south of Italy and Spain, still their culture is considered profitable.

The following is from high authority, although equally high authorities do not sanction it:

It is well known that many of the immature receptacles drop off from imperfect fertilization, which circumstance has led to the practice of caprification, or artificial impregnation. Branches of the wild fig containing fruit are placed among those of the cultivated ones. Certain insects which frequent the wild fig, enter the minute orifice of the receptacle, apparently to deposit their eggs, conveying thus the pollen more completely to the stigma. They thus insure the fertilization and consequent ripening of the fruit.

By some, the nature of the process is questioned, and the better maturation of the fruit attributed to the stimulus given by the puncture of the insect, but the arrangement of the flowers renders the first theory more probable. The fig orchardists of Aiden believe so strongly in the former theory, that when in the winter of 1879 and 1880 the wild fig was so badly injured by frost that it produced no fruit, they sent to the islands of the Grecian Archipelago, and imported shiploads of the wild fruit for this purpose.

Statistics of the Fig Trade.

The amount of figs exported from Smyrna I am not able to give. Great Britain uses about \$1,000,000 worth each year.

There were entered, for consumption in the United States, dried figs as follows, the duty being 2½ cents per pound:

Year.	Pounds.	Value.	Duty.
1879.	3,369,475	\$247,075.00	\$84,236.89
1880.	6,396,413	440,507.09	156,680.92
1881.	3,420,427	379,382.55	\$5,510.72

Discussion on Fig Growing.

Mr. Wolleb: I think the Sacramento valley, and particularly the foothills, is the best place for figs. A gentleman, who grows them in that region, told me his method of drying: The figs are put on a string through the small end, and hung up to dry. When they are dry, they are put on the big end and pressed down flat; then afterwards packed. I saw some figs that were as nice as any from Europe.

Mr. Trumbull: Is this Smyrna fig the real true Smyrna fig, and does it bear but one crop in the year.

Mr. Rixford: Mr. Smithers told me that that variety produces more than one crop, but it is one only crop (the second) which is used for drying. In regard to the caprification process, it is considered in Asia Minor essential, and unless it is practiced the crop fails. As you know, the blossoms of the fig are inside of the fig, and the claim is that an insect crawls into the fig, and moving about carries the pollen from the anthers to the stigmas. The importance of fig culture on this coast can hardly be over-estimated. There is no reason why California should not produce all the figs which we need on this coast. The subject is one of importance, and I trust this society will not lose sight of it.

Mr. Trumbull: The subject of fig culture on this coast is a very important one. I feel just now as if Mr. Shinn or some other person who knows something of this matter, should bring in a paper at another meeting. There are a great many places on this coast where figs can be grown. They may be used largely for the ordinary sustenance of life, or for daily food. I suppose Mr. West could give us some very good illustrations on this point—how much a small patch of ground, used properly, can be made to produce. Let some of our fruit growers take it up and bring in an enthusiastic speech.

Mr. Wetmore: I accidentally forgot the meeting to-day. I wish to plant the Smyrna fig, and I would like to know what is the best land for it. I have had very little experience in this State, but I had a theory of growing them on such lands as we find the sycamore growing on—land full of gravel. On such places I have found the fig growing very well. My impression is that a great deal of waste land is the most desirable for figs. I find they grow vigorously. It would be important to know something about where the best place for the fig is.

A Native Almond.

Dr. Kellogg: Our opinion that the peach is a native of Persia and that the almond is also a native of that country is erroneous, and I wish to call your attention to the fact that it is found wild in California.

I have preserved some specimens of the native almond. The specimen I have here is rather dwarfed. I have others of larger size. It is an amygdalus without any doubt at all, but the species I am unprepared to give.

The specimen we have made a figure from is about one-third larger than these. The flower I have not seen.

It is very much different from another species which is found in Mexico, because the flower stands out on long stems like the cherry. It is not set down on branches. The stem is about

one-half to three-fourths of an inch long, on which the fruit hangs. The form is oblique.

It is the genuine peach, only the native form. It is a shrub from five to eight feet high. It is found at Truckee, and was sent me by Mrs. Dr. Curran. It is a very interesting fact, it seems to me, that this plant is found to be a native of California. It settles the question of the native country of the peach. The native country of the peach is California, which many people will be surprised to learn. I have known of the existence of this plant since 1850, but it has never come to hand before. I had not the slightest doubt of its existence.

Apricots Shown.

John Rock showed some very fine apricots, some of them little known. The Mush-Mush is rather small, but very sweet, and is excellent for drying. Other varieties were the DeCoulange, New Large Early and St. Ambrose—some of the specimens being of immense size. Mr. Klee, also, showed apricots, one being the purple apricot, a fruit with the apricot flavor and shape, but with the reddest purple color of the plum and a lively acid taste. One would think it would make a fine wine-colored jelly. Mr. Klee showed also the Ontario and McLaughlin plums. James Shinn had a branch of the "Utah hybrid cherry," which was thought to be simply a wild cherry of the "Choke" persuasion. Also, he had fine samples of the apricot Albert de Mongamet.

Subjects for Next Month.

It was decided to discuss peach growing, plum growing, and what is the best fruit to plant for profit, at the next meeting, August 25th. Jas. Shinn will open the peach subject, and J. V. Webster the plum. All members are expected to give their views on the best fruits to plant. The society adjourned.

Cherry Growing in Santa Cruz.

The Courier-Item of Santa Cruz gives an account of cherry growing in that county from which we quote as follows: We were surprised the other day to learn from Messrs. A. G. Rose & Co. that their firm alone had already shipped over 10 tons of cherries this season, and that their pickers were still busy. Most of the cherries that supply our local market and furnish the surplus for export are grown in the

Vicinity of Sequel.

In this section are the orchards of Daubenbiss, Hobbs and Owen. Besides several others of greater or less extent. These three represent entirely different localities, and show the adaptability of different soils and climates. The cherry orchard of Mr. Daubenbiss is near the coast, that of Mr. Hobbs on the bottom lands of the Sequel creek, and that of Mr. Owen in a sheltered redwood canyon. Mr. Daubenbiss had seven trees planted many years ago, the fruit from which sold on the tree this year for \$65. The product of the younger orchard it is impossible yet to estimate, but several tons have already been gathered.

In the mind W. H. Hobbs, our Superintendent of Public Schools, the cherry is the finest of all fruits, and a few years since he planned a terrestrial paradise by planting a grove of cherry trees about his homestead in Sequel, whither he might retire when wearied of political and commercial life. These trees are now nine years of age, and cover about one-half acre of ground. Their yield this season will be 3,000 lbs. of fruit.

To M. P. Owen our local readers need no introduction. He is an enthusiast on fruit, but not without cause. His orchard, which stands where eight years ago were tall redwoods and tangled underbrush, is one of the finest in this or any other county, and it is a just pride with which he regards it.

Owen's Orchard

Is one of the wonders of California production, and an inspiration to every visitor who appreciates the transformation that has taken place from the wilderness of the redwood forest to the graceful rows of fruit trees with heavy laden boughs. It contains about 1,400 trees, about one-third cherries and the balance divided between peaches, pears, apricots, plums and apples. There is not a defective tree in the whole, and it has never received a drop of water from irrigation. In the dry year of 1877 about 1,200 trees were set, and the loss was less than one per cent. All the trees planted at that time are now in bearing, except some of the pears, and some varieties have borne from the first year. The cherry trees are now from 10 to 18 inches in circumference, branching close to the ground, and have been laden with fruit from the lowest fruit spur to the topmost twig. The cherries were sold, on the tree, to Messrs. Rose & Co., as were those of the other orchards mentioned, at prices varying from three to five cents per lb. At these figures all the picking, packing, marketing, etc., is done by the purchasers. The exact yield of but few trees is known, but these vary from 20 to 80 lbs. to the tree. About three-fourths of the crop is now harvested, and, from returns in, Mr. Owen estimates that the net income from the cherry orchard will be at least \$500. For the past two weeks the sight of the fruit on the trees has been a vision of beauty, and hundreds of people from abroad have visited the orchard. Stimulated by Mr. Owen's example, and encouraged by his success, several others in the vicinity have planted small orchards, which are promising equally good results. Five trees in

the yard of Wm. F. Cooper, in this city, 20 years of age, have this year produced 1,500 lbs. of cherries, of such superior quality as to command extra prices.

Cherry Pits.

The instances cited above are only illustrations of what is attainable in cherry culture in this section. There is nothing exceptional in location, variety or prolific yield in either case. Equally flattering results in proportion have been obtained by others, and are possible for the future grower.

A single cluster of 10 cherries from one of Mr. Cooper's trees weighed 3½ ounces, in the ratio of 45 cherries to the pound.

A twig cut at random from a tree in Owen's orchard, 11 inches in length, held 84 ripe cherries. The wood was of last year's growth.

Judicious pruning and thorough cultivation are the requisites of success.

The "bearing season" for cherries in this region extends with different varieties from 8 to 12 weeks.

FORESTRY.

Forest Trees of California—No. 7.*

California Juniper.

(*Juniperus Californica*.)

*And she cast the boy under one of the shrubs.—of juniper. —Moses, Gen. XXXI: 15.

This species is full oft, only a large depressed shrub, or a small tree of 20 or 30 ft. high; bark of body brown and shreddy; wood, pale; outline of top, irregular; branchlets thickest of any of the savin section; tiny scale leaves usually in threes; on young shoots they are loose and awl-form, white above; in age, they become short and thick, rounded at the tips, horny eye-lashed or fringed on the margin. These last twigs present the usual appearance of finely-corded sprays, least larger and largest; these last being more loose and scale-like. In the male flowers the anther scales mostly in threes, eighteen or twenty-four, rhombic, scarcely acute; scales of the female, tiny aments, usually six, and spreading; the galebuloid berry, globose or oval, five to six lines long, signs of scale tips, or mucros scarcely prominent; seeds one, or sometimes two, four to six lines long; shell very hard, thick and smooth, shining brown above, with large bilobed whitish hilum.

We are apt to confound this common coast and island species with the great far western juniper (*J. occidentalis*). However, as Dr. Englemann observes, it is readily distinguished by the fruit, this having a drier, sweetish, and not so resinous tasted berry, which is larger and reddish-blue bloomy (instead of being smaller and bluish-black, or rarely brown, as *occidentalis* is). Found in the vicinity of San Francisco, on the Oakland hills, Mount Tamalpais and Mount Diablo, all along the Coast range in general, and on the islands off the coast southward; also, said to be in the Sierras, and so on, to Utah and Arizona.

Junipers readily climb to any cliff, and thus form the most substantial, perfect and lasting screens, walls, mantels, or mats of verdure, over the most arid, sterile, sandy or rocky places, etc. Whenever planted and trained over or against objects deemed desirable to conceal, there is in this, only a furtherance of the order of nature, and because all men and things together tend toward sympathy and manifold harmony, orderly or disorderly, with their surroundings; therefore it is, when with the former, that our eye dwells with more pleasing satisfaction upon forms that do little or no violence to the order of nature. Who can fail to admire the responsible facility with which the minor species of juniper like this thicken in and apply themselves to that humble habit that, with a hint of training, they so readily take on, of shielding the rude and the rejected; laying the soft and soothing hand of natural beauty over the sharp and ragged rocks, lighting up the lonely and desolate places of the land; venerable in sacred classics for shielding the wild ass boy of the wilderness and archer of the desert; the bright leader in sciences and human rationality!

The universal use of these berries in beer and spirits is already too well known. Hitherto there has been no call, to speak of, on this coast for such superior timber; but if ever a naval demand for knees or short ship timbers should arise, no lack of resource will be likely to limit the supply.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

THE range of the human eye may be judged of from a consideration which gives us at the same time a good idea of the scope of animal structure. Supposing that an individual of every known species were to take its stand between the two species that were respectively the next larger and the next smaller than itself, the smallest known animal at one extremity of the line, and the largest standing at the other; and then supposing we were to ask which creature occupied the middle place, having as many degrees of size below it as above, that place would be found to be occupied by the common house-fly. What stupendous optical instrument must that be which, assisted with a few brass tubes and some disks of glass, shall discern a creature as much smaller than a fly as a fly is smaller than an elephant?

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The National Alliance.

The *Western Rural* gives a sketch of the progress of the National Alliance, a new organization, which aims to correct abuses in government by securing a fuller representation of the industrial classes in the halls of legislation. We quote as follows:

No one, except the Secretary of the National Alliance, has the opportunity that we have, of knowing how rapidly the Alliance is spreading, and how deeply it is taking root among the people. And that others may know what we know, and have reason for rejoicing, we desire to say the steady work of propagation goes on most encouragingly. This is really the second summer only of thoroughly systematized work, the first summer's work having been done under the disadvantages of only partial organization, and should not be counted. Last summer but comparatively little was done, and it was not expected that much would be done the present summer. Farmers are so busy during the summer season, that usually they have little time for anything outside of their regular duties. But the pressing need of reform has been made so apparent that many farmers, after the day's work has been done, and with weary bodies, have gone out at night to organize Alliances. Thus the work has been kept up during the summer, and a large number of applications for charters have been received at the National headquarters.

The army which has already been mustered under the Alliance Banner is a large and powerful one, although as yet, somewhat scattered. But it is growing larger and more compact every day. It will soon be able to stretch in unbroken lines from ocean to ocean and from Canada to the gulf. It is not a noisy army. We should be sorry if it were, for it is the man who strikes first and threatens afterwards who is the most effective. There has been little noise connected with this great movement, which has been rather characterized by the silent determination of desperation born of the patient suffering under great and accumulating business and political wrongs. One of the most unaccountable things is the apparent belief of demagogues and monopolists that they can abuse and crowd down as intelligent a class as American farmers, with impunity. A greater or more fatal mistake was never made. Opposition to political and business injustice may be slow in making itself manifest; indeed it has been deplorably slow. But it is now crystalizing, and is growing steadily and firmly as the oak of the forest grows. It takes a long time for our people to become aroused; they will suffer more abuse and suffer it longer than any other people on the earth. But they have their faces set the right way all the time, and it only remains for them to get ready to move forward. There are several well-defined stages in American reform. There is first the squirming stage, in which the people just squirm and wonder at the audacity of the wrong; second, the kicking stage, in which the people remonstrate; third, the stage of general agitation, and fourth, the stage of determined action. When the last stage is reached it is as easy to stop the cyclone in its course as it is to stop the people in theirs. They will have their own way then, if they break all the crockery in the attempt. The farmers are now in the last stage.

MISSION OF THE GRANGE.—We must never forget that, in the language of another, "the crowning glory of all our work, as an Order, is to educate and elevate the American farmer." This is our right, nay more, it is our imperative duty. Upon the proper discharge of this duty our future, as an Order, depends. Whatever else we may do, our chief reliance is upon this. Education is the corner-stone. We live in a day, age and country where knowledge is power. To attain and utilize this power, we must bestir ourselves. It will not come to us; we must use diligence in seeking it. It must be secured by co-operation, by association of views, by discussion, by reading, by patient study. In short, we must use all of the agencies in accomplishing this greatest work known to the race. Every Grange hall in the land must be a reading room and a thinking room, says Worthy Master Luce, of the Michigan State Grange, in his annual address.—*Farmer's Friend*.

GRANGE NEEDS.—What our Order most needs is not more talent or more money, or more opportunities, but more real, upright and downright work for our own and our children's good. It takes but a few members, a little money and small culture to build up a good Grange, when all have a mind to work. The greatest trouble with the Grange to-day, is a lazy membership, seeking to be benefited without any effort of their own, forgetting that "faith without works is dead." "What we want is not talent, it is purpose; in other words, not the power to achieve, but the will to labor." Grangers have learned that their salvation does not depend upon the success of any political party. They find it better to put their trust in Providence and the rational use of their faculties; their own

well-directed efforts in their own behalf are their best protection. No greater mistake can be made by any Grange than to imagine we do not need members. We need all good farmers and their families, and every Grange should be busy adding to itself all the best material to be found in the surrounding country.—*Dirigo Rural*.

The New Grangers' Business Association.

Amos Adams, Secretary, has addressed the following to the stockholders of the old Grangers' Business Association:

Much of the stock of the old Grangers' Business Association has been surrendered to the new association, and stock issued in lieu of it. There is some stock not yet surrendered for exchange, to the owners of which I wish to say, that about the 1st of October next steps will be taken to disincorporate the old Grangers' Business Association of California, and when the order of the court granting it takes effect, the old corporation will go out of existence, and, unless exchanged before, parties will hold stock in a defunct institution. It may not change the status of the stock in the old association, but it is better that all the stock be exchanged while the old association has an existence, because, in the event of the loss of certificates of stock, there will be officers, the President and Secretary of the old corporation, qualified to issue new certificates, which, when surrendered to the new Grangers' Business Association, other stock will be issued. Another reason why the stock in the old association should be exchanged is that the old association has transferred all its property to the new Grangers' Business Association. Consequently, you are holding stock in a corporation without assets. The only value it has now is the right to have it exchanged for stock in the present Grangers' Business Association.

GRANGE DISCUSSIONS.—For the last four years I have been much among the Granges, both in public and private meetings, and no subject of practical importance has been so fully and so often discussed as the subject of butter making, and it has been clearly seen that a feeling of emulation was being developed, which could but produce good results. No woman likes to be outdone by her neighbor, and when one sister tells of getting 35 or 40 cents for butter, the other sister, who is selling for 20, gets a bee in her bonnet at once. When one farmer tells of getting 400 lbs. from his cow, his neighbor, who is getting but 150, sees a big hole in the skimmer that he never knew of before, and forthwith he begins to investigate the cotton-seed and Indian-meal question, and probably he will batter up the cracks in the tie-up, and get a load of saw-dust for bedding. I know of nothing that will more strongly influence ambitious men or women than this feeling of emulation, and nowhere can practical questions be so intelligently and unreservedly discussed as in the Grange.—*Cor. Maine Farmer*.

THE GRANGE IN MAINE.—A correspondent of the *Grange Bulletin* writes: We have nominated our Worthy State Master, Col. Fred. Robie, as a candidate for next Governor, and we are going to elect him. We have nominated Worthy Past Master D. H. Thing, and we propose to elect him to Congress. Patrons in this State hold the balance of power, and if they but mass their votes, as they should, we can elect whom we will so mass on any general ticket. We have for years, as an Order, and as individuals of the Order, made a good deal of talk about electing Patrons and farmers to the Legislature and to Congress, and to places of trust and of honor, and now we have a chance to show our hands or go into our boots. Soon the campaign will warm up, and when the news of the election shall roll over the Alleghanies and down the Ohio valley you will hear good tidings from Maine.

THE UNIVERSITY OF SOUTHERN CALIFORNIA.—The University of Southern California (Los Angeles) has met with such unexpected favor from the public that further accommodations must be provided in the near future. The trustees of the endowment fund are now maturing plans for a system of buildings to be erected on the campus in the future, so as to have a uniformity of design, combined with the greatest utility and least expense. The intention is to erect the separate buildings each a unity in itself, yet so designed architecturally, and so located on the campus, that when the whole number is completed, it will present a grand, majestic whole. Each building will be about 150 ft. square. The whole will form a square of about 480 ft.—thus giving three buildings of 150 ft. square each, with a 15-ft. alley-way between each building, fronting, on each face, on the square. Eight separate buildings will thus form the exterior of the large square, the interior of which will constitute an immense court 180 ft. square. This inner court will, in course of time, be covered with a large skylight dome roof, forming the central architectural object of the group of buildings. It will be used for such art purposes as may be desired.

NORMAL SCHOOL AT REDDING.—We learn by the *Redding Independent* that our Shasta county friends, propose to urge their claim again for the location of a branch normal school in Redding. The *Independent* says: "Next winter this question will be before the Legislature for the third time, with better prospects of success than before. Los Angeles has secured the establishment of a similar institution, the buildings have been erected, and the school started under favorable auspices. The people of that section of the State are gratified with the success of their enterprise, and believe that it is a good thing for their country. Now that they have had the first show, we believe that they will have the farmers to help us next winter, and with their assistance we can carry our point, and not be snubbed by a few narrow minded sinecure holders around the bay."

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

CANNERY.—*Chico Record*, July 29: Blood's steam fruit cannery on Rancho Chico is now idle, owing to the fact that it is impossible to secure enough fruit during harvest. But there are nine men now engaged at the works making tin cans. Operations will shortly begin in the cannery, and it will run to its fullest capacity.

CONTRA COSTA.

CROP NOTES.—*Antioch Ledger*, July 29: Mr. John R. Byer, an Eden Plain farmer, had Messrs. Norman & Griggs thrash his grain last Saturday. The result was 112 sacks of wheat and five tons of straw. Last year, from the same land, and with the same thrashers, the yield was 4,000 sacks of wheat, and nearly 200 tons of straw. Considerable difference! Three thousand five hundred pounds of wheat to the acre is what Andrew Porter raised on 60 acres of summer-fallowed land at Point of Timber this season. So much for well-cultivated land in a dry season. Some of his neighbors did not raise anything, comparatively.

HUMBOLDT.

EDITORS PRESS.—As we live in an almost unknown part of the earth I will just say to the rest of the world that the crops in this little valley are splendid. Harvest is only just commencing. Wheat and oats are good, and so far as I have seen every kind of field crop is all that a reasonable man could ask for. As for fruit, apples are in abundance, peaches and prunes scarce, plums generally scarce. Currants and other small fruit were plenty in their time. Pears are generally very scarce, but some varieties are full of fruit. The weather is very dry, but there is plenty of green feed in the valley. It is rather dry for gardens, yet they are doing well without irrigation.—*JAMES HODGE, Rehnerville*.

LAKE.

CROPS.—*Democrat*, July 28: The harvesters are still very busy in Big valley and various other portions of the county, and the amount of grain yet uncut does not presage rest for them soon. It is a most happy report that comes from every harvest field this year.

LOS ANGELES.

THE EAGLE CHEESE FACTORY.—*Anaheim Gazette*, July 29: We met on the street Mr. F. N. Cocke, of the Eagle cheese factory of Los Boleas. He had with him a wagon load of cheese, which he sold to the store-keepers of Anaheim. He confirms our views in regard to the outlook of that industry. There is an almost clamorous demand for the products of the creamery, and every pound is sold as soon as it is fit for market. The Eagle factory is now turning out 150 pounds of cheese daily, and Mr. Cocke proposes to increase his facilities in proportion to the quantity of milk furnished to him. That the Westminster people found it more profitable to make butter than to sell their milk to the factory, was, according to Mr. Mr. Cocke, only partially true. If one is milking first-class Jersey cattle, it will probably pay better to make butter at the present prices, but unless the milk is very rich in cream, the greatest profit is in selling it to the cheese factory.

CENTINELA CROP.—*Mirror*, July 29: So much has been said in regard to the failure of the cereals in this locality, that we publish with pleasure some facts furnished us by Mr. D. Freeman. Mr. Freeman commenced thrashing on the 20th of June, and is not half through yet, thrashing from 1,200 to 1,500 sacks per day. In round numbers, this gentleman will have when done thrashing, 50,000 sacks of barley. The wheat crop is forty per cent. better than was expected by the most sanguine. He has not commenced thrashing wheat, but the yield will be fair. Mr. Freeman will plow and sow double this season's acreage during the coming winter and spring.

NAPA.

A NEW VINEYARD PLOW.—*St. Helena Star*, July 28: A large number of gentlemen interested in grape growing were present, by invitation, on Tuesday afternoon, at the vineyard of Mr. P. K. Stockton, to witness the first trial of his newly-invented vineyard gang plow and cultivator. At one o'clock the team was attached and the plow started. The first step was to break centers, which was done at one going through, a right-hand and left-hand plow being attached to the iron frame, so as to face each other, thus throwing both furrows to the center. This operation was done with exactly one-half the work that is required under the old system. After plowing awhile in this manner, the plow was driven into a hard piece of ground which had not been plowed for four years, and was perfectly packed and solid. Here the plows were forced into the ground and turned up the hard, baked ground in a manner that did away with the last ray of doubt as to the strength and efficiency of the instrument in the most obstinate ground. Returning to the vineyard, the two plows were moved on the frame so as to throw two more furrows into the first two, and in this operation was sounded the death knell to all single plows in future, for it was demonstrated that a man riding on the seat can drive with more precision than when walking and holding a plow, and can plow two furrows easier than one by the old system. Then there remained the last furrow next the vines on either side, and here the most

ingenious part of the invention comes in. Two extra plows are attached in place of the first two, with a direct offset of one foot, and in this way it was shown that the last furrows next the vines can be plowed with greater safety to the vines than by any other method. During all this time the crowd was following the plow and inspecting it closely, but there seemed to be no room for criticism except as to the mere shape of the mold-boards or something of that kind, which the inventor explained by saying that different shaped plow-bottoms can be supplied according to the kind of soil it is to operate in. After this operation, the plows were reversed on the frame and the dirt thrown back to the vines, two furrows at a time. Then the cultivator attachment was put on, and by going once in a row, splendid work was done, and here again a large saving of labor was shown. The plow was voted a grand success by those present. We understand that it is the intention of the inventor to give public trials in all the vine and hop growing counties of the State.

SACRAMENTO.

THRASHING.—*Bee*: A Franklin correspondent furnishes the following: "On the ranch of Wm. Sparrow, near Franklin, last Tuesday afternoon, was thrashed 1,430 bushels of wheat by Barney McCaffry, with a 32-inch Buffalo-Pitts separator. This, considering the size of the separator, is the best thrashing ever done in this part of the country, and it is doubtful if it was ever beaten anywhere in the State."

SAN BERNARDINO.

LUGONIA FRUIT.—*Cor. Index*, July 22: Our fruit crop, which is about a month later than usual, is very full, and of fine quality. Apricots are being marketed, and for size and quality cannot be excelled. Lugonia can challenge the world in the production of all kinds of deciduous fruits.

APRICOTS.—*Riverside Press*, July 29: The apricot season is now about closed. Two years ago the entire crop of the valley was about 70 tons. Last year it was 150 tons, and this year it will probably exceed 400 tons. Dr. Jarvis had the heaviest crop—about 75 tons; John B. Crawford had about 60 tons; Chaffey Bros. about 40 tons, and Geo. Crawford about 25 tons. These are among the heaviest producers. Dr. Jarvis estimates his crop next year, if it is a favorable season, at about 200 tons.

SAN BENITO.

LIGHT CROPS.—*Hollister Advance*, July 28: There are but few thrashers at work in this valley. The yield is so light that there is not much for them to do, and the ruling prices are so small that several thrasher owners have refused to start their machines. Nine and 10 cents per 100 is paid this year against 12 and 13 for previous seasons.

SANTA BARBARA.

DISCOURAGED BY APRICOT PRICES.—*Carpinteria Cor. Press*, July 29: We have been having considerable sunshine during the past few days, which is ripening up the apricots and cherry plums. Orchardists are quite blue at the prices paid by the cannery for fruit this season. A leading one informed your correspondent that every pound of apricots he raised cost him two cents, and that there is nothing left for profits. Two or three years ago over 100 acres of land was bought for the purpose of setting out the apricot, but the project is abandoned, the present prices not warranting any further outlay. Farmers can afford to pay from \$150 to \$250 per acre for choice land, plant it to apricots, take care of the trees, and cultivate the land for at least three or four years before any returns can be realized, unless more remunerative prices are paid for fruit. Trees that die out will not be replaced, neither will new orchards be set out.

SAN MATEO.

COAST CROPS.—*Redwood Gazette*, July 29: Harvesting has now the old ring about it. The farmers are busily engaged cutting and stacking their grain. About all the barley is cut, and wheat and oats are being attacked by many reapers and self-binders. A little thrashing is being done, but the season will not fairly open for about two or three weeks. Dolloff & Lovie have two cook houses in the field which are a great benefit and saving to the farmers as well as to the thrashers, as they save both time and money, and toil on the part of the farmers' wives and daughters. The latter have acknowledged that they are indeed a blessing. The turn out, thus far, of barley has been excellent, and every indication points to a most excellent harvest. Russian oats, a fine grain received from Detroit, Michigan, look as if the turn out will be all that is claimed for them. They grow about from five to seven feet high, and the heads are long and well filled. There are a great many farmers who desire to sow when they know more; and about next year's planting quite a quantity will be experimented with.

SONOMA.

FRUIT.—*Petaluma Courier*, July 26: We are informed by one of the largest fruit growers about Petaluma, that the general prospect for fruit is good. The cherry crop has been larger and finer than ever before, and prices about fair. The apple crop bids fair to be good, especially the winter apple. Plums of the light colored varieties promise a good crop; but of the colored varieties it will be very light with but few exceptions. Pears are doing better than was anticipated two months ago; at that time we did not expect over a quarter of a crop. Peaches promise to be a full crop of all

varieties. Vineyards about here are also very full, and the grapes will doubtless be of fine quality. Have never seen them look better. Blackberries are abundant and of fine quality.

RUSSIAN RIVER.—*Flag*, July 27: Thrashers report one field west of town, owned by H. M. Wilson and farmed by M. V. Hooten, to average 60 bushels to the acre, a field too, that has been farmed heavily for over thirty years. Abundant harvest is reported. Fruits are choice and in large quantities; one orchardist who sold his peaches at \$40 per ton delivered at the railroad station, will realize over \$400 net per acre, from a portion of his place. Grapes will be heavy, and over \$20 per ton is being offered already. A large crop of figs is just coming in.

Hops.—*Santa Rosa Republican*, July 27: Last Saturday, wearied because of our office routine, we took a trip to Healdsburg by rail. When at Healdsburg, we learned that there were in that vicinity about 60 acres of old hops; 12 of two-year olds, and about 30 that had been planted this year. Hop gathering will begin about the first of September; it is principally done by white labor and a few Indians. The crop promises good. The ruling price at this time for hops is 35 cents. Buyers from San Francisco have offered to engage several crops at that price. Growers fear that they will be short of pickers this time, as the crop is so large that the help will be inadequate. Last year white families, who lived all the way from one to 12 miles in the country from Healdsburg, camped along the banks of Russian river and the adjacent orchards and engaged in hop picking, some families making as high as \$4 per day.

STANISLAUS.

THE HARVEST.—*Modesto Herald*, July 27: Harvesting will not be finished in this county for two weeks to come. This has been occasioned by the lack of laborers, but we are informed that it will not lessen the yield, as the grain is too thin and short on the ground to suffer from heavy winds. Those who have had their wheat thrashed say that it turns out better than they expected.

Stockton Inventions, and Prospects for a Grand Fair.

EDITORS PRESS:—Perhaps it is not admitted by all that San Joaquin county is the very heart of California for farming experiments and farming inventions. The leading plows, harrows, nets, pumps, thrashing machines, harvesters, hay travelers and windmills were invented in this county, and are manufactured on a large scale in this city. We invite all our country cousins to come and learn the facts. It will pay travelers from the East, and open the eyes of Australian and New Zealand purchasers to witness our farming system.

There is one point that should be made known. The San Joaquin Agricultural Society aims each year to offer liberal premiums for the best work of inventors. The display of farming implements, as a general thing, is larger and more varied than even the State fair can muster. This year the society has advertised larger premiums than any fair in California. The signs are that this fair will far exceed any fair ever held in the State. We advise every farmer to examine the farming implements exhibited this year. We are satisfied every rancher in the State can make more money by spending one week at Stockton's fair than they can at home.

Not only will the agricultural implement department pay them, but the exhibition of stock, consisting of choice cattle, sheep and hogs, thoroughbred runners, trotters, jacks and jennies and various grades of all kinds, cannot be surpassed in the world. The farmers have been over 30 years collecting the very best strains, and now they have them, and have them to sell. Purchasers from abroad should always examine San Joaquin county stock before going to Kentucky, Vermont, or any other State, and satisfy themselves that just as large prizes are secured in San Joaquin county for less money, thereby saving large transportation expenses. San Joaquin county's motto is: "We defy competition." "BEDROCK."

Stockton, July 29th.

HIGHLAND SPRINGS.—This old and popular resort in Lake county, has been largely patronized this season, under the new and skillful management of Dr. C. M. Bates, of San Francisco. Its guests have included an unusual number of leading and well-known citizens. All seem well pleased with their sojourn at the springs, beautifully located, as they are, in a remarkably healthy climate. Those intending to go into the country, for health or pleasure, will find some facts and information worth noticing, concerning these springs, in our advertising columns.

BERKSHIRES.—John Rider of Sacramento, one of our leading Berkshire breeders, sends us a copy of the "Swine Breeder's Manual," a pamphlet supplementary to the American Berkshire Record. It is an interesting publication to swine growers, and has an attractive advertisement of Mr. Rider's stock upon the last page of the cover.

ADMIRAL SEYMOUR is to act as a censor over cable dispatches from Egypt.

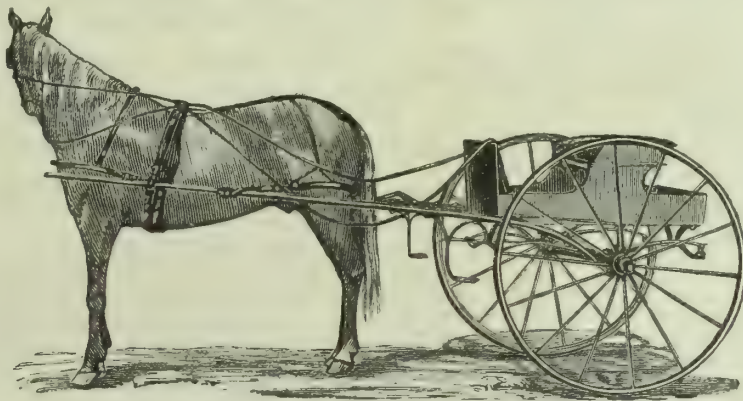
Business Sulkies and Breaking Carts.

There has arisen in this State, within a year or two, a remarkable demand for a light, compact and cheap two-wheeled vehicle, to be used in the place of the heavy express wagon or expensive buggy. The convenience and usefulness of such a thing has been shown by what are called breaking carts (which is merely a clumsy and heavy sulky), but which, notwithstanding their disadvantages, have come into general use throughout the State.

Conceding their importance and their advantages, among which are cheapness, safety with skittish horses, lightness and durability, it must be admitted that the most of them have some rather serious objections. The principal ones are the following:

1. A tendency to keep the occupants constantly bowing or bobbing their heads and shoulders back and forth in a manner that is at once ludicrous, disagreeable and fatiguing. It is caused by the seat being either directly or indirectly connected to the shafts or thills.
2. A sinking down behind when heavily loaded, thus tipping the seat back, making the rider's position very uncomfortable and throwing the load out of balance.
3. The tipping of the body of the vehicle backward when a very large horse is used, or its inclination forward when a small one is employed. (Horses, at the point where the shafts attach to the belly-band vary in height 14 inches, while the adjustment of the height of the shafts by the harness is about four inches, thus leaving 10 inches variation, at best.)
4. A tendency to make a horse's back sore. This is caused by the same thing that makes the occupant's head bob back and forth; namely, a rigid connection between the shafts and the load, which compels the horse to receive on his back the shock of every vibration of the load.

These well-known objections have set our mechanics and inventors at work to produce something that should avoid them. They have



PRICE'S SAN LEANDRO BUSINESS SULKY.

been measurably successful. The improved vehicles are becoming common, and are rapidly displacing the earlier and ruder forms.

Among those who have been most successful in this respect is Jacob Price, of San Leandro, the well-known hay-press inventor, whose piano-box business sulky we illustrate on this page, and whose platoon or pleasure sulky is shown in our advertising columns on the last page of this number of the *RURAL*.

It is said of Mr. Price's sulkies that they are entirely free from that ludicrous and uncomfortable motion which makes the occupant look as if constantly bowing or bobbing his head and shoulders. This alone is certainly a great improvement, and one which will be highly appreciated by those who have been subjected to the tiresome bobbing aforesaid.

He avoids the faults enumerated by coupling the shafts directly to the axle, and hanging the body independent of them, which allows it to move up and down 10 or 12 inches as freely as a buggy body, and makes it remain level throughout the entire movement. Mr. Price also uses a peculiar device whereby the body can be instantly leveled, whether the point of the shafts are held high by a large horse or low by a small one. This is a matter of vital importance, for the comfort of the rider depends much on the seat being level, instead of being tipped back or forward at an uncomfortable inclination, thus throwing the load out of balance.

Mr. Price claims that the same motion that makes the rider's head bob back and forth is what makes the horse's back sore; and that when the vehicle is constructed so that the shafts can move up and down a few inches, independent of the load, a sulky is as comfortable for a horse's back as a buggy.

Mr. Price uses long, easy platform springs on his sulkies, the cross-springs being connected to the side springs by links, thus as it were, suspending the body, so that it can be freely moved back and forth, an inch or so.

The practical effect of this arrangement is to permit the axle, to which the shafts are attached, to be jerked back and forth a little by the irregular motion of the horse, without affecting the body or seat of the sulky.

These points appear to be well worthy the attention of those contemplating the purchase of these popular and handy vehicles. Those desiring fuller information can address the inventor, Jacob Price, at San Leandro, Cal.

Soconusco.

EDITORS PRESS:—Something has been published, I see, in some of the State papers, as well as some of the Eastern papers, in regard to the hitherto terra incognita of Soconusco, a Republic of Mexico. As a former subscriber to your paper, and a practical farmer of more than 30 years' experience on this coast, and hence known to some of your readers, I will give for the benefit of those who may not have suitable homes, and are not able to pay the prices demanded here for land, my experience and judgment of and in that country.

Soconusco

May be reached by embarking on one of the Panama line of steamers at San Francisco, for the port of San Benito, in Mexico, which is generally reached after a run of about 12 days. It is the most southern port in Mexico. Here you will find yourself facing the well-defined range of mountains known as the Sierra Madre del Sur, whose summits lie at a distance from the coast of about 60 miles, and rise to an elevation of 6,000 ft., with her majestic peaks towering up to an altitude of 14,000 ft.

The country on the southern, or rather southwestern slope, and facing the Pacific ocean for a distance along the coast from the Guatemala line north or northwest for nearly 200 miles, is known as the district of Soconusco, State of Chiapas. It is embraced within the latitude of 15° and 17° north, and rises gradually back to the summit without any intervening ridges, and is consequently readily accessible even for a railroad to very near the summit.

I will say, in short, that after the second visit to that country, and a residence there of nearly a year, all the conditions necessary for a successful agricultural, manufacturing and commercial community, with all the natural advantages that belong to our civilization, can be found nowhere so well as in Soconusco. The great diversity of climate, and hence almost every variety of product to be found in the tropical and temperate zone, may there be produced.

season), and the second about the 15th of September, the rainy season continuing until the 1st or middle of November.

At an elevation suited for coffee, the climate is perhaps unsurpassed in any part of the world, being perfectly healthy and delightful, the thermometer (Fahrenheit) indicating from 60° to 80°, and lower down 85°, the year round; night or day it will be found within these limits.

Arrangements have been made for establishing an American colony upon these lands with all the advantages and improvements afforded by our own civilization, to wit: A compact settlement with roads, schools, mills, commercial facilities, etc. A concession has already been made by the government for the building of a wharf at San Benito and a railroad extending up to the coffee lands. The people of this district are quiet, well disposed and hospitable, while the governing classes and those in authority offer every encouragement and protection to foreigners. The colonization laws of Mexico are also very liberal, the principal features of which are exemption of taxes and free importation on all goods, provisions, implements, stock, etc., for a period of 10 years; cheap lands and payments for the same to be made in 10 annual installments. With all these advantages (and when we take into further consideration the fact that these lands are situated along and in sight of the evergreen summits of the Sierra Madre, on the one side, covered by the luxuriant and fragrant of an everlasting spring and summer, and upon the other by the Pacific ocean, which corporations and railroads do not monopolize) it must, indeed, seem tempting to the thousands who are seeking homes where at least independence and competence may be obtained. It requires no prophet to foretell that these lands must soon become valuable. In Guatemala, adjoining where foreigners have had formerly better protection, unimproved lands are worth \$10 per acre, which are in no way better than the Soconusco lands; while improved lands are very much higher. Much more might be said of Mexican colonization schemes in general, as well as the civilization, improvements and general condition of the country, but must be deferred to a future time.

JAMES CATLIN,

506 Battery St., San Francisco.

HARMON SEMINARY.—On Thursday evening a reception announcing the completion of the Harmon Seminary was held in the new Seminary building in Berkeley. The beautiful rooms were thronged with the friends of education and lovers of good music. The Orchestral Union of San Francisco rendered several fine selections. Addresses, expressive of good will to the new institution for the education of young ladies, were delivered by President Reid and Prof. Kellogg, of the State University, Rev. Dr. Breck, Rev. Mr. Pond and others. The school opens this week, and many girls are arriving from the interior of the State and from beyond, and others will be received later and assigned to the classes for which they are prepared. The school will be an excellent place to give girls and young ladies the best there is in boarding school life and studies.

News in Brief.

THE proposition to issue two-percent bonds has been unfavorably reported.

VIRULENT yellow fever at Metamoras, Mexico. It is feared that it will enter Texas.

A TWELVE-YEAR OLD boy in Missouri kills his father and is found guilty of murder.

ENGLAND, says Dufferin, is forced to take the responsibility of action in Egypt to restore order.

GERMAN men-of-war are ordered on no account to land troops in Egypt, but to receive German citizens.

THE motion in the House of Commons for a vote of credit for the Egyptian expedition was carried by 275 to 19.

IT is reported that the De Lesseps Panama canal is being pushed forward with energy, and prospects of early success.

THERE is no more than \$4,500,000 of unused appropriations to the credit of the River and Harbor fund from last year's bill.

THE Senate increased the appropriation for the new dry dock at Mare island to \$300,000, and directed that it be built of granite.

A COLLISION on the Lake Shore railroad, near South Bend, Ind., caused the burning of 60 cars and the death of seven tramps.

INDIANS to the number of 1,000 lately met near the mouth of Rock Creek, W. T., to have what they called their Fourth of July, which lasted several days. It consisted of feasting, dancing and horse racing.

THE executive officers of the Brotherhood of Telegraphers of the United States and Canada, and the United Telegraphers of North America held a conference in Cincinnati, Saturday, and effected a complete consolidation.

A DISPATCH from Nutt, N. M., says: Great excitement was caused in this vicinity by the discovery of new deposits of extraordinarily rich silver ore at Lake valley, 10 miles from here, in the Black range. In one shaft of the Sierra mine, a vein of chlorides and horn silver 40 ft. thick has been disclosed this week. The influx of prospectors is so large that hostile Apaches, who committed numerous outrages here last year, have fled from their camps and gone over the border. The Atchison, Topeka & Santa Fe railway has laid out a branch road from here to Lake valley, and the rush to the new mining district increases daily.



Reformed.

You have reformed! And are you, then,
Much better than all other men,
That you so quickly come,
Thus boldly, seeking for the hand
Of her, the fairest of my bang,
To make for you a home?

You have reformed! And does that make
You better for the very sake
Of reformation's need?
Are simple words security?
Are you the peer of purity?
And innocence indeed?

Let's glance just once adown thy past,
And view the record there made fast
In time's unerring book;
Turn ope the leaves and we'll look in,
And see the record of thy sin—
Dost hesitate to look?

Now, in thy record here we find
The traces of an impure mind,
Trailed through each common sin;
The curse of drink is o'er the whole,
Hath left its impress on thy soul,
And in thy heart hath been.

And blighted hopes and joys are cast
Along the record of thy past,
From youth to manhood's age;
And deeds a man should blush to own,
Along thy whole career are sown—
Disfigure every page.

And yet you dare to ask for her,
Whose acts are now and always were,
Since I did give her birth,
As pure as virgin flakes of snow,
That fall from heaven to us below,
Before they touch the earth.

You have reformed! I pray you tell
How long since you have stood so well
By reformation's light!
Go, sir, and wait until you've made
A record whose foundation's laid
Upon long years of right.

And when thy past can show clean leaves,
And right deeds bound in goodly sheaves,
And when futurity
Holds hopes for noble acts to come,
Then seek for one to make thy home,
Whose life is purity.

—Lillian Lake, in Western Rural.

House Cleaning.

"Saidee! Saidee! Where are you! Why don't you answer me when I call you?"

"Yes, Aunt Leah—I am coming in a minute."
"In a minute," sarcastically repeated the old lady. "It's always 'in a minute' with you, Saidee! But, I suppose, because I'm old and helpless, my comfort is a matter of no consequence whatever."

"Dear Aunt, Leah, you must not think that!" answered a bright, cherry voice; and Saidee Lynn came into the room with a little tray, where was arranged on a snowy napkin, some tea-biscuits, half a dozen pink radishes, a few thin cut shavings of smoked beef, and a little pot of tea, with a cup and saucer of old blue China which would have been invaluable to a collector. "You see I had you on my mind all the time, Aunt Leah," she said, merrily. "I gathered the radishes from our own garden. Don't they look nice?"

Aunt Leah, a withered, little, old lady, in a dress of worn black silk, and sharp, gray eyes, peering through gold-bound spectacles, tasted of the tea, and shook her head.

"It's too weak," said she. "It isn't fit to drink!"

"I put in all the tea there was in the canister, Aunt Leah," said Saidee, with a distressed countenance.

Aunt Leah pushed away the cup, with an expression of disdain.

"It is as I might have expected," said she. "My neices have too little thought for my comfort to study my poor and few necessities. Never mind the tea; I can drink cold water, I dare say!"

Saidee wrung her hands in despair. How could she tell this week, feeble old lady, above whose declining years hung the threatening Damocles sword of heart disease, of their narrowing circumstances, of the empty exchequer, the clamoring creditors, the pitiful strait to which they were reduced?

"What shall I do?" she asked herself, as she went slowly back to the little kitchen of the ruinous Gothic cottage, which they had obtained for a ridiculously low rent because it was ruinous.

"I've borrowed of the rector's wife twice, and I'm ashamed to go there again, and I've sold everything I can lay my hands on. But," glancing up at the picture which hung in the hall beyond; "there's the Velasquez still. A Velasquez is always worth money. Belle will scold about parting with it, and Aunt Leah will mourn; but we can't live on air and dew, like the fairies. I'll take it down to Mr. Bruner, the artist, this afternoon, and ask him to find us a purchaser. Poor people, such as we are, can't afford to retain old family relics." And so, when Aunt Leah was indulging in her afternoon nap, and Belle, the beauty of the family, was ironing out the flounces of her white muslin dress for the morrow's picnic,

valiant Saidee climbed on a chair, took the unframed picture down (it was the head of some old Spanish grandee, with a stiff pointed ruff, and an evil leer in the eyes) wrapped it up in a newspaper, and crept across the meadows with it to the village.

Mr. Bruner was in his studio—a grizzle-headed, blunt old gentleman, in a belted linen blouse and a faded velvet cap. He nodded kindly at Saidee, who had once taken a few lessons from him, but when she displayed the canvas he shook his head.

"How much do you think it is worth," asked Saidee, wistfully.

"Nothing!" said Mr. Bruner.

"But," cried the girl, "it is a Velasquez!"

"That a Velasquez?" said Mr. Bruner, contemptuously. "My dear, there isn't a picture dealer in the country who would give you 50 cents for it. It is a mendacious imitation, and a wretched one at that."

So Saidee tied up the poor picture, and went home again, shedding a few tears as she walked under the whispering old trees.

"My last hope gone!" thought she. "But I'll not tell Aunt Leah or Belle that it is an imposture. They have always taken such innocent pride in the Velasquez."

As she came past the old brick house at the foot of the Locust Lane, a load of furniture was being carried in, for it was the second week in May. Wicker chairs, twined with blue ribbon, a cottage piano, cases of books, engravings, bird cages, plants, and all sorts of pretty things.

She paused and looked at them, not without interest.

"I wonder who our new neighbors are?" she thought.

Just then, out trotted a stout, cherry-cheeked old lady, with her cap all on one side, and a worsted shawl tied over her shoulders.

"Oh!" said she, "you are the young woman who disappointed us yesterday about cleaning."

"No," said Saidee, crimsoning to the temples.

"Oh, dear! oh, dear!" said the old lady; "what is to become of us? All the furniture coming in, and my daughter lame from falling off a step-ladder, and the girl gone, and—but," with an eager look, "perhaps you can recommend some one to help us settle."

"I am sorry to say I cannot," answered Saidee, and she vanished behind the lilac hedge, rather amused at the mistake which the old lady had made.

Belle was full of news that evening.

"Oh, Saidee," she cried, "such a nice family is moving into the Locust House!"

"Yes," said Saidee, "I saw the furniture carts at the door, as I came from the village this afternoon."

"Oh, the village!" cried Belle, tossing her blonde head. "It's strange, Saidee, how much time you get to run about and enjoy yourself, while I am drudging at home. But there's a young gentleman there—the handsomest man, Alace Aiken says, that she ever saw—and Mr. Pyle knows him, and he is to be at the picnic to-morrow, to get acquainted with the young people of the neighborhood. Won't it be delightful?"

"Very," said Saidee, indifferently.

But while Belle was talking, she had made up her mind what to do on the day of the picnic.

Early in the morning, while the flush of sunrise was crimsoning the sky, and blonde Belle asleep with her yellow hair in crimping pins, Saidee arose, dressed herself quietly, and slipped out of the back door like a gray shadow.

At eight o'clock, Aunt Leah rapped with her cane on the ceiling of her room, which was directly beneath the one occupied by her nieces. Belle made her appearance presently, in a faded calico wrapper, rubbing her eyes after a drowsy fashion.

"Where's breakfast?" said Aunt Leah.

"Where's Saidee?" counter questioned Belle. "Oh, I know the selfish thing! She has got up early and gone down into the woods to get some pink azalias for her hair before the other girls think of it. She wants to astonish us all at the picnic. But I think she might have told me!"

"I'm afraid Saidee thinks more of herself than she does of us," said Aunt Leah, sourly.

And Belle, in a very ill humor, began to prepare the breakfast—a task generally assumed by her elder sister.

While Saidee, hurrying down the path by the swamp, took the short cut across the clover meadow, and was presently knocking at the door of the brick house where the load of furniture had stood the day before.

The old lady with the crooked cap and cherry cheeks came to the door.

"Have you engaged any one to help you get settled?" said Saidee, blushing very prettily.

"We can't hear of a soul," said the old lady. "Every one is engaged just now, and—"

"If you thought I could be of any use," faintly began Saidee.

"Bless me, child," said the old lady, "you are too slight and small. Besides," looking closer at her, "you are a lady."

"But I know how to clean house, for all that," said Saidee, valiantly. "I've done it for every year at home. We are ladies, but we are not people of means. And I think you will be suited with my work. It is necessary that I should earn a little money, and—"

"Come in, my dear," said the old lady—"come in, and have a cup of coffee with us. I am Mrs. Hartwick—and this is my daughter Kate."

"Saidee Lynn!" exclaimed the soft voice of a

pretty young girl lying with a sprained ankle on the sofa.

To her amazement our heroine recognized one of her schoolmates, Katherine Hartwick, who had graduated in the same class with her, at boarding school, two years ago.

"But you surely never have come here to work!" said Kate in amazement.

"Yes, I have," said brave Saidee. "Why, is it any less creditable to clean paint and wash windows than to play croquet or do Kensington stitches? And my Aunt Leah has lost all her little property, and we are very, very poor. So now you know all about it. And when I have eaten my breakfast, if Mrs. Hartwick will give me a cleaning cloth, and plenty of soft soap, I'll show her what I can do."

So that Miss Lynn was mounted on a step-ladder, polishing off an antique mirror, when Kate's soft voice was heard saying:

"Oh, Harry! is that you?" We supposed, of course, that you were at the picnic. Miss Lynn, this is my brother Harry. Harry, let me present you to Saidee Lynn, my dear old school-mate, who has come here to help us clean house."

Miss Lynn made as graceful a bow as she could under the circumstances. Mr. Harry inclined his head.

"At the picnic, indeed!" he retorted merrily. "Not at all. I've been hunting high and low for some one to help you, and for lack of success, I have returned to do a little whitewashing myself."

"Oh, have you?" said Saidee. "I know such a nice receipt for kalsomine—as white as alabaster, and it won't rub off at all."

"Let's make it," said Mr. Hartwick promptly. No picnic could ever have been more delightful than this day among dust, whitewash, scouring sand and brooms.

Kate, on her sofa, hemmed curtains; Mrs. Hartwick bustled to and fro; Saidee, with her curly hair tied up in a handkerchief, scoured paint, and Harry whitened ceilings, and at twilight had three rooms in perfect order.

"We have achieved wonders," said Kate, looking around at the neatly tacked carpets, the soft garnet plush hangings, the pictures on the walls, the crystal brightness of the windows, while Mrs. Hartwick took Saidee mysteriously on one side.

"My dear," said she, "I do not know how to thank you sufficiently. But I am ashamed to offer you a dollar and a half, although—"

"But I shall not be ashamed to take it," said Saidee, smiling. "Why should I? That is, if you really think I have earned it."

"My dear, you have more than earned it," said the old lady; "and if you could possibly come to-morrow—"

"Of course I will come," said Saidee.

Weary as she was she went round by the village to buy some Young Hyson tea for the old lady before she returned to the Gothic cottage. "Well," she cried, brightly, "what sort of a day did you have at the picnic?"

"Awfully stupid," yawned Belle. "And that handsome young gentleman from Locust Lane didn't come at all."

"Didn't he?" said Saidee.

"And where have you been?" demanded Belle, in an injured tone.

"Oh, spending the day with a neighbor," said Saidee, with a laugh.

They finished the house-cleaning that week. Mr. Harry Hartwick found it necessary, we may add, to walk home with Saidee the next evening, and he developed a remarkable talent in the amateur painting and kalsomining line, before they got through.

"Isn't she pretty?" said Harry, enthusiastically; "and she's brave, and isn't afraid of honest work; and altogether she is my beau ideal of a girl."

"Mamma," whispered Kate, laughing, after her brother had gone out, "I believe our Harry is in love with Saidee Lynn."

"I'm sure I don't blame him," said Mrs. Hartwick. "She is a little jewel."

Aunt Leah never knew where the Young Hyson tea came from, nor the sponge cake, nor the white grapes, nor all the little luxuries that had cheered her of late; nor did she suspect anything until one day Harry Hartwick came to her, and formally asked her for her niece's hand in marriage.

"Well, I never!" said Aunt Leah.

"But how did you ever become so well acquainted with him," questioned Belle, half pleased, half jealous.

"Because I cleaned house for his mother," said Saidee, laughing.

And then, under solemn seal of secrecy, she told Belle all; and Belle declared that it was too romantic for anything, never pausing to think that real life is as full of romance as a summer meadow with buttercup, and that fortune comes to those only who go bravely out to seek fortune.—Helen Forest Graves.

A TRAVELER tells the story about his stopping at a hotel in New York one night, and being kept awake by a man pacing the floor in the room above. Occasionally, he would hear a moan of anguish; and at last he went up, like a good Samaritan, to see if he could not relieve the sufferer. "My friend," said the traveler, gazing sympathetically at the haggard face of the stranger, "what can I do for you? Are you ill?" "No." "What ails you, then?" "I have a note for \$10,000 coming due to-morrow, and haven't a nickel to pay it with." "Oh, pshaw!" said the traveler, "Go to bed and let the other fellow do the walking."

Springvale.

The Late Mary Mountain's Home

EDITORS PRESS:—Profiting by the kind invitation of Mr. D. M. Locke, we are sojourning for a season of refreshing on the lower part of his estate, in a beautiful valley in the Santa Cruz mountains, three miles from Felton, up a difficult road.

The humorist of our party, who favors figures of speech, declares that this spot is as pleasant as any to be found on this side of Jordan, and the way here about as hard to travel as if it were on the other side.

The valley is half a square mile in area, and 300 ft. above sea level. It is enclosed by mountains, with the exception of an opening oceanward. Prof. Guyot gives scientific reasons for concluding that this fertile land was formerly the bed of a lake. What fancies the idea suggests! Amid sylvan surroundings, where now sits a 19th century representative of the noblest race of bipeds, what saurian monster once disported his scaly ugliness? Ages later, what manner of men made up the prehistoric peoples, who came and went, and left no sign, some of whom, doubtless, fished in this great lake? Among them may have been giants, contemporary with those whose huge foot-prints, having uniformly six toes, are found in the solid rocks of the Cumberland mountains, on the Atlantic slope of our continent. Perhaps never human eye saw the glitter of its waters.

These surrounding hills are greatly diversified; some wooded to the summit with dark redwoods, others covered with a low growth, the character of which recalls Sir Walter Scott's description of the flora of a mountain of Scotland.

Boon nature, scattered free and wild,
Each plant or flower, the mountain's child.
Here gentian embalm'd the air,
White heath and hazel mingled there;
The lily, pale and violet flower,
Found in each cliff a narrow bower;
Foxglove and night-shade side by side,
Emblems of punishment and pride,
Grouped their dark hues with every stain
The weather-beaten crags retain.

Each plant and flower mentioned are to be found on these hills, which have undergone one of nature's wonderful transformations, from worthless sand to fertile soil. Seen between and above these verdure-covered peaks "the heaven's delicious blue" seems more ethereal than any lowland sky. On yonder low hill are the curious stone structures once famous as the Santa Cruz ruins, casually mentioned in one of the much-loved Mrs. Locke's (Mary Mountain) "Chats" in the RURAL PRESS. Their origin has been much controverted; it is now generally conceded that they are nature's handiwork; they are cylinder-like in form and hollow, extending to an unknown depth below the surface of the ground and rising perpendicularly above to a height of 10 ft., the ravages of time and vandalism having reduced their former height and numbers. An attempt was made by an organized company some years ago to excavate the "ruins," and nothing less than the discovery of a long-buried temple was expected, but sand-slides prevented much search.

Traversing this charming valley are three trout streams whose sloping banks are lovely with tanglewood over which the far-up reaching pines and redwoods whispering ashes and poplars cast a pleasing shade. Willows "shake leafy hands" across the water, and the alders fringing it all along dip graceful low-growing branches in. Here are found plants that love retirement,—delicate ferns, white and yellow violets, pink hare bells and white ones, and the straw-colored mountain lily. Clumps of azaleas and frequent bushes of the exquisite "meadow-sweet" with countless plumes of creamy white stand like censers through the wood waving with every breeze fragrance on the air, already redolent with balsamic odors. As one walks, broods of startled quail fly up; lately a careless foot intruded in a quail's nest of 18 eggs. The flapping yellow hammers and blujays afford a contrast to the many shaded verdure, and the songs of robins, canaries and blackbirds give a crowning grace to the lovely glades.

Here on the upland, overhanging a creek, is a secret bower, called by its sole occupant, "The Study," and much resorted to in meditative mood. Formed by a circle of pines and manzanitas, it is hidden from outside view by interlacing branches of hazel and snowball bushes, the entrance being guarded by tall ferns furnished with a woodland spring that closes the leafy door after one enters. In the creek bed below lie several prostrate trees, once giants of the mountain, attesting the fury of winter storms.

On the opposite bank is the road leading through "dim defiles and lonely gorges" to the sawmill a quarter of a mile beyond, where the redwood industry is carried on, four teams of five or six horses each going daily to Felton with lumber.

A few rods from the "Study" are two white oaks of immense size, with their branches festooned with hanging yards of "poor man's lace." Under these are the tents where we sleep. There, too, is the picturesque gable-roofed cottage where our culinary duties are performed. There we sit evenings in front of a fire, blazing in the old-fashioned chimney-place, and the fitful glow radiates corners of memory long disused, and calls forth songs and tales of long

ago. Here, for four years resided the late Mrs. D. M. Locke, the "Mary Mountain" of the RURAL PRESS, who endeared herself to all who knew her, and whose breezy "Chats" interested all readers. Her memory is fondly cherished by those to whom she was a neighbor. One of these said with tearful eyes, while showing her portrait in a carefully-kept number of the RURAL PRESS, "we loved her much; we miss her still"—a eulogy of more worth than many chiseled on the marble monuments of the departed rich and great.

On the cottage walls are evidences of her efforts to make home attractive, she having papered them with *Harper's Weeklies* of a score of years ago, when the civil war was the engrossing topic of thought. Farther to the north, in this range of mountains, is the home of Widow Brown; whose sorrow would seem fresh again should she see those illustrations of the indignities suffered by her martyred hero. Tender the task to stroke her silvered hair and to wipe the tears from her grief-worn cheeks, while listening anew to the story of him who heard God's call, but alas! for himself, did not interpret it rightly! What is to her that "his soul goes marching on?" It is his dear bodily presence she yearns for. Oh, sorrow-stricken ones everywhere, how blest are ye, that "earth has no sorrow that heaven cannot heal!"

Twilight begins to fall; the faint light in the woodland study, though conducive to thought, is insufficient to write by; and hark! that enlivening tattoo on a tin pan is the call to supper, so good evening.

ORNA.

July 23, 1882.

Rich and Poor.

EDITORS PRESS:—Your correspondent, John Taylor, in his letter of July 10th, asks: "Are not the rich getting richer and the poor poorer." I am without statistical or historical books to answer this question, but I believe it could be proved that the so-called poor of to-day are infinitely richer than the working classes of 100 years ago, while the rich are not relatively richer. As, however, the rich are few, their burdens and sorrows are not of much account, if only the masses have a greater abundance of the good things of this life, and with more certainty and regularity. God gave Adam food gratis when he was in Eden, and Adam found out pretty soon that he wanted clothes also, and, ever since then, the wants of Adam's children have increased, so that it is considered essential that even poor folks have a house and, in winter, fuel.

I am confident that there is more wheat, corn, meat and other food produced and consumed per inhabitant in the United States than 100 years ago, especially of the richer and more attractive kinds, and that the diet of the poor is more varied. Possibly the census returns would not be able to show this, but I ask Mr. Taylor if he does not believe it. Now, as to imported foods. Let some one examine the imports of sugar, tea, coffee, spices, etc., and tell us the ratio per capita now and years ago. I am sure it would show the poor man's table, as well as the rich man's, was enriched by greater quantities and infinitely greater variety.

As for clothes, I am sure Mr. Taylor's neighbors, if he goes about with a fig leaf, or even like Paddy from Cork, with his coat buttoned behind, would supply him with overalls. Let some one make up the statistics, and see if more cotton, linen and woolen goods are not consumed per capita than of yore; ditto to boots and hats. When we come to intellectual and æsthetic pabulum, our forefathers lived in a state where ignorance may have been brutal bliss, but was not wisdom. There is to-day a greater diffusion in the United States of material wealth and *pari passu* of intellectual wealth than the world ever dreamed of; and labor is getting more of the rewards and capital less. May the blessed time come quickly when labor will be more and more intelligent, more frugal and more competent to take 99% of all the profits, instead of giving capital 10% or 6%, even 3%.

H. J. S.

Santa Barbara, Cal.

NEW STYLES FOR FINISHING.—The fact is observed by hard-wood manufacturers that new styles are being adopted in the direction of fine finishing, the most of which are somewhat antique. In fact, while they mark a new departure as compared with the recent types of finishing, they still partake of the characteristics of the styles of years ago; that is, while they are new, they are at the same time more or less old-fashioned. Perhaps it is with architecture as it is with fashions, for with the advent of knee-breeches and the prospective recurrence of the balloon style of ladies' dresses, we may soon find ourselves back to the good old times when our forefathers first ascertained that America was a great timber country, and wore powdered wigs.

IMPROVEMENTS IN WATCH MAKING.—Some 40 years ago the majority of watch carriers (and they were few then compared to the present time) were well satisfied with their time-pieces if they did not vary over five minutes a day, and one that would time closer than that was considered a valuable piece of property; but since then the demand for a better grade has increased, and American enterprise and genius have gone to work and are now producing time-keepers, both watches and clocks, that are but little outside of perfection.

YOUNG FOLKS' COLUMN.

Our Puzzle Box.

Numerical Enigma.

My whole, consisting of 28 letters, is the dying tailor's advice.
My 24, 20, 23 is very warm.
My 28, 7, 17, 22 is a part of a house.
My 6, 20, 25 is a conjunction.
My 8, 2, 15 is a metal.
My 12, 3, 27, 16 is a part of the body.
My 5, 9, 10, 28 means gentle.
My 1, 14, 21 is a number.
My 4, 18, 11, 26, 22 means following.
My 19 is sometimes used as a vowel.

J. L. C.

Blanks.

[Fill blanks with words pronounced alike but spelled differently.]
1. The clergyman performed the ——— just at the ——— time, but failed to ——— out the certificate in a proper manner.
2. As we ——— yesterday we met our friend upon the ———.
3. A thick ——— of mist hung over the ——— and hid it from our view.

ALICE.

Charade.

As John was walking on the street,
While tempests around him burst,
Amid the mud and falling sleet,
He soon did soil my first.

But, as he wandered on, he met
My whole, who quickly made
My second of my first, and soon
Bright sunshine round it played.

A. B. C.

Decapitations.

1. Behead a part of a vessel and leave a fish.
2. Behead to confound and leave a large cask.
3. Behead to quench and leave a large body of water.
4. Behead to wander and leave a shallow vessel.

NETTIE.

Square Remainder.

Behead and uncoil the words having the following significations and get a word square:
1. Indisputable.
2. A growth of hair.
3. To scorch.

AUNT SARAH.

Answers to Last Puzzles.

NUMERICAL ENIGMA.—Avariciousness.
PHONETIC SPELLING.—1. Seedy (C. D.). 2. Cayenne (K. N.). 3. Artie (R. T.). 4. Easy (F. Z.). 5. Eighty (A. T.). 6. Pedee (P. D.). 7. Decay (D. K.). 8. Any (N. E.). 9. Icy (I. C.).
ADDED AND SUBTRACTED FRACTIONS.—Paper, ape.
HIDDEN TOWNS.—1. Andover. 2. Newry. 3. Amity.
4. Dover. 5. Paris.
REVERSALS.—1. Not, ton. 2. Ned, den. 3. Live, evil.
4. Ten, net. 5. Arc, era. 6. Time, emit.

Billy, Jack and the Master.

"He is coming, Billy; just listen—don't you hear his whistle?" said Jack, turning his head in the direction of the sound that he hoped foretold his master's arrival.

Billy pricked up his ears after the manner of horses and listened attentively.

"I think he is coming," said Billy, "I've lived with our master a long time, Jack—years before you came—and he has never forgotten to come to see me three times a day. It's not every one who has so kind a master."

"That is true, Billy, and I have always thought I was really fortunate in finding such a good home."

"You are a lucky dog, Jack! I feel thankful, too, and whenever I travel on the road, or work in the field, I always do my best, and master never fails to give me a few gentle pats when he removes the harness."

"He thinks everything of you, Billy. The other day I heard him say that you should stay with him till you died, and that you should not be worked to death, either."

"Did he? Bless him! And I heard him say that he had not a friend of whom he thought more of than faithful Jack."

"I tell you, Billy, we are a happy family—master and you and I."

Here further conversation was interrupted by the arrival of the master. Jack, who had been standing with his forepaws on the fence, jumped down to meet him, frisking about in such a joyful manner that very much pleased the master. Billy, more quiet in his demonstrations of affection, walked leisurely towards him, gave a gentle neigh of welcome, and laid his head affectionately upon his master's shoulder for the caress he was sure to receive. There had been a time when Billy and Jack had been a little jealous of one another; but that time was long ago, when they were not much acquainted. Now they were the most devoted friends; thought more of each other than anything else in the world, except the master.

The master petted Billy and talked to him quite awhile, then spread out before him a bountiful dinner of hay and oats, and, leaving Billy to enjoy his repast, he turned to Jack.

"Now, Jack, what do you say to a hunt before dinner?" said the master. Jack was delighted with the idea, for hunting was his particular forte.

The master went into the barn, took his gun, and he and Jack proceeded to the wood. They had not gone far, however, when Jack stopped and pointed to a fox. The master fired his gun, and the fox that had been the terror of all the hens and roosters in the neighborhood, breathed no more. The master was well satisfied with his game. He sat down by the side of an old tree to talk the matter over with Jack.

Jack was delighted, and when he heard his master say, "Now, Jack, I think you have earned your dinner," he leaned his head to one

side and raised one paw to give his master a salute like a soldier.

The master and Jack returned home, and, after dinner, Jack ran down to the barn-yard to tell Billy all about the hunt, and that they would not be disturbed any more at night by the cackling of hens and roosters on account of that fox.

GOOD HEALTH.

The Heart and Its Diseases.

Death from heart disease is of alarming frequency. Almost daily we hear that friends or acquaintances, or public men have suddenly died, and on inquiry it is found that the heart was at fault. This fact has not unfrequently given rise to the remark that it is strange the heart should so often be the seat of mortal disease. But the truth is we attach far too little importance to this organ and its functions. It performs its great office so quietly and uninterceptedly that we even forget its existence. From a period anterior to birth until death, during sleeping as well as waking hours, ceaselessly and noiselessly, with steady and measured rhythm, it circulates the vital fluids through every tissue of the body. Seventy-five times it pulsates in a minute, 108,000 times in the day, without exhaustion or apparent need of repose.

The heart is a hollow muscular organ, weighing but 10 ounces, and is suspended in the cavity of the chest by delicate ligaments; and yet, it performs quietly and noiselessly, with but the slightest jar, an incredible amount of labor. In 24 hours it is estimated that the heart accomplishes more than three times as much work as a common laborer in 10 hours. "Three old women sitting by the fire," says a recent scientific writer, "alternately spinning and sleeping, do more work by the constant beating of their hearts than can be done in a day by the youngest and strongest laborer." He adds: "No labor that we can undertake is regarded as more severe than that of the muscle employed during a boat race; and yet this labor, severe as it is, is only three-fourths of that exerted day and night, during life, by each of our hearts."

If the entire force of the heart were expended in lifting its own weight vertically, it would be raised 19,754 ft. in one hour. Compare this with the exertions of an active pedestrian, who can raise his own weight but 1,000 ft. per hour, and we find the heart exerts itself about 20 times as much force; or with the best locomotive, which can raise its own weight 2,700 ft. in one hour, which is but one-eighth of the energy of the human heart. To a reflective mind, it cannot be a matter of surprise that this delicately-constructed organ, laboring so vigorously without a moment's rest day or night, should frequently and often suddenly, give over its labor and cease to act. On the contrary, it is rather a matter of astonishment that the heart should maintain its integrity, year after year, amid the scenes of excitements through which the individual passes for three score years and ten. In severest sickness, when other organs fail, the heart pursues the even tenor of its way, continuing its pulsation to the last moment of life. Like a strong warrior in a citadel, it yields only when every resource has been exhausted.

Bruises and Cuts.

At the present time, when accidents are so common, it is the duty of every one to learn how to take care of the sick or injured. If any serious or sudden injury happens to a member of a family and one knows what to do, it may be the means of saving a life. Young people in the shop, in mines, or on the farm, are liable to get hurt or injured in some way or other—either "cut" or bruised. The bruised limb should rest, be kept moderately warm, bathed frequently with tepid water and chafed gently with the naked hand.

In case of incised wounds (cuts), at first there is free bleeding from the many divided capillaries. If no large vein or artery is severed, the flow of blood will soon cease; press the lips of the wound together and trickle on cold water until the blood and all foreign matter is removed; then apply narrow strips of adhesive plaster. The union of the divided parts is effected by the action of the blood vessels, and not by healing salves. The one thing is to keep the parts together and protect the wound from the air; nature will do the rest.

In any deep wound, where a vein is severed, tie a handkerchief, or any band, *below* the wound. If an artery, tie it *above* the wound; sometimes in case of an artery, it is difficult to stop the flow of blood. If there is any trouble, place over the artery and under the bandage a cork, or else twist the handkerchief by placing a stick under it and keeping the knot over the artery as the artery can be felt by its pulsation. In binding up the wound, keep the limb so as to have as little strain as possible upon the wound. The care should be the same as any cut.

REMEDY FOR PAINFUL WOUNDS.—Take a pan or shovel with burning coals and sprinkle upon them common brown sugar, and hold the wounded part in the smoke. In a few minutes the pain will generally be allayed, and recovery proceeds rapidly.

DOMESTIC ECONOMY.

Hints on Painting Old Woodwork.

Saying nothing of the economy of painting, it is a good practice to apply a coat of paint to all woodwork of the kitchen, once in two or three years. Good paint always saves much hard labor in keeping such parts of a house clean. Some doors that are used often, need painting every year, to keep them at all decent. It is not best to put on thick, heavy coats, as these are needlessly expensive, and after a few years will look bad. The same amount of paints, applied often in thin coats, will look better and cost little more.

Where woodwork is much soiled, especially by hands not scrupulously clean, it is sometimes difficult to make even the best of paint hold well. It will dry soon enough, but will afterwards peel off, for paint will not adhere well to a dirty, greasy surface. This is particularly the case in rooms where washing and cooking are usually carried on.

In order to make paint stick and become about as firm as the wood itself, wash the surface thoroughly with moderately strong lye, using a short swab, then wipe it off with a cloth wrung out in fresh water. This will remove all grease and dirt that prevent the paint from taking a firm hold.

Paint for such places should be made of the best white lead, mixed to the consistence of thin cream, with two parts of the best boiled linseed oil, and one part of good lacquer, or "liquid drier." Such paint will dry in one day and become sufficiently hard to handle in a few days. A very small quantity of lamp-black will make a beautiful lead color. Yellow ochre may be added until the paint is of the desired shade for floors, mop-boards, or wainscoting. Pure white lead for the body will make a much more durable paint for floors than most other kinds. The use of zinc-white, which is much superior to white lead in some situations, as for instance in privies, is attended by a little difficulty, because it must be applied very thick to cover well when used alone; but a second coat, not so thick, may be put on over other paint, and it will add greater brilliancy and will not tarnish from sulphurous gases frequently rising from sink-drains, etc., nor from the exclusion of light, which causes white lead paint to turn yellow.—*Am. Agriculturist.*

CLOTH OF TIN.—A French chemist is said to have invented a process by which fabrics can be permeated by a solution of tin. The method is described as follows: He first makes a mixture of zinc powder and dissolved albumen, which he spreads over the fabric by means of a brush, leaving it to dry, when the stuff is passed first through superheated steam, and afterward through a solution of chloride of tin. By this means an exceedingly thin layer of tin is spread over the whole side of the fabric, which is thus rendered waterproof, and protected against ordinary rough usage. The utility of the invention is not quite apparent, for probably few people would care to don garments in which they would bear a very close resemblance to animated tin kettles and teapots, though, in the preparation of theatrical dresses, and even the bright "trimmings" in which the female heart delights, the invention might find a limited application.

ARCHIMEDES AND THE LEVER.—The apothegm of Archimedes—"Give me a lever long enough and a prop strong enough, and I will move the world"—arose from his knowledge of the possible effects of machinery; and, however it might astonish a Greek of his day, would now be readily admitted to be as theoretically possible as it is practically impossible; for, in the words of Dr. Arnott, Archimedes "would have required to move with the velocity of a cannon-ball for millions of years to alter the position of the earth by a small part of an inch. This feat of Archimedes is, in mathematical truth, performed by every man who leaps from the ground, for he kicks the world away from him whenever he rises, and attracts it again when he falls."

WAGON WHEELS.—To prevent the tire of a wagon wheel from coming loose and requiring to be refitted, a method highly recommended is to fill the felloes with linseed oil before the tire is put on. The timber thus treated is not liable to injury by water, and lasts much longer. The process followed is to hang the wheel in the oil, each felloe being immersed for one hour. The oil, which is contained in a cast-iron heater of suitable length, is brought to a boiling heat—a higher degree must be avoided, or the wood will be burned. The timber should be dry, as in a green state it will not take oil. The tire of a wheel thus treated, will, it is said, wear out before becoming loose.

WHITENING SMOKED WALLS.—A method of cleaning and whitening smoked walls consists, in the first place, of rubbing all the black, loose dirt off them, by means of a broom, and then washing them down with a strong soda lye, which is to be afterwards removed by means of water to which a little hydrochloric acid has been added. When the walls are dry, a thin coating of lime, with the addition of a solution of alum, is to be applied. After this has become perfectly dry, the walls are to be calcimined, or coated with a solution of glue and chalk.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWEL.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY* which may be necessary, *either on the payment of any yearly subscription or on this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$3 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.
Per line25 .80 \$2.20 \$5.00
Half inch (1 square). \$1.50 \$3.00 10.00 24.00
One inch. 2.00 6.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWEL.

G. H. STRONG

SAN FRANCISCO:

Saturday, August 5, 1882.

TABLE OF CONTENTS.

EDITORIALS.—Beside the River; Agricultural Lands in Arizona; False Dairy Products; Wild Pests on Tame Plants, 81. The Week; The Transportation Problem; The Railways and the People; The Animal Industry; Beef Values; Tree Moss for Bedding; The State Bag Factory, 88. Marketing Fruit; The Combined Machines; The Ely-Meeker Sun Drier, 89.
ILLUSTRATIONS.—The Quiet of Midsummer, 81. Price's San Leandro Business Sully, 85. The Ely-Meeker Sun Drier, 89.
CORRESPONDENCE.—Arizona Botanical Notes, 82.
HORTICULTURE.—State Horticulture Society Meeting; Cherry Growing in Santa Cruz, 82-83.
FORESTRY.—Forest Trees of California—No. 7, 83.
AGRICULTURAL NOTES, from the various counties of California, 84-5.
PATRONS OF HUSBANDRY.—The National Alliance; Mission of the Grange; Grange Needs; The New Grangers' Business Association; Grange Discussions, 85.
NEWS IN BRIEF.—on page 85 and other pages.
HOME CIRCLE.—It formed (poetry); House Cleaning; Springvale, 6. Rich and Poor, 67.
YOUNG FOLKS' COLUMN.—Our Puzzle Box; Billy, Jack and the Master, 87.
GOOD HEALTH.—The Heart and its Diseases; Bruises and Cuts, 87.
DOMESTIC ECONOMY.—Hints on Painting Old Woodwork; Cuth of Tin; Archimedes and the Lever; Wagon Wheels; Whittening Smoked Walls, 87.

Business Announcements.

Tendon Cutter, G. G. Wickson, Agent, San Francisco.
Jersey and Guernsey Cattle, H. P. Roe, S. F.
Agricultural Implements, Hawley Bros., S. F.
Stockton Gang Plow, H. V. Shaw Plow Co., Stockton, Cal.
Sewing Machines, Mark Shelden, S. F.
Industrial Exhibition of Mechanics' Institute, S. F.
Stockton Fair, L. U. Shippee, President, Stockton, Cal.
Fruit and Shade Trees, Leonard Coates, Napa, Cal.
Pumps, W. S. Raynor, San Francisco.
Grape Cuttings, Leonard Coates, Napa, Cal.
Mexican Colonization Co., office, 506 Battery St., S. F.
Fruit Trees, Stewart & Samers, Saratoga, Cal.

The Week.

A mountain of peach baskets over-topping the high dry stakes, hiding the horses from view, as they draw it along over the pavement below our window, tells of the height of the peach season. Cords of rich yellow peaches cover the sidewalks in front of the commission houses, and along the street one is continually bumping his knees against the square corners of the peach baskets in the hands of homeward-bound citizens. The high price of meats is driving people to other available food supplies and during the fruit season the regret at the lack of the costly steak will be washed away with plenty of peach and grape juice. The change will be a salutary one.

Harvest progresses. Thrashing is showing some immense yields in the upper counties which often have too much water for the best deeds of their low lands. The acreage in these parts is, however, comparatively small and though the product will bring much comfort to the owners, it will out but a small figure in compensating for the short crop on the wide plains. The outlook is, however, more satisfactory than was anticipated in many parts, and courage will be gained for wide work in preparation for next season, which, according to the doctrine of probabilities, should be a grand one for the great valleys, and bring the old wheat counties again into the foreground.

The Transportation Problem.

We shall soon be voting for new Railroad Commissioners in California, and if people care anything for their rights in the regulation of the action of transportation companies, it behooves them to be up and doing. It would be difficult to conceive of a more useless body than the outgoing Commission has proved. It is alleged, and indications certainly point that way, that a majority of the Commission was pocketed by the railway companies, and the result has been that the career of the Commission has been a glowing example of conspicuous and expensive idleness. It is wonderful that so little is said of the performances of the illustrious body, and yet it is perhaps not so strange when one reflects that with a very few exceptions, the leading newspapers of the State are as silent upon railroad wrongs as though they were paid for silence. It would have been rather more refreshing if the majority of the Commission had spent a few hours in preparing statements to show that there were no wrongs. Almost anything would have been more than the perfect example of laziness and imbecility which the expiring Commission has furnished. Such a farce as it has enacted in the face of the people has probably never before been presented for the consideration of the American people.

And yet there is no more momentous question now pressing than the transportation problem. There is no subject which should so excite the effort of a commission to investigate and expound than the alleged discriminations and oppressions practiced by railway management. The literature of the subject is extensive; the subjects for inquiry are many and varied. The regulation of railways by commissions is not a new thing. And yet our California Commission has drawn its salary and kept up its gilded signs for years without putting forth any work which touched the borders of the important problems which it was expected to investigate.

What shall the future be? Shall the people elect another commission of know-nothings and do-nothings? Shall we elect a body of men who will be content to draw their salaries and whatever else they can get, and yet put forth nothing to let the people know whether they are imposed upon or not. This is a momentous question. It, in our opinion, overshadows all else in importance. An honest Governor is important, and other State officers of honesty and intelligence are important, but a wide-awake and intelligent Railroad Commission, which will set about industriously to ascertain the right and wrong in the management of these corporations, will do more for the welfare and prosperity of the producers of California than all the other State officers combined.

For this reason it is incumbent upon electors this fall to scrutinize closely the candidates presented by the different parties, and to vote for men whose antecedents and associations are such as would lead the public to expect from them honest and intelligent work without favor to any one, except as their rights appear. There is a splendid field for earnest and conscientious work on the transportation problem in this State and in other States. There can be no doubt in the mind of any disinterested man, that the operation of the companies must be regulated by some higher power than their own self interest. The courts have decided that the public shall not be left unprotected. Now, it remains for active, honest and intelligent Commissions to adjust the delicate questions involved, so that all rights shall be conserved. To do this, a Commission of workers is essential. Let the people see to it that the trust is well placed.

The Railways and the People.

The Committee of the United States Senate, composed of A. G. Thurman, E. B. Washburn and T. M. Cooley, have just made a report on railway charges, which affirms the duty of the transportation companies toward the public as follows:

Large powers of self government have, undoubtedly, been left by the law in railroad managers, but all their authority is qualified by duty to the public; and it cannot be too often or too pointedly asserted that the obligation on their part to serve the public with relative fairness is of perpetual force. In their future dealings with the important question which has been the occasion for our coming together, the great trunk lines should be particularly careful to give no occasion for just complaint, that they subject any one of the seaboard cities to the operation of arbitrary or unfair regulations or charges, or that they fail to observe towards any one of them, or towards the people trading or desiring to trade with them, the mandate of the common law—to deal justly and distribute fairly the benefits and burdens which are incident to their occupation.

This touches only for a single point of railway management, to-wit: the fair treatment of all sections of the country, but this is of the utmost importance. Railway discrimination has operated disastrously to some of our best districts, and it should not be allowed to continue. The upper San Joaquin valley has many grievances to be healed, and it is now impossible to carry on production in some promising lines because of excessive transportation charges. It is to be hoped that the new Railway Commission will serve the public by an effort to have the wrongs righted.

An appalling mortality prevails in New York city.

The Animal Industry.

The Government seems disposed to assume kindly guardianship over the animal industry of the country, and in view of the growing importance of this specialty of agricultural production, it is well that the Government has determined to do something for it. The Senate has reported favorably upon the Bureau of Animal Industry bill providing for the creation of a bureau, whose chief shall be a competent veterinary surgeon, and whose duty it shall be to investigate and report upon the number, value and condition of the domestic animals of the United States, their protection and use, and also inquire into and report the causes of contagious and communicable diseases among them, and to collect such information on these subjects as shall be valuable to the agricultural and commercial interests of the country.

The Commissioner of Agriculture is also authorized to employ two Commissioners, one of whom shall be a practical stock-raiser and one an experienced business man, familiar with questions pertaining to commercial transactions in live-stock, whose duty it shall be to advise with regard to the best methods of treating, transporting and caring for animals, and of providing against the spread of said diseases.

The Commissioner of Agriculture is directed to make enquiry through the Chief of the Bureau of Animal Industry as to the existence of pleuro-pneumonia or any contagious or communicable disease along the dividing line between the United States and foreign countries, and along the lines of transportation from all parts of the United States to ports from which live-stock are exported, and to make a report of the results of such investigation to the Secretary of the Treasury. He shall establish such regulations concerning the exportation and transportation of live-stock as the results of the investigation may require.

Beef Values.

Our exchanges in the interior counties from north to south are speaking of the journeys of the butchers to secure stock for their slaughter. With many, it is a literal scouring of the country to find the animals. No such scarcity has been known for years.

As we have remarked before, the scarcity and consequent high price of beef rules all over the country. The monthly report of Hon. J. R. Dodge, Statistician of the Department of Agriculture, dated July 12th, states that a comparison of Chicago prices of beefs of different grades, for six years past, shows a constant decline from 1876 to 1879, amounting to 20% for choice beefs during this period. Then commenced a rise, which, in three years, exceeded 40%, the advance moving slowly in 1879 and 1880, but much more rapidly during 1881, the increase being fully \$1 per 100 of live weight during the year. But since the 1st of January, the advance has been extraordinary, if not unprecedented, the range being from \$5.85 to \$6.35 in January of 1882, and from \$8.65 to \$8.90 in June, or more than 45% advance upon the prices of six months ago.

The advance in the value of extra beefs in these six months has been almost 40%, and nearly as much in the last month as in five months preceding. The record of prices on the 1st of January is as follows:

YEARS.	Extra.	Choice.	Good.
1876.....	\$5.25 to \$5.75	\$4.50 to \$5.10	
1877.....	5.00 to 5.50	4.50 to 4.80	
1878.....	\$4.15 to \$5.40	4.50 to 4.90	4.00 to 4.40
1879.....	4.60 to 5.00	4.10 to 4.35	3.60 to 4.00
1880.....	5.00 to 5.25	4.60 to 4.75	
1881.....	5.75 to 6.25	4.85 to 5.40	
1882.....	6.50 to 6.85	5.85 to 6.35	4.50 to 5.10

The upward movement of last year is only a prelude to the advance since January, as follows:

MONTHS.	Extra.	Choice.	Good.
January.....	\$6.50 to \$6.85	\$5.85 to \$6.35	\$5.50 to \$5.75
February.....	6.30 to 6.50	5.85 to 6.10	5.25 to 5.50
March.....	6.60 to 6.75	5.90 to 6.35	5.50 to 5.75
April.....	7.17 to 7.65	6.75 to 7.00	6.25 to 6.60
May.....	7.60 to 7.85	7.30 to 7.50	6.80 to 7.15
June.....	9.15 to 9.40	8.65 to 8.90	8.00 to 8.50

In "butcher's stock" the range has been from \$2.75 to \$4.25 in January, and from \$3.50 to \$6 in June, the latter rate being a reduction from May prices.

What will the future of prices be? It is difficult to tell, but there seems reason to expect a still farther advance for it does not appear where the cattle are to come from to supply the demand. At the East the outlook is portrayed by Mr. Dodge as follows: "It is clear that a season of abundant crops, and especially a good corn crop, would cause an immediate decline. If another short crop is gathered, prices will continue to be high. Already the effect is seen in reduced consumption, tending to increase of supply and reduction of rates. While prices cannot continue to increase, and cannot be permanently maintained under full harvests, it is probable that the low rates of a few years ago will not soon prevail, if ever. The general tendency throughout the world is towards a high rate for meat compared with grain and other annual products."

Tree Moss for Bedding.

A writer in the London *Live Stock Journal* calls attention to the value of tree moss as bedding for animals. Along the Pacific coast this material grows in large quantities, and it is possible that it might be gathered and baled with profit, or gathered for use in the stables of our coast ranches. This moss absorbs a much larger proportion of fluid than either straw or sawdust. Where used in stalls or loose boxes drains are not required, and thus a great source of annoyance and expense is got rid of. It prevents decomposition of the urine, and thus preserves the most valuable portion of it—the ammonia—for manurial purposes, while keeping the stables free from this and other injurious gases. The moss can be continued in use 30 days; straw has to be changed at the end of a week. The stables are not only kept free from bad odor by it, but the floor is always clean and dry. It forms an excellent, soft and elastic bed for body and feet, and does not injure, but rather improves the hoofs. The hoofs grow elastic and strong upon it, as it keeps them soft and promotes growth; and in this way it should greatly diminish the serious amount of foot disease and suffering always so common in town stables. It maintains an excellent coat on the horses, and does not soil or stain like straw; while it is warm and comfortable in winter and cool in summer.

Other considerations are: It is incombustible, or at worst would, in case of contact with fire, only smoulder when newly laid down, and not at all after it has been in use a day or two. It is the most economical of any kind of litter in use, and, when compared with straw, the saving is very great. Voracious horses will not eat it as they do straw litter, and this is a most important matter with regard to health, especially with horses required for fast work. As a manure it is much more valuable than straw, and sawdust is not to be compared with it. Dr. Voelcker gives the following analysis: Moisture, 40.58, organic matter (containing nitrogen 1.47—equal to ammonia 1.78), and salts of ammonia, 48.05; phosphate of lime, 2.29; carbonate or sulphate of lime, .92; alkaline salts and magnesia, 3.15; insoluble silicious matter, 5.24. This manure is worth about two and a half times as much as good ordinary stable dung. In consequence of this, and of the moss lasting so much longer than straw for litter, it is considered the cheapest in England. Whether it would prove so in America can only be told on trial. In subsequent articles the English paper treats especially of the utility of moss bedding for bruised, brittle, feverish horses' feet, also for sheep and cattle.

The State Bag Factory.

The reporters of the daily papers are giving due attention to the State bag factory at San Quentin, and readers are duly assured of the full success of the enterprise. The building cost \$45,000, the machinery \$105,000, and the whole was put in complete running order for \$184,000, and with the balance of the appropriation 480 tons of jute were purchased. Now at San Quentin State prison cloth is woven daily by the convicts, with a few freemen as superintendents, sufficient to make 7,200 grain bags, and these have been sold at 8½ and 9 cents per bag. The demand for them cannot be supplied. And these bags have not been disposed of to traders, but directly to farmers. The first lot was sold at 8½c., mainly to Arizona, because they were not in quality up to the standard, but now the price is 9 cents—and it will not be raised, for this institution is not a speculative one. It was established to give work to prisoners, and to supply a public need. There can be no more corners in grain bags, for the 8,000 bags a day, which henceforth will be turned out of San Quentin, will be sufficient to prevent the speculators from venturing on such dangerous course, hence the price of bags will be kept at the lowest rate, and all this will inure to the great benefit of the farmers. These San Quentin bags have been examined by experts and pronounced of a superior quality. The Warden, Judge Ames, is not, however, in his jute factory confined to grain bags, as he weaves cloth for hop packing, for ore bags, for wool sacks, etc., and makes twine to sew them with. This is probably the best investment that the State ever made. It is practicable and profitable—first, in making the prisoners earn their living, and second, by furnishing the farmers with good bags at a just price, and thus preventing the dealers from charging them unconscionable rates.

ABOUT two-thirds of the freighters on the route between Lordsburg and Clifton, New Mexico, have drawn off, believing it unsafe to travel the road on account of hostile Indians. The Detroit Copper Mining Co., situated on the old trail from San Carlos to Mexico, at about six miles below Clifton, have been obliged to shut their smelter down, being unable to obtain teamsters to haul their ore. Mr. Church, the superintendent, has attempted to obtain from the military commander suitable protection for his reduction works, but without success.

It is reported that the Chicago, Burlington & Quincy railroad will extend its line to the Pacific.

Marketing Fruit.

There is no subject which the fruit growers had better discuss, with all their powers of discernment and analysis, than the marketing of their product. Insects are an immense evil, the labor question is of great importance, but in the market lies the secret of success in the fruit business. It is well to propagate and plant to subdue the waste lands, to bring water upon waiting fields, but do not forget that unless a fair trade and fair prices can be obtained, it will be well nigh useless to proceed with the development of our fruit resources.

We are not unconscious of the fact that an element of danger is introduced into the business by the combination of the leading canners, in both buying and selling, and that hardship may result to the growers, from cupidity which may seize upon packers when they feel power increasing in their hands. We do not, however, anticipate any such lasting evil as some are predicting; because we believe it impossible to long maintain any such close corporative efforts as are feared. There is too much inherent rivalry in the business of canning fruit to make all those interested completely subservient to the behest of the central power. Then, too, the starting of new canneries in the country is so easy an undertaking that they will spring up at every cross-roads in the fruit districts, if the city canners push the growers too far toward the wall. We are well aware that immediate hardship may result, and, perhaps, one season's fruit go at too low a rate, but there is too much capital looking for investment and too great confidence generally in the fruit industry to allow any combination to long corner all the profits. However, it is well enough to face the problem at its worst, for the purpose of awakening popular attention. Therefore, we quote from a writer in the *Santa Rosa Democrat*, as follows:

The combination of fruit canners has already commenced to draw the slimy coils of the great anaconda around the producer. By articles of incorporation they propose to build boats, become common carriers, commission merchants and fruit canners. Capital stock \$1,250,000. Their first object is to drive out from San Francisco all commission merchants who are dealing in fresh fruits. To accomplish that end, they resort to ways that are crooked and dark. They employ a general buyer at a salary of \$7,500 per year to bear the market. They have outlined the work as follows: They, through the general buyer, buy orchards of the varieties they wish to can at fair prices, from several different points in the State. That, or a portion of the fruit, is placed on the market at greatly reduced figures. The remainder is turned over to the canners. The canners dare not buy fruit unless the general buyer gives them a permit. Their motto is to close their factories unless they can purchase the fruit at their or the buyer's figures. We will illustrate:

A. sends his apricots to the general buyer, per contract at three cents per lb. B., a neighbor of A.'s, sends his to a commission house. The local trade has been well supplied for the day. The commission man is obliged to carry over several hundred boxes. The next day's invoice comes in on what has been carried over. The local trade has become demoralized by the combination throwing on the market just enough fruit to keep the price at such figures as they wish. He is forced to sell at such figures as are offered or have them decay upon his hands. Hence, they are compelled to ask the boss buyer to set a price on the apricots. He says we do not want them, as we have enough of our own, but, to accommodate you, I will give you from one to two cents per lb. The commission merchant is obliged to accept the offer, as he cannot make a price. In this way the boss buyer uses A.'s fruit to kill the price of that of his neighbor B.'s. Unless this combination is met by some formidable opposition the commission merchants will soon be obliged to close their doors; the combination buyer will then dictate the terms; the combination will do the carrying, selling and canning business; and the producer will be obliged to accept the combination terms. Their ultimate object is to depreciate the value of fruit to such an extent that the orchards will become of little value to the owner. They, with their millions of money, stand ready to absorb the orchards at reduced figures. Then, with a regiment of Chinamen to gather the fruit, the combination have it all their own way. They have appointed one man as the agent for all the canners to sell their goods; therefore, no competition. The consumer will have to pay enhanced prices on goods manufactured from fruit bought at depreciated prices in order to gratify the insatiable maw of a soulless corporation.

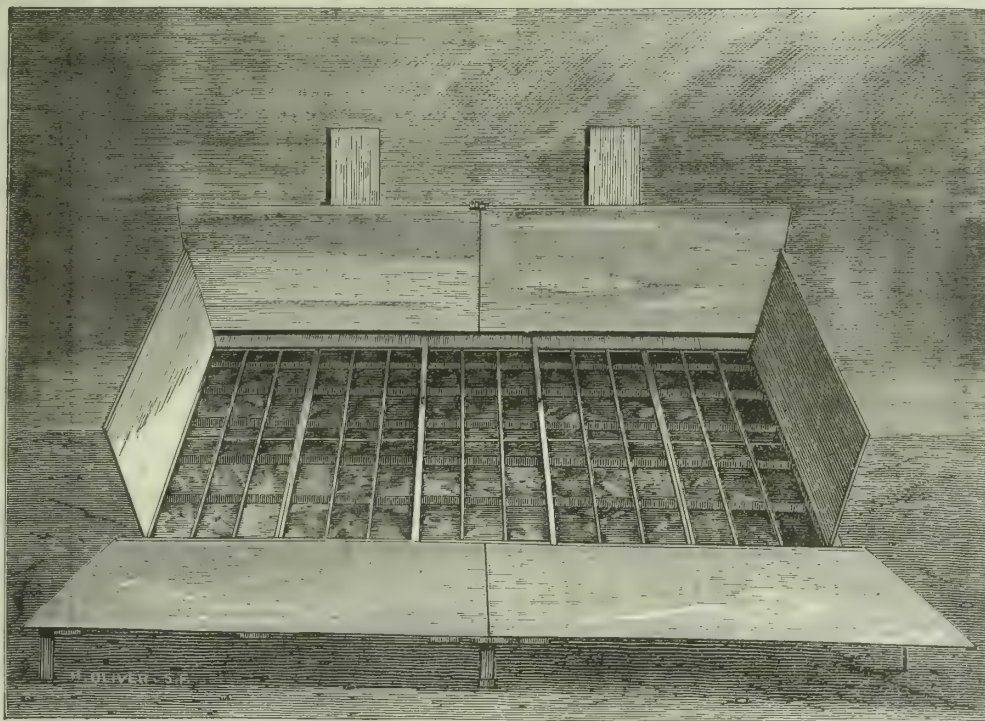
This is an alarm cry of the deepest sound, and it will do no harm if it arrests the general attention of growers. We have said we do not think the evil can go so far as the writer fears. There is already a group of canners not in the combination; there are instances of home canning which yields a product superior to anything produced by city packers, because they have the fruit at its best, and these establishments will spring up like mushrooms if the combination attempts to carry the work too far. Then there is the drying industry which has almost unlimited scope, and will prove the growers avenue of escape if the city market presses him too closely.

The combination for the sale of the products of the great nurseries is a necessary part of their plan and does not seem to us a very great menace to the business. There are just as able fruit sellers who would only be pleased to contest the market with the constituted authorities of the great canners. They can enter the markets of the world with just as good advantages if they can be supplied with abundant supplies of the product, and when the world is the salesroom, it is hard for one voice to reach all its corners.

And when we thus write in a half hopeful strain, it is not from any liking for the combination plan of the packers, nor at all apologetic for the unholy alliance which they have assumed. We do not approve of their movement in any shape or form, and when we see reasons

which lead us to think they will never be able to pocket the fruit industry of the State, we are heartily glad of it. They do not, perhaps, lack the disposition, but they certainly cannot have the power to monopolize the business, as perhaps they desire. The whole subject should be discussed by growers, and there should be the fullest and most confident co-operation in efforts to free the business from the meshes which the few may design to spread over it.

ANGORAS.—Appropos to the discussion of Angora ethics by our able contributor in *Mari-rosa county*, we give the following items, gathered by the *Napa Reporter*, from various sources: T. H. Ink, in the mountains adjacent to Pope valley, has quite a flock of Angora goats grazing upon the shrubbery of the hills, and finds



ELY-MEEKER SUN DRIER—FRONT VIEW.

the business of raising them not unprofitable. J. M. Harbin, for a number of years, also made a successful business of raising, near the Little Geysers, goats bred with Angora stock for their fleece, but afterward transplanted them to Mexico. It is reported that the business of raising Angora goats for their wool and skins is proving to be quite profitable on the Humboldt. The Battle Mountain (Nevada) *Messen-*

The Combined Machines.

We lately had an item about the combined headers and thrashers starting in vigorously around Stockton. A friend sends us word that they are working quite satisfactorily. In one instance with the machine, four men and 16 horses cut and put in sacks 30 acres of grain in 9 hours. About 25 of the combined machines are in use.

We learn from the *Marysville Appeal*, that Sheriff Harkey, of Sutter county, lately went on a tour of inspection to Stockton, to see these machines. He was greatly pleased with their work, and says that he means to buy one for his own ranch next summer. One of these harvest-



REAR VIEW OF ELY-MEEKER DRIER.

ger says that, at Bailey's ranch, on Mill creek, there are 1,400 full-grown goats and 300 kids. The range is very fine, and the goats have done extremely well there, and the future is very bright for a continuance of their growth. Mr. Bailey says that the goat business needs to be increased; that the demand for mohair and Angora gloves is continually increasing, and that he is now extending the business of raising the goat in various places; that it is difficult to obtain a sufficient number of skins to supply their manufactory so as to meet the call for gloves.

A SONOMA SILO.—We learn from the *Petaluma Courier*, that Isaac R. Jewell is building a silo as an experiment. This, we believe, is the first green-feed preserver, so far as our information goes, built north of the bay.

A DISPATCH from the city of Mexico says the Mexican revenues for the last fiscal year were \$27,500,000, an increase of \$4,500,000 over the year previous.

The Ely-Meeker Sun Drier.

We give on this page engravings showing the new form of apparatus for fruit drying by sun-heat, called the Ely-Meeker sun drier. Last year we gave a picture of the old Ely sun drier. It was found to have fatal defects, which, it is believed, have been fully overcome by the new arrangements.

The new Ely-Meeker drier is improved to the extent that but one principle of the original machine is retained. We are assured that experiments with the new drier have produced thoroughly dried fruit in the following times: Sliced apples in from 3 to 5 hours; apricots, halved, in from 8 to 12 hours; peaches in from 12 to 15 hours. The quality of the fruit shown us is certainly very fine, the color being excellent, apricots, for example, being translucent and of a beautiful amber color. The flavor is rich and sugary. Samples which we had cooked at home softened nicely and had the true fruity flavor.

In the old Ely sun drier there were fatal faults in that the trays of fruit were not equally exposed to the sun, and there was not adequate ventilation. The new arrangement of the trays secures much better results even than were attainable with the top tray of the old pattern, because the ventilation is better, and the work of the new drier is completely satisfactory, while the old drier was a failure, because equal exposure of all the trays was not provided for, and the moisture was retained in the machine, giving the fruit a steaming instead of a drying action.

In the new drier the trays are equally and fully exposed to the direct rays of the sun, and to the action of the reflectors. They are, therefore, equally effective, doing their work in the same space of time. Each tray is independent, and easily accessible and removable without disturbance to the rest, and is easily handled by women or girls. No turning or changing of trays is necessary. After five minutes' work of opening the drier for the day, a boy or girl of 14 can manage it. The drier revolves easily, so as to constantly face the sun, while reflectors above, below, and at the sides, multiply the power of the sun's direct rays. Ventilators perfectly under control carry off the moisture with as little loss of heat as possible. Out of the fruit season it may readily be made use of

as a forcing house for seeds, flowers, vine cuttings, or any similar purpose.

By using sun-heat, any quantity, small or great, can be profitably dried. In the case of a drier using artificial heat and requiring much attention, it does not pay to dry less than a full charge of fruit. The superiority of sun-dried fruit is indisputable. It is claimed that in the Ely-Meeker drier all of the sugar of the fruit is crystallized and preserved. The flavor and all the peculiar qualities of the fresh fruit are retained, while by artificial heat these qualities are often changed or destroyed. The sun, which has grown and perfected the fruit, is the natural agency for drying and preserving it. The great advantages of sun-drying are, however, lost when the drying is done in the open air. The long exposure of the fruit to the air and dust, and to the larvae of insects, makes it unclean, injures its appearance, takes away its flavor, and makes it liable to become wormy and unfit for keeping or use. It is claimed that fruit dried by the Ely-Meeker process has all the virtues of sun-dried fruit without any of these evils; can be kept for any length of time, like grain; and will bear a much higher market value.

We have given these claims of the apparatus as a matter of news, and expect that any one who is interested will take the trouble to examine for himself and ascertain how far the claims are justified. The new Ely-Meeker drier is now out in the orchards and will be thoroughly and practically tested. They may be seen at the ranches of Gen. John Bidwell, Chico; J. M. Bassford, Jr., Vacaville, and J. A. Bunting, Centerville. These gentlemen are named in case any one desires to enquire of the work of the new machine.

The usual size of the drier is 8x16 ft. on the ground. The sides are covered with tin and act as reflectors to concentrate the sun rays upon the fruit which is on the trays under the glass. In the rear view the little knobs show the long doors which open to admit the fruit trays. The square chimneys are the flues to allow the escape of the moisture-laden air. The rear view shows also the manner in which the drier is mounted on castor wheels upon a platform so as to turn towards the sun. The drier may be seen in the city at the Excelsior mills, Bryant street, between Fifth and Sixth streets.

PLOWS.—The H. C. Shaw Plow Works, of Stockton, are early in the field with an advertisement of their well-known Stockton gang plows, which may be seen in another column. This plow has an enviable reputation for rapid and thorough work, and is shipped from Stockton to all parts of the coast. It is an excellent implement.

GOV. SHERMAN, of Iowa, has issued a proclamation declaring the result of the election on the adoption of the prohibition amendment to be 155,436 votes for and 125,677 against adoption, being a majority for adoption of 29,759.

ARABI PASHA is endeavoring to fortify the vicinity of Port Said. France is watching the place with men-of-war.

THE President has vetoed the River and Harbor bill, and it is not believed that Congress can pass it over the veto.

HORTON & KENNEDY'S FAMOUS ENTERPRISE Self-Regulating WINDMILL

Is recognized as the best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Send Wire-rope Crank Shaft with double bearings for the crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating
With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit all times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, LINTH, RICE
& CO., 323 & 325 Market St., S. F.

New Crop Insect Powder. BUHACH! BUHACH!

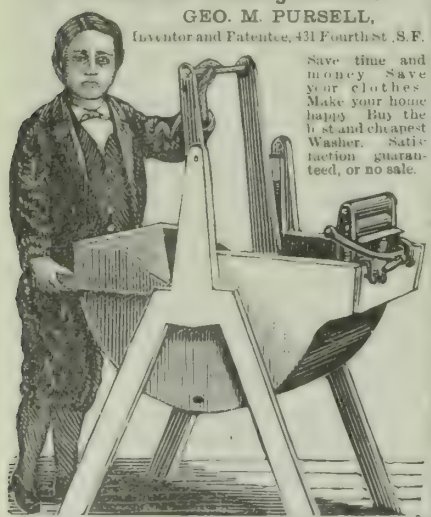


None genuine without this trade mark.
SURE DEATH TO ALL INSECTS.
An unexcelled powder of a bright yellow color is sometimes sold as Buhach. Buy only that which bears our trade mark. All druggists and grocers not keeping it send for price list. Buhach Producing & Manufacturing Co., 154 Levee street, Stockton, Cal.

The California Washing Machine.

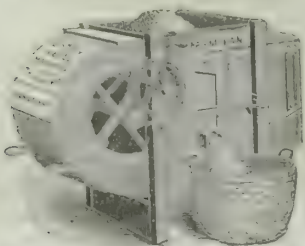
GEO. M. PURSELL,

Inventor and Patentee, 431 Fourth St., S. F.



Save time and money. Save your clothes. Make your home jump. Buy the best and cheapest Washer. Satisfaction guaranteed, or no sale.

A. P. DICKEY FARM AND WAREHOUSE FANNING MILLS.



The BEST FANNING MILL IN THE WORLD. Obtained 1st Grand Award and Grand Medal, also best award at Paris Exposition 1875. It cleans perfectly, sorts, chaffs, cracks and removes all matter from wheat and barley. It grades and separates the seedling and Market, clean all kinds of grain. Also, it will save the farmer its cost annually. Lowest freight rates to all purchasers. Address, DICKEY & PLANT, Manufacturers, Racine, Wis.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1882:

252 Market Street, Elevator 12 Front,
SAN FRANCISCO.

Branch Offices in all Foreign Countries.

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE
ON APPLICATION

GEO. H. STRONG.

W. B. EWER.

A. T. DEWEY

CLEAR LAKE

AND

CALISTOGA STAGE LINE.

San Francisco

—TO—

LAKEPORT

In Eleven Hours.

Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays stages leave Calistoga for Lakeport via Middleton, Glenbrook, Kelseyville and Soda Bay; returning alternate days.

This is the Most Direct Line from
San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegler, Howard Springs and Soda Bay. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middleton, Glenbrook, Lower Lake, and Sulphur Springs; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!
Driven by the most skillful drivers on the coast. For full information and tickets apply to **SAM. MILLER**, Tourist and Ticket Agt., 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50. Lakeport office at W. W. Green's Hotel. JOHN CLARK, Agent. W. F. FISHER, Proprietor.

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, Proprietors.

These Springs are particularly beneficial in purifying the blood, and unsurpassed by any in the State for the cure of rheumatism, dropsy, scrofula, weak lungs, dyspepsia, costiveness, catarrh, liver and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Board and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake. Two and one-half miles from the Siegler Springs, two and one-half miles from "Bassett's" place, in Cobb Valley, only six miles by a good trail from the Harbin Hot Sulphur Springs, and twenty-eight miles from Calistoga. Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, \$5. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

GILLES H. GRAY.

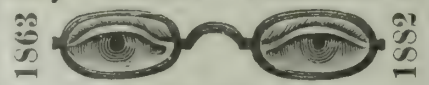
JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

30 California St. SAN FRANCISCO

Only "PEBBLE" Establishment.



Muller's Optical Depot,

185 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defect
ive vision thoroughly diagnosed, free of
charge. Orders by mail or express
promptly attended to.

Compound Astigmatic Lenses Mounted to
Order. Two Hours Notice.

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON
and Mrs. F. W. HARMON, for the last 10
years principals of Washington College.

The HARMON SEMINARY will receive girls of all
ages; the instruction comprising Primary, Preparatory
and Academic. Thorough course in the English
branches. The Arts, Music and Modern Languages in
charge of well known masters. Special course prepara-
tory to the State University.

The HARMON SEMINARY will be first-class in all re-
spects, and will combine the best educational advantages
with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,

Or E. J. WICKSON, 414 Clay St., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter
street and Miner Avenue, Stockton, Cal. Largest School of
its kind on this coast. Open day and evening. Tuition and
expenses less than one half the usual rate. Excellent board,
\$10 per month. Courses of Study: Full Business Course,
Full Normal Course, Review Course, Special Courses, Teachers
Courses, Preparatory Course, Telegraphy, Languages. The
College Journal, containing full information, will be sent
post paid to any address. F. E. CLARK, Principal.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

Paid in Installments, \$75.

Send for circulars.

THE HOME SCHOOL

FOR—

YOUNG LADIES,

1825 Telegraph Avenue, Oakland, Cal.

The next year will begin on

WEDNESDAY, JULY 26, 1882.

H. N. FIELD, Principal.

SACKETT

(FOR BOYS)

SCHOOL.

Takes first rank for thorough-
ness and ability of its teachers;
also for home care.

Business, Classical, and
English Departments.

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M.,
Principal, Oakland, Cal.



417 Kearny Street, San Francisco.

C. N. ANDREWS,

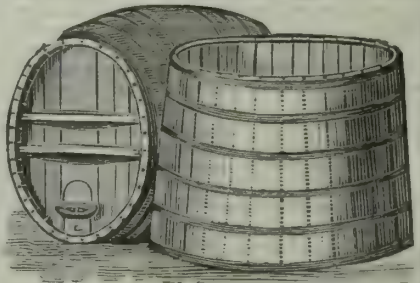
President.

G. B. BARNARD,

Business Manager.

Send for Circulars.

CALIFORNIA Wine Cooperage Co.



FULDA BROS., Proprietors.

30 to 40 Spear St., S. F.

ALL KINDS OF CASKS, TANKS, ETC.

Ship, Mining and Water Tanks a Specialty.

PACIFIC BRANCH.



GEO. D. DORNIN, Manager.

WM. SEXTON, Asst. Manager.

INSURES ON GROWING CROPS under a
plain and easily understood Contract, also on Grain in
Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

Highland Springs SANITARIUM.

This popular and healthful summer and winter resort
for families, pleasure seekers and invalids, is situated in

Lake County, 25 Miles from Cloverdale.

Seven miles south of Lakeport, four miles of Kelseyville,
and in sight of Clear Lake, at an altitude of 1700 feet,
and is sheltered from the cooling Coast
Winds and Fogs by mountains 1600 feet in height,
which for

Grandeur and Beauty of Scenery are unsurpassed on
the Pacific Coast.

While the Beneficial Effects of its Mineral Waters are
equal to any in the United States or Europe.

MAGIC SPRING,

Analysed by Prof. W. B. Bixing, University of California.

TEMPERATURE.....	Grains per U. S. Gallon.
Chloride of Sodium.....	1.290
Bicarbonate of Potash.....	0.544
Bicarbonate of Soda.....	21.763
Bicarbonate of Lime.....	60.411
Bicarbonate of Magnesia.....	70.243
Bicarbonate of Iron.....	0.973
Bicarbonate of Manganese.....	trace
Silica.....	7.398
Alumina.....	0.109
Organic Matter.....	trace
Free Carbonic Acid.....	74.462

Total.....237.262
W. B. Bixing, Berkeley, April 3, 1882.

Dr. C. M. BATES (formerly of San Francisco), having
become sole proprietor, by purchase and lease, of these
justly celebrated Springs, will devote all necessary time
and attention to persons requiring the use of the waters.

Good Hotel and Cottage Accommodations.

Carriages, Buggies and Saddle Horses

Furnished at Reasonable Rates.

Cloverdale and Lakeport stage stops at hotel daily.

Post Office and Telephone connected with hotel.

Direct Route via San Rafael and Cloverdale 7:10 A. M.,

will arrive at Springs 5:30 P. M.

By steamer "DONAHUE," via Donahue Landing, 2:30

P. M., will remain over night in Cloverdale; and via Napa

and Calistoga, 8:00 A. M.

On Tuesdays, Thursdays and Saturdays

Will be met at Kelseyville with private conveyance, if

notified.

For further particulars, address

DR. C. M. BATES,

Highland Springs, Lake Co. (via Cloverdale).

Excelsior Fruit Pitter.

Invented by A. Donatella.

This machine recommends itself
by the following good qualities:
Rapidity of work, one operator
doing the work of four with knives.
It cleans the pit perfectly, wastes
no fruit, and leaves the plum in
two equal parts. It is easily op-
erated. Makes no litter, the pits
dropping in a vessel under the
table. The plum remaining be-
tween thumb and finger can be
placed directly on the riddle for
the dryer. Simplicity of con-
struction. Cannot get out of or-
der. Will work equally well on
crown or very fine Plums, Prunes,
Apricots or Nectarines pitted with
this machine dry more evenly and
look nicer than when clipped
off with a knife.

The low price comes within reach
of all, and will pay for itself with two days' work. It is in-
valuable to the housewife for preparing fruit for canning and
other purposes. Ask your hardware dealer for it. Try it
and be convinced. For particulars address,
A. DONATELLA, Healdsburg, Cal.

WIESTER & CO., General Agents, 17 New Montgomery
Street, San Francisco

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses
from running away. Price \$2.50. Address W. F.
MERRILL, Florin, Sacramento Co., Cal.

This paper is printed with ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph H. Dorety 527
Commercial St., S. F.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAGE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Yorkshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Seitate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb. box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$4. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

LAUREL RANCH.

Thoroughbred Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop. Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to FALKNER, BELL & CO., San Francisco.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

Poultry and Stock Book.

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco.

Oakland Poultry Yards.

(Cor. 17th and Castro Sts., Oakland, Cal.)



GEORGE B. BAYLEY.

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to **GEORGE B. BAYLEY**, Box 1771, San Francisco.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHbred



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, **E. W. WOOLSEY & SON**, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

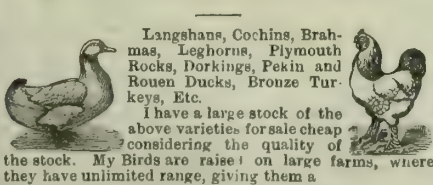
SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to **CHA. DUSENBERG & CO** Sole Agents, 314 Sacramento St., San Francisco.

PURE BRED POULTRY.



Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc. I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

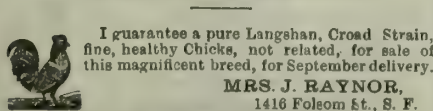
VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock.

For further information send 3 cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

LANGSHANS.



I guarantee a pure Langshan, Cross Strain, fine, healthy Chicks, not related, for sale of this magnificent breed, for September delivery.

MRS. J. RAYNOR, 1416 Folcom St., S. F.

ONE HUNDRED

SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. SCHNEIDER,

Cornwall Station, Contra Costa County.

Duroc, or Red Hogs.



The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Spaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 683 lbs. gross, and 584 lbs. dressed. On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F., killed one weighing 1018 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

HINCKLEY & GETCHELL,

Laurelles Ranch, Monterey, Cal.

POULTRY, Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks, Bronze and White Holland Turkeys, Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES, Los Angeles, Cal.

HOG RINGING A FAILURE! OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.

" " "Tendon Cutter," \$2.75 each.

Sold by the trade generally, or address

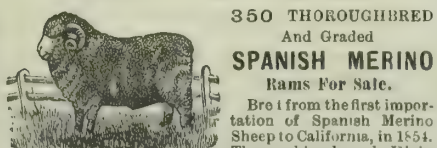
G. G. WICKSON, General Pacific Coast Agent, No. 319 Market Street, San Francisco, Cal.

FOR SALE.



Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to **G. M.**, 39 Clay street, S. F.

RAMS FOR SALE.



350 THOROUGHbred And Graded SPANISH MERINO Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, **MRS. E. McCONNELL WILSON**, Elk Grove, Sacramento Co., Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Hens and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

BADEN FARM HERD.

R. ASHBURNER,

Baden Station, - - - San Mateo Co.,

Breeder of Short Horn Cattle, Dairy Cows and Berkshire Pigs. Catalogues on application.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING..... President
A. D. LOGAN..... Vice-President
ALBERT MONTELLIER..... Cashier and Manager
FRANK McMULLEN..... Secretary

DIRECTORS

JOHN LEWELLING, President..... Napa Co
J. H. GARDNER..... Rio Vista
T. E. TYNAN..... Stanislaus Co
URIAH WOOD..... Santa Clara Co
J. C. MERYFIELD..... Solano Co
H. M. LARUE..... Yolo Co
I. C. STEELE..... San Mateo Co
THOS. McCONNELL..... Sacramento Co
O. J. CRESSEY..... Merced Co
SENECA EWER..... Napa Co
A. D. LOGAN..... Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Lands for Sale and to Let.

Fruit and Homestead Lands FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER,

Vacaville, Solano, Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$80 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,

410 Montgomery St.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place,

WM. C. PRINCE.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,

Anderson, Shasta Co., Cal.



Calvert's Carbolic

SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.

Dewey & Co. { 252 Market St. } Patent Agt's

JOHN PENDER, in a speech to the stockholders of the Direct Cable Company, in London, Saturday, made some interesting observations. He said the percentage of increase of traffic at the one-shilling rate was so small, and consequently so unremunerative that the company was obliged to return to the two-shilling rate. The agreement with the Western Union Company is working well.

ANTI-ROOTING OPERATION.—We have been shown samples of a new device for preventing hogs from rooting, which is advertised in an other column, by G. G. Wickson, 319 Market street, S. F. The advertisement describes the method and shows the apparatus for applying it. We have also seen many testimonials from hog growers in Illinois that the new method is practically valuable and superior to the old way of ringing the nose. The new device will, no doubt, be tried by California hog raisers.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chiapas, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madre, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co. 606 Battery street, S. F.

Hay Rakes.

The celebrated hay rakes manufactured by John Dodds, Dayton, Ohio, can be found in large stock at the San Francisco branch, 37 Market St. The old reliable Hollingworth Rake has taken three Gold Medals at International Fairs. The Red Bird is cheap, simple and a great favorite. The new Reindeer is the strongest and most durable Self-Dump Rake on the market. The iron axle and wheels, rocker-frame movement, adjustable teeth, dumping device and other improvements make them the most desirable Rakes manufactured. See the agent, S. H. Gould, before purchasing, 37 Market St., S. F.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Announcement Promised.

Mr. B. Holmyer, of San Jose, wishes to notify the readers of the Press that in a few weeks they may look out for his advertisement of an immense stock of nursery trees for next winter's trade—such as apricots, peaches, plums and prunes of many choice kinds.

LIVERY STABLE IN OAKLAND.—We call the attention of farmers visiting Oakland, and others to hire teams or stable teams in Oakland, to the Hay, Sale, Boarding and Livery Stable of T. A. Cunningham, 1398 Broadway, Oakland, Mr. Cunningham (recently from Hayward where he still owns a ranch) has purchased a homestead in Oakland, and will do his best to give satisfaction to his new customers and old friends who may call.

NEW GIE OR SULKY.—Something novel and very elegant in the way of a Sulky, may be seen across the way from our office, at the store of Geo. A. Davis, the well-known Agricultural Hardware man. It must be seen to be appreciated. A cut of it will appear in our columns soon. Photographs sent on application to Geo. A. Davis, S. F., or Jacob Price, San Leandro, who is the inventor of it.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

AGENTS CAN NOW GRASP A FORTUNE. Outfit worth \$10 sent free. Full particulars address E. G. RIMMOUT & Co., 10 Barclay St., N. Y.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 2, 1882.
Wheat is feeling a little better this week, as better foreign advices are improving the views of local buyers somewhat. Barley is losing ground a little. Prices are not materially changed as yet. The latest from abroad is the following:

LIVERPOOL, Aug. 1.—California Wheat, quiet and steady, at 9s 11d to 10s 2d per cwt. Cargoes are firmly held, at 47s 6d for just shipped, and 48s 6d for off coast and nearly due.

The Foreign Review.

LONDON, July 31.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: The weather was unfavorable until the close of last week. Hardly any home-grown Wheat was offered, and what remains is 2s per quarter higher than formerly. The trade in foreign Breadstuffs is checked by finer weather, large supplies and reports of declining prices in America.

There were some occasional concessions to buyers. Flour was dull, but comparatively steady. Oats declined because of large arrivals off coast. Trade is quiet. There were four fresh arrivals, five sales and four cargoes withdrawn. Wheat on passage closed with a downward tendency. The latest English Wheat during the week have been 10 237 quarters, at 57s per quarter, against 13,200 quarters, at 47s 10d per quarter, for the corresponding week of last year.

Freights and Charters.

The past week in freights has been the dullest for months, owing to the wide difference in the views of shippers and ship-holders. The only charters drawn were three vessels, of a register of 3,040, or a carrying capacity of 91,200 cts. The chartered Wheat fleet in port has now a register of 31,688, or an export capacity of 47,532 short tons, or 950,640 cts, against 58,320 tons at the same time last year. The disengaged tonnage in port has now a register of 37,238, or a carrying capacity of 55,857 short tons, or 1,117,110 cts, against 13,036 tons at the same time last year. There is also a disengaged tonnage of 8,150 at adjacent ports. Tonnage now on the way to this port has a register of 234,005, against 367,291 at the same time in 1881 and 173,978 in 1880.

Eastern Grain and Provision Markets.

CHICAGO, July 31.—The markets on 'Change this morning opened with notable changes. Wheat is 1/2¢ higher, July being strongest. The wet weather has made a stronger feeling, although the receipts are nearly 300,000 bushels. Corn, which benefits by the rain, is 1/4¢ lower. The Corn receipts are also heavy. Oats are firmer. Pork is 10¢ to 15¢ lower under continued hammering. Lard, 2 1/2¢ to 3¢ lower in sympathy. Advances this morning indicate that the rainstorm was quite heavy and extended into Iowa, Minnesota, Wisconsin and to southern Illinois, lasting 12 to 36 hours. The sky is still threatening at 11 A. M. It is not likely that any material damage to ripened Wheat has been done yet, but continued wet weather now would prove disastrous to the Wheat fields in this section and northward.

CHICAGO, August 1.—The following were the closing quotations: Wheat, regular, strong and higher; 97 1/2¢; August; 99 1/2¢; September; 99 1/2¢; October; Red Winter, 100 1/2¢ cash. Corn, stronger; 76 1/2¢; August; 75 1/2¢; September. Pork, strong and higher, \$20.50 cash; \$20.70 September. Lard, stronger; \$12.17 cash; \$12.22 September.

Eastern Wool Markets.

BOSTON, August 1.—The Wool market is steady, with desirable grades firm and the demand good. Ohio and Pennsylvania fleeces have been selling at 40¢ to 42¢ for X and XX; Michigan X fleeces are in fair demand, at 39¢ to 40¢; Ohio and Michigan, 44¢ to 45¢. Unwashed fleeces are in demand at 18¢ to 23¢ for coarse and low, 25¢ to 33¢ for fine and medium grades. Combing and delaine fleeces have been in demand, and all desirable lots were taken as fast as offered. Prices have changed 1¢ from 43¢ to 45¢ for fine delaine, and 46¢ to 47¢ for fine and No. 1 combing, medium and coarse combing grades are dull, and prices are nominally unchanged. California Wool is quiet, and prices range from 26¢ to 32¢ for good to choice. Eastern and Maine wools, 28¢ to 32¢ for common and good wools. Foreign Wool is quiet, and both clothing and carpet wools are in light stock.

BAGS.—Bags are rather quiet this week. For Calcutta, buyer August, \$9.50 was bid, \$9.75 asked. Tuesday morning on the Produce Exchange. For spot, \$9.70 was asked in the afternoon. For buyer August, \$9.60 was bid, \$9.72 asked on the Grain Exchange.

BARLEY.—Buyers are getting Barley at a little concession, as supplies are increasing. Some activity is springing up in Brewing. Sales on the Produce Exchange call were: 100 No. 1 Feed, spot, \$1.24; 25, \$1.24; 100, August, \$1.23; 100, \$1.22; 200, \$1.22; 100 No. 2 Feed, August, \$1.18. Bids and offers were: No. 1 Brewing, November, \$1.25 bid; No. 2 Brewing, October, \$1.30 bid, \$1.35 asked; No. 1 dark Brewing, spot, \$1.24 bid, \$1.27 asked; September, \$1.40 bid, \$1.41 asked; No. 1 Feed, September, \$1.22 bid, \$1.23 asked; October, \$1.23 bid, \$1.24 asked; November, \$1.25 bid, \$1.25 asked; December, \$1.25 bid, January, \$1.30 bid, \$1.31 asked; No. 2 Feed, November, \$1.19 bid, \$1.23 asked. Sales on the afternoon call were 850 tons, as follows: 150 No. 1 Feed, spot, \$1.24; 100 October, \$1.24; 100, \$1.23; 300, \$1.23; 100 November, \$1.25; 200 No. 2 Feed, August, \$1.18. For old No. 1 Brewing \$2 was bid.

CORN.—Corn is selling a little more freely this week, Nebraska Yellow, old crop, being taken at \$1.47, and, finally, at \$1.53, where it was run up to under a good demand, with \$1.53 bid at the close. Sales were: 10, \$1.47; 20, \$1.50; 10, \$1.51; 20, \$1.52; 10, \$1.53. California Yellow, spot, is nominal at \$1.60 bid, \$1.65 asked. For No. 2, October, \$1.35 was bid, \$1.55 asked; January, \$1.35 asked.

DAIRY PRODUCE.—There is no change in dairy goods. The fancy lots are, however, growing smaller, and better rates for them may be expected.

EGGS.—Prices are unchanged.

FEED.—The Bran market is firmer, but quiet. Bids and offers were: Spot, \$15.25 bid; August, \$14.85 bid, \$15 asked; October, \$14 bid; November, \$14.37 bid, \$15 asked; December, \$14.25 bid, \$14.75 asked; September, \$14.30 bid, \$14.50 asked.

FRUIT.—Supplies are working off well at the rates we give in our table to-day.

FRESH MEAT.—Beef is a fraction lower. Pork holds its high rate. Other Meats are unchanged.

HOPS.—Hops are still a subject of interest. Prices for future deliveries are going higher; 35¢ to 40¢ for Oregon and Washington Territory, and 40¢ to 42¢ for California.

HONEY.—Honey is quoted 1¢ higher for choice comb.

OATS.—Oats are selling fairly. Exchange rates were: No. 1, September, \$1.42 bid, \$1.50 asked; No. 2, September, \$1.45 bid, \$1.47 asked; October, \$1.45 asked; No. 1, seller 1882, \$1.42 bid, \$1.45 asked.

ONIONS.—Silver-skins have advanced sharply to \$1 per cwt for the best; Reds bring 60¢.

POTATOES.—Potatoes are quiet and unchanged.

PROVISIONS.—There is no change. The trade is reported fairly active.

POULTRY.—Prices are shaded off this week, as seen in our list.

VEGETABLES.—Cabbage and Cauliflower have returned to old prices. Tomatoes are cheapening slowly.

WHEAT.—Wheat is improving a little. Extra choice is worth \$1.75 to \$1.77, and No. 1, \$1.72. Bids and offers in the morning were: No. 1 White, September, \$1.71 bid, \$1.72 asked; October, \$1.72 bid, \$1.72 asked; November, \$1.70 bid; No. 2 White, August, \$1.65 bid, \$1.67 asked; October, \$1.67 asked; No. 1 Sonora, August, \$1.63 bid, \$1.71 asked. Sales on the 3 o'clock call, 100 No. 1 White, October, \$1.72, and 100, \$1.73. The usual amount of business was done on the Grain Exchange, as follows: 10 No. 2, September, \$1.65; 100, October, \$1.65; 500, \$1.65; 100, November, \$1.65; 300, \$1.65; 300, January, \$1.65. Bids and offers were: No. 1 spot, free on board, \$1.71 bid; August, \$1.70 bid, \$1.72 asked; September, \$1.71 bid, \$1.72 asked; October, \$1.73 bid, \$1.73 asked.

WOOL.—Sales have been fewer this week. Prices have not changed materially.

General Merchandise.

WHOLESALE. WEDNESDAY M., Aug. 2, 1882.

CANDLES.		Cement, Rosen, Aug. 2, 1882.	
Crystal Wax.....	16 @ 18	dale.....	1 75 @ 2 00
Paraffine.....	20 @	Portland.....	3 75 @ 4 00
Patent Sperm.....	25 @ 28		
CANNED GOODS.		NAILS.	
Assorted Pic Fruits.....		Assorted sizes, keg 3 75 @ 4 00	
2 1/2 lb. cans.....	2 25 @	Pacific Pine Cans.	
Table do.....	3 50 @	Nestaford, No. 1 1 00 @ 1 00	
Jams and Jellies 3 75 @		Castor, No. 1.....	
Pickles, hf gal.....	3 25 @	do, No. 2.....	
Sardines, qr box.....	1 67 @	Baker's A.....	
Boxed.....	2 50 @ 1 90	Olive, Flagnoli.....	
Merry, Paul & Co.		Palm, B.....	
Preserved Beef.....		Linsed, Raw, bbl.....	
2 lb. doz.....	3 25 @ 3 50	Boiled.....	
do 4 lb doz.....	6 50 @ 6	Cocoanut.....	
Preserved Mutton.....		China nut, cs.....	
2 lb. doz.....	3 25 @ 3 50	Sardines.....	
Beef Tongue.....	5 75 @ 6 00	Spiced Ham.....	
Preserved Ham.....		2 lb. doz.....	
2 lb. doz.....	5 50 @ 6 00	Deviled Ham, 1 lb.	
do 4 lb doz.....	10 00 @ 11 00	do 2 lb doz.....	
do Ham 1 lb doz.....	2 50 @	Bonesless Pig Feet.....	
do 2 lb doz.....	3 00 @ 3 50	2 lb. doz.....	
do 4 lb doz.....	6 00 @ 6 50	2 lb. doz.....	
do 1 lb doz.....	1 50 @ 2 00	Spiced Fillets 2 lbs 50 @	
do 2 lb doz.....	3 00 @ 3 50	Head Cheese 3 lbs 50 @	
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....	1 50 @ 2 00		
do 2 lb doz.....	3 00 @ 3 50		
do 4 lb doz.....	6 00 @ 6 50		
do 1 lb doz.....</			

JAS. P. HULME,
Late Miller & Co. JACKSON HART.

HULME & HART,
(Successors to MILLER & CO.)

Wool, Grain,
AND GENERAL
Commission Merchants.

10 Davis Street, near Market,
SAN FRANCISCO.

DALTON & GRAY,
Commission Merchants
And Dealers in
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.
404 & 406 DAVIS STREET,
P. O. Box 1936 SAN FRANCISCO.
CONSIGNMENTS SOLICITED.

PETER MEYER. LOUIS MEYER.
MEYER BROS. & CO.,
—IMPORTERS AND—
Wholesale Grocers,
—AND DEALERS IN—
TOBACCO AND CIGARS.
412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco
Special attention given to country traders.
P. O. Box 1940.

R. W. O'NEAL, JOS. L. NUGENT,
Late of Point Arena. of P.A. Graham & Co., Bernardo.

NUGENT & O'NEAL,
Commission Merchants
and wholesale dealers in
GRAIN, WOOL, BUTTER, EGGS, HONEY, AND
PRODUCE OF ALL KINDS.
227 and 229 Washington, bet. Front and Davis Sts., S. F.

DAVIS & SUTTON,
No. 75 Warren Street, New York.
Commission Merchants in Cal. Produce
REFERENCES.—Tradesmen's National Bank, N. Y.; Ell-
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra-
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

SEND YOUR CONSIGNMENTS TO



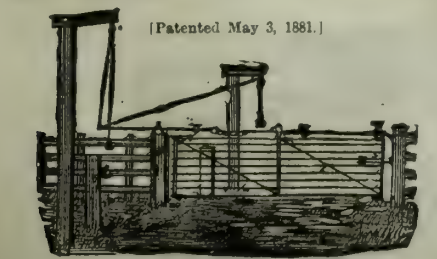
COMMISSION MERCHANTS
CALIFORNIA & OREGON PRODUCE
SAN FRANCISCO
"THE OLDEST HOUSE"

Agents wanted



CHURCH'S
Hay Elevator & Carrier.
BEST in use for moving away Hay in
barns or stacking, being adapted for either
purpose. Has no equal for Simplicity, Durability
and good work. The track is self adjusting
and is easily put up. Send for descriptive circular and special
terms for introduction to E. L. CHURCH, Manufacturer,
Harvard, McHenry County, Illinois.

CAMPTON'S
Self-Opening Iron Farm Gate



It is the Champion Gate of the World for its
Simplicity, Durability and general Excellence.

ARLINGTON FARM, DAVISVILLE, Yolo Co., June 3, 1882.
A. P. CAMPTON, Esq., Dear Sir: The two Automatic Iron
Gates of your patent (one 12 and the other 10 ft. in width)
erected by you on my farm, two miles west of Davisville,
have given me entire satisfaction. They are all you repre-
sent them to be, the most substantial, the neatest and the
most easily operated of any gate that I know of. They are
just the gate that every farmer should have; in fact, they
cannot afford to do without them. Respectfully yours,
H. M. LARUE.

A. P. Campton, P. O. Box, 1210, San Jose, Cal., patentee;
John Aylward, manufacturer, P. O. Box, 88, Livermore, Ala-
meda Co., Cal., and Jas. Stanley, Mission San Jose, Cal.,
agents.

BUY
SEWING MACHINES
AT
HEADQUARTERS.

900 Machines in Stock.

PRICES FROM \$25 TO \$80.

Packed and Shipped Free upon Receipt of Price.

SEVEN LEADING MAKES TO SELECT FROM, VIZ:

"DAVIS," "HOUSEHOLD,"
"QUEEN," "HOWE," "SPRINGFIELD,"
"STEWART" and "SINGER."

Every Machine Warranted Perfect.
NEEDLES, OIL AND ALL SUPPLIES, BEST AND CHEAPEST.

MARK SHELDON, Nos. 9, 11 and 13 First Street,
SAN FRANCISCO, CAL.

E. DETRICK & CO.,
Importers, Manufacturers and Dealers in
BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES—HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING
CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

TO FRUIT GROWERS,
Tree Planters, Etc.

A part of the stock of the **NAPA VALLEY**
NURSERIES, being on rented land, must be cleared
off early. Stock includes yearling FRUIT TREES, de-
ciduous SHADE and FOREST TREES, Etc.

All stock grown Without Irrigation, and abso-
lutely FREE FROM DISEASE OR INSECTS.

Address for special price list,
LEONARD COATES, Napa City, Cal.

P. O. Box 2.

C. E. CASE, M. D.,
Consulting and Operating Physician,
1116 Broadway Oakland,
Will visit patients at a distance for consultation or to
perform operations.

REMITTANCES to this office should be made by postal or-
der or registered letter, when practicable; cost of postal
order, for \$15 or less, 10 cts.; for registered letter, in ad-
dition to regular postage (at 3 cts. per half-ounce), 10 cts.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent
Law.

N. B.—Mr. J. L. Boone, of the above firm, has been con-
nected with the patent business for over 15 years, and de-
votes himself almost exclusively to patent litigation and
kindred branches.

GRAPE CUTTINGS

Season 1882-3.

A SPECIALTY AT THE

Napa Valley Nurseries.

All best varieties, from vineyards where no phylloxera
has been discovered. Also, **ROOTED VINES**,
and Phylloxera-proof Stock. **Riparia, Rupestris**, etc.

Address for prices, etc., **LEONARD COATES**,
P. O. Box 2. Napa City, Cal.

CALIFORNIA'S
Exposition.

The Twenty-ninth

Annual State Fair

Begins at

SACRAMENTO, CAL.

On the 11th, and ends on the 16th of Sep-
tember.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

**LIVE STOCK, MACHINERY, IMPLE-
MENTS, ETC., TEXTILE FABRICS,
MECHANICAL, AGRICULTURAL,
HORTICULTURAL PRO-
DUCTS, and FINE
ARTS, ETC.**

Any further information may be had upon application
to the Secretary, from whom Premium Lists may be pre-
cured. **HUGH M. LARUE**, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacra-
mento, Cal.

UNUSUAL ATTRACTIONS!

\$13,000 Gold Coin in Purses!

THE LARGEST PURSES OFFERED
IN THE STATE.

STOCKTON FAIR!

Sept. 19th to 23rd, inclusive.

Also, UNRIVALED DISPLAY OF

**LIVE STOCK,
FARM PRODUCTS,
AND
Agricultural Machinery.**

L. U. SHIPPEE, President, **J. L. PHELPS**, Secretary
P. O. Box 133, Stockton, Cal.

SEVENTEENTH

Industrial Exhibition

OF THE

MECHANICS' INSTITUTE

WILL OPEN TO THE PUBLIC ON

Tuesday, August 15th, 1882,

AT THE

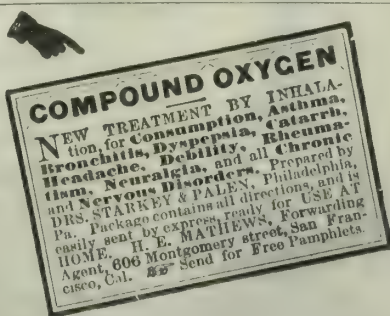
NEW PAVILION,

Larkin, Hayes, Polk and Grove Sts.,

AND CONTINUE UNTIL SEPTEMBER 16.

PREMIUMS of Gold, Silver and Bronze Medals, Diplomas
and Cash, will be awarded to meritorious exhibits in Art,
Manufactures and Natural Products.
Full information will be given or sent by applying at the
office, 27 Post street.

P. B. CORNWALL, Pres't. **J. H. CULVER**, Sec'y.
J. H. GILMORE, Sup't.



The American Driven
WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL
DOMESTIC & MUNICIPAL PURPOSES
Send for Circulars.

BABCOCK & CO.,
40 Merchants' Exchange San Francisco, Cal.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

NEW STORE AND LARGE STOCK!

AUSTIN BROTHERS,

IMPORTERS OF

HARDWARE, IRON, AND BLACKSMITH SUPPLIES.

Rope, Wire, Belting, Pumps, Pipe and Steam Fittings.

310 and 312 Main Street, Corner of America,
STOCKTON.

Agents Halladay Wind Mills.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to the House

O. F. BECKER, Proprietor

W. R. ALLEN & CO.,

IMPORTERS OF

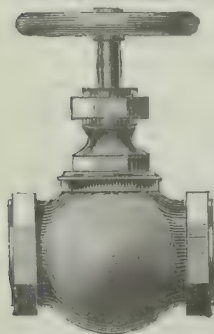
Iron Pipe and Fittings,

Lift and Force Pumps,

Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

QUALITY
NOT
QUANTITY.

OUR NEW PACK FOR 1882.
50 ALL-Color Cards, 100
Views, 100 Landscapes, 100
Silver Prints, 100 Mottos, 100
Moonlight, Summer and Winter Scenes,
all in beautiful 100-card packs, each
10c. Sample for 10c. 100-card pack for 25c.
paid to Agent. Send for circular. Particulars in
every order. CANTON PRINTING CO. Northford Conn.

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS.

Cor Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

50 LARGE SIZE New Chromos, with name, 10c.
TODD & CO., late Wise & Co., Clintonville, Conn.

**Silos, Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.**

RANSOME, 402 Montgomery St., S. F. Send for circular.

NOTICE!

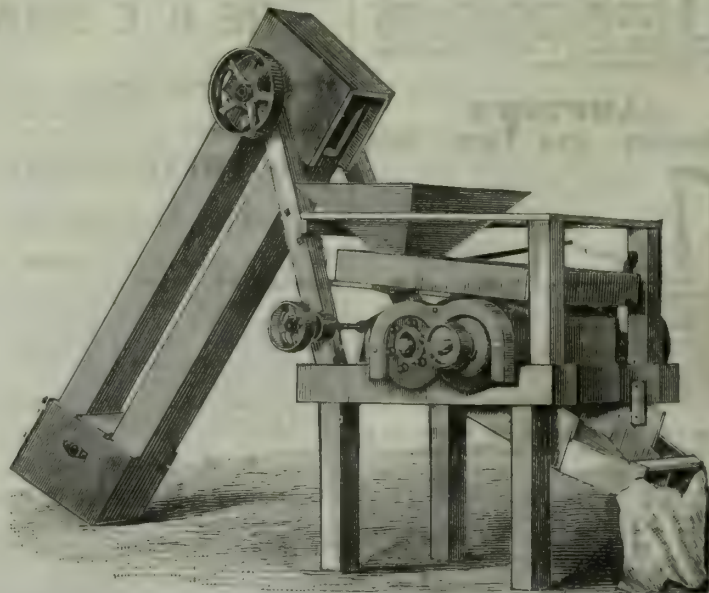
To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-raiser, once having used our medicines will ever be without them in the house. For sale everywhere.

Trade } H. H. H. { Mark	Trade } H. H. H. { Mark	Trade } H. H. H. { Mark
Hoof and Healing Ointment	Horse Liniment	Condition Powders.
For Brittle Hoofs, Fever in Feet, Founder, Contracted Hoofs, Sand Cracks, Quarter Cracks, Collar Galls, Harness Galls, Scratches, Mud Fever, Etc., Etc.	The most effectual liniment ever used for Ringbone, Spavin, Sweeney, Callous Lumps, Old Sores, Sprains, Stiff Joints, Bruises, Windgalls, Etc.	For Inward Strains, Hide Bound, Loss of Appetite, Yellow Water, Poll Evil, Scratches, Mange, Rheumatism, Epizootic, Coughs, Colds, Etc.
H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 50 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name

HAWLEY BROS.' HARDWARE CO.,

SUCCESSORS TO
MARCUS C. HAWLEY & CO.,

SOLE AGENTS FOR THE
CELEBRATED

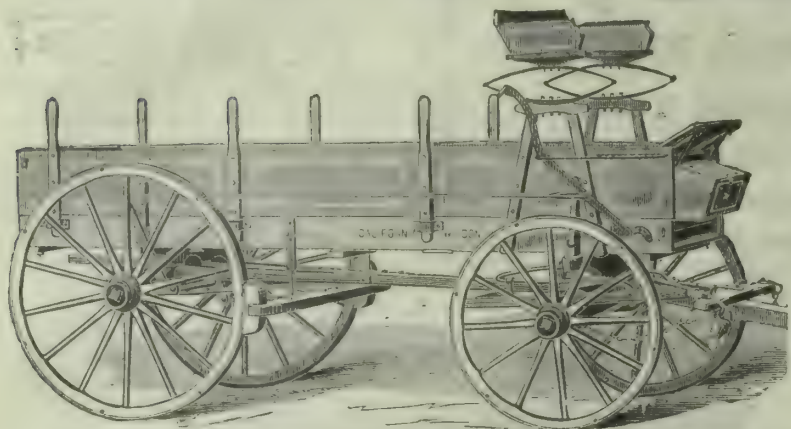
SCHUTTLE
WAGONS!

The Best Wagons in the World!
Warranted to Run Lighter and
Wear Longer than any
Wagon in America.



SCHUTTLE FOUR-SPRING WAGON,

With Sarven Wheel and Brake Inside of Box.



SCHUTTLE WAGON WITH CALIFORNIA RACK BED.

We are Sole Agents for the Following Implements:

THE "CHAMPION" FAN MILLS,

The "Challenge" Feed Mills, Deere's Moline Gang and Single Plows,

SOUTH BEND CHILLED PLOWS,

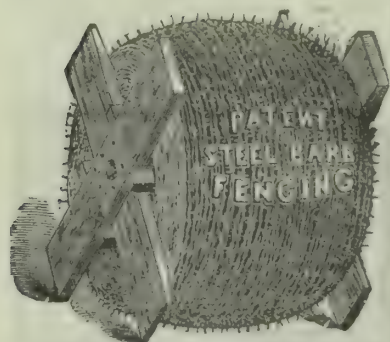
"Buckeye" Gang Plows, "Buckeye" Seed Drills, and "Buckeye" Broadcast Seeders,

"GILPIN" SULKY PLOWS,

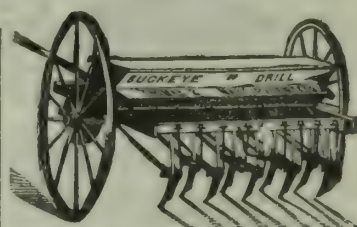
Perkins' Windmills, "Regulator" Windmills, Nordyke & Marmon Co.'s Plantation and Feed Mills,

Corbin's Disc Harrows, "Keystone" Corn Planters, Sandwich Corn Shellers, Rumsey & Co.'s Pumps, Rice's Straw-Burner Engines, Etc.

Also, have the largest assortment of Harrows, Cultivators, Cider Presses and all kinds of implements and Hardware of any house on the Pacific Coast.



GLIDDEN'S STEEL BARBED FENCE,
the Best Fence in the World.

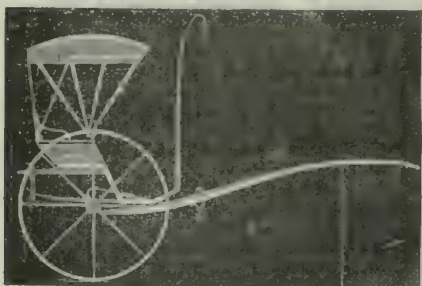


"Buckeye" Force Feed
DRILL,

The Only Really Successful
Drill Made.

HAWLEY BROS.' HARDWARE CO.,
San Francisco, Cal.

SAN LEANDRO SULKIES,
WITH PHAETON OR PIANO BOX BODIES.



The above cut is a diminished copy of the same drawing from which my Phaeton Sulkies are made.

It will be seen that for elegance of design, grace and proportion, it is superior to anything yet made having only two wheels.

It is mounted on platform springs, and has the patent leveling device used in my Piano Box Business Sulky.

It is guaranteed to be free from that bobbing motion common to all other sulkies, and which renders riding in them a real instead of a pleasure, and is warranted to ride easier than most buggies.

This important result is obtained by my method of hanging the body free from the shafts, so that their motion, or the motion of the horse, is not communicated to the seat or body at all.

This method of hanging the body also allows it to move up and down level, whether it has a heavy or light load.

The leveling device enables the rider to instantly change the level of the seat should it become necessary to change from a small to a large horse, or vice versa.

With a leather saddle, if a large horse is used, or a heavy load is carried, the sulky tips back, thus throwing it out of balance and making it ride uncomfortably.

This method of making two-wheeled vehicles is new, both in this country and Europe, and is designed to bring them into favor rapidly, both as business and pleasure carriages.

The Phaeton style (with or without top) is designed for ladies and children, or for doctors and commercial travelers.

They are thoroughly well-made, and range in price from \$30 upwards.

My Piano Box Business Sulky and Breaking Cart, of which a cut appears in the columns a few weeks since, has recently been somewhat improved in its proportions, and is the best thing that can be obtained in its line for small carriers, carriers of large loads, and carriers, hunters, advertising agents, etc. Prices, from \$75 upward, according to style and finish. For circulars, giving fuller information, price lists, etc. Address

JACOB PRICE..

At Works of San Leandro Plow Co.,
San Leandro, Cal.

To Farmers Miners, Wine-Makers
AND OTHERS.

PUMPS

For Wine, Mines, Ditches, Ships, Irrigation, Wells, Tanks, Etc. Hand, Horse, Steam or Wind Power. Best Pump in use.

A SMALL INVOICE FOR SALE CHEAP TO CLOSE A CONSIGNMENT,

By W. S. RAYNOB,

At Linforth, Rice & Co.'s, Hardware Dealers,
323 Market St., San Francisco.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel, also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller
" " " " Tule Plow.
" Improved Granger Gang.
" " " " Single Sulky and Tule Plow
" " " " Single Plow.
Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers.
" " " " Plows.
" " " " Side Hill Gang.
" " " " Double Deep Tiller.
" " " " Fresno Ditching and Grading Plow.
" " " " Cultivators.
" " " " Iron Seed Sowers.
" " " " Hill's Improved Headers.
" " " " Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

THE ONLY TRUE

"RICHARDSON."

If you wish to get the only true "Richardson" - and there is only one - be particular to order by the whole title:

Richardson's New Method

FOR THE

PIANO-FORTE.

By NATHAN RICHARDSON.

Price, \$3 25.

AMERICAN AND FOREIGN FINGERING.

It is the most wonderfully successful instruction book ever published.

OVER 300,000 COPIES

Have been sold, and still its popularity does not wane. With its perfect and progressive system and thoroughly practical course of musical study, it stands without a peer as the

Most Perfect of Music Books,

Absolutely without errors, and a universal favorite

DON'T FORGET THE TITLE!

OLIVER DITSON & CO., BOSTON.

Established 1834.

C. H. Ditson & Co., 843 Broadway, N. Y.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno B. Niles, Los Angeles; I. S. Leach, Marysville; T. B. Watt, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

FOR SALE.

Moor Park Apricot & French Prune Trees.

One year's growth in the graft, thrifty, and of good size.

Free from pests and will be dug by hand. Address

STODDART & SANDERS,

Saratoga, Santa Clara Co., Cal

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, AUGUST 12, 1882.

Number 7

Topography and Rainfall.

Californians have abundant evidence to indicate the influence of diversities in the surface of the land upon the falling of rain. Within the borders of the State there are districts ranging all the way from almost perpetual dryness to copious drenching. Sometimes these districts are quite within sight of each other. For example, in the northern part of the State, in the vicinity of Mt. Shasta, there are valleys where the crops this year are suffering for water, while not far away there is far more moisture than any ordinary crop requires. Within the State there are regions where summer showers with thunder and lightning are frequent, and there are vast areas where these phenomena are never seen. The influence of wind and topography upon rainfall is one of the most interesting studies in meteorological science.

Professor E. Loomis has prepared, in aid of his studies of the laws affecting the amount of rainfall at different places, a graduated table of the average annual rainfall at more than 700 points, of which we find a review in the *Germantown Telegraph*. Of 204 stations at which the mean exceeds 75 inches (rising from this amount to 492.45 inches at Cherapunji, Assam,) some are elevated more than 2,000 ft. above the sea, and nearly all are within 100 or 200 miles of elevated mountains. Rain chiefly occurs when the wind from the ocean is blowing towards the mountains, and the extraordinary rainfall at most of them is probably due to the influence of the mountains, by which the wind is deflected upward to such height that a considerable part of the contained vapor is condensed by the cold of elevation.

The cases in which the rainfall is excessively deficient are, on the other hand, those of places in which nothing exists that may cause an upward current of air. Another cause of deficient rainfall, frequently exemplified, is the descent of a current of air which has been forced up to a great height and suffered condensation of its vapor, after it has crossed the mountain by the influence of which it has been raised, when its temperature rises and it becomes dry. Such effects are produced by the Rocky mountains on the plains east of them, and by the Himalayas on the desert of Gobi; and the operation of these two causes will assist in explaining most of the rainless districts of the globe.

Other influences modifying the amount of rainfall are the meeting of the northeast and southeast trade winds, which results in a great rain belt surrounding the globe; the irregular barometric depressions of the middle latitudes, indicating frequent storms; proximity to the ocean, especially when the prevalent wind comes from the sea; and the projection of capes and headlands into the ocean, which contribute to frequent rains. Uniformity in the direction of the winds throughout the year, such as prevails in the trade-wind regions, obstruction of the free movement of surface winds by mountains, remoteness from the ocean measured in the direction from which the prevalent wind proceeds, and high latitude tend to produce a dry climate. These principles do not seem to be fully borne out by the phenomena of rain on either side of the Alleghany mountains, but we have not yet systematic enough or careful enough observations to enable us to determine what is their real influence. Mt. Washington, in New Hampshire, exerts a marked influence. The mean annual precipitation there is 77 inches, while in the surrounding districts it is only 40 inches.

THE RURAL PRESS.—A San Bernardino reader writes: "I can scarcely understand how anyone can farm successfully without the RURAL PRESS, which improves constantly, and the closer it is examined the better it seems."

A KANSAS paper says that 6,000 acres of black walnut trees have been planted in that State.

The Oil Palm of Africa.

We give on this page a picture of a plant which is most highly esteemed by the natives of various parts of the "dark continent," as it produces much to serve their immediate needs, and also affords them a commercial article which returns them much revenue. It is the oil palm (*Elaeis guineensis*).

It grows best in shady places, and attains the height of 15 to 16 ft. The fruit resembles the stone of the date. When ripe, this nut is heated by fermentation, and then coarsely pulverized in hollow cylinders, by which its oily matter is separated. It is then macerated in hot water, when the oil gradually collects on



THE OIL PALM OF AFRICA—(*Elaeis guineensis*).

the surface, and cooling, concretes into a thick, unctuous cake, of a light lemon color, with little or no taste, but having a rich perfume. At the ordinary temperature of the air it is not a fluid oil. At 69° it begins to be slightly opaque; at 62° it is of the consistency of honey; at 45° it is proportionably thicker, but still retains a degree of softness. It is heavier than most of the other expressed oils. The quantity of oil in these nuts is very considerable, one gallon of nuts usually producing a quart of oil. This oil is used as butter by the natives of the Gold Coast, entering into all their culinary preparations; and, when eaten fresh, is a delicate and wholesome article of diet, differing as much from the palm oil imported into England as fresh butter does from that which is rancid. It is employed in this country to make a soap, which bears the name of palm soap; and also enters into the composition of other articles of perfumery.

The oil palm delights in a hot, moist climate, and would not succeed in this State, probably not even in greenhouses. The engraving represents rather a young tree. The palms of this species begin bearing when very young.

THE Truckee Republican says that the frightful mortality among the fish in Donner lake, is caused by some unknown disease, not by poison.

Rye Grass in Summer and Winter.

The value of rye grass in dairy pastures is each year being more generally recognized in California. The grass has certain adaptations which especially fit it for our peculiar conditions. Although this grass has earned a special reputation on account of its adaptation for irrigation, yet it withstands severer drouths as well as any other of our cultivated grasses; it is also very hardy, remaining of a green color during winter, when other grasses are brown with frosted foliage. A noted peculiarity of this grass is its capability of growing in low temperatures; when other grasses cease to produce green leaves, the Italian rye grass will afford

Machine-Made Hay.

In an allusion to the new English method of hay making by drying machines, we emphasized the opinion that the sun is the best hay drier. It seems that a similar view is held even in a land where sunshine is scarce, for the reporter of the *London Agricultural Gazette*, who was on his way to examine a hay drier, writes as follows: "This way to the hay drier!" was the waggish announcement of a Reading citizen, who had his placard upon the wall so arranged that the index finger pointed to the sky. Alas, for us all! his guidance was no truer than that of the official hand guide to the Coley meadows, where very little hay drying, natural or artificial, has been possible throughout the week. Visiting the field last Thursday morning, after a fine, bright, blowing Wednesday, we found several ricks actually built, and others on their way to completion, with the apparatus—Coultras, Bamlett, Phillips, Gibbs, and others—all standing ready for action, so soon as the temperature within the rick should make their assistance needed or available. But they were not ready then, and we could only see the preparations that had been made. There is, however, but little chance, we fear, of a great success on this occasion. The week, indeed, but for its beginning, has been very much of the character where artificial aid would be both really helpful and really hopeful. But the cut grass got such a soaking on several previous days that there is no chance of a good quality of hay being made; and then it was put together still with a good deal of outside water on it, which, we fear, must inevitably make a moldy rick. The grass lay two days and more soaking in the rain; and though the third day was fine and blowy, it was hurried together still wet, and though the rick will no doubt heat, and the air drawn through it will bring out the moisture, yet it is impossible that the resultant hay can be of good quality.

Resisting Vines.

At the last meeting of the St. Helena Viticultural club, Mr. Simonton said that all the badly infected vines in his vineyard were taken up and resistant vines planted in the same hole, without the use of any disinfectant whatever, and that they were growing splendidly. He was more than ever convinced that the use of the resistant stock was the one and only remedy, and that bisulphide of carbon was not and could not be effectual. Leonard Coates spoke of the ease with which the *Riparia* and *Rupestis* stock could be made to grow. He had a quantity rooting which were doing remarkably well without injection. He soaked the cuttings in running water before planting, and was particular to have them planted firmly in the ground. The non-observance of this last rule he believed to be the chief reason why so many poor stands were to be seen in young vineyards. He had a lot of cuttings rooting, of which 99% were growing.

A good suggestion is made by Hon. M. M. Estee, who recommends that a stock of native cuttings be rooted and kept in every vineyard, and whenever a vine begins to wither and lose its thrifty look, a rooted resistant cutting be set at once in its place. By such a proceeding phylloxera-exposed vineyards would neither go to decay nor require destruction. Thrifty resistant vines would constantly be taking the place of infected ones, while, by such renewal, the product of the vineyard would be kept up to a maximum. Such a plan is better than grubbing up a whole vineyard at once, thus losing the labor of years while establishing a new vineyard.

A GUILD has been organized in New York for the distribution of free ice to the poor.

HONOLULU is to be lighted by electric towers. The telegraph is in general use throughout the city, and is being carried around the island of Oahu and extended on the other islands. An inter-island cable will shortly connect all the islands with the capital.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Steam Digging Machinery.

EDITORS PRESS:—I have noticed in the RURAL references to steam spading and digging recently tried in England. Having examined that subject in 1860, I made a model steam spade, and exhibited it at the Alameda Agricultural fair, June 6, 1860. My machine was a cylinder or drum, of a diameter of 6 ft. and 8 or 10 ft. in length, rolling on the ground with a shaft or axle through it; the ends projecting from the end of the cylinder, for the shaft's connections with the engine which drew it over the ground. The spades, when the cylinder was at rest, were all drawn inside of it, except those immediately beneath, and where the cylinder was in contact with the ground. They came out just before the opening from which they emerged reached its lowest point, and a cam on the central shaft drove them into the ground. As the cylinder continued to roll on, and when the spade would be about half out of the ground, another cam would give it a quarter or half twist, with the same movement that a hand spader will give as he withdraws it. The spade being by this time out of the ground, it sticks out of the cylinder its full length, but before reaching a horizontal position is taken by another cam, turned back to its proper place, and is drawn inside by another stationary cam. The spades were ranged so that they came out of the drum in echelon, and at about the distance a hand spader would work. The model of this machine was sent to the Patent Office, June 20th, 1860. I received notice of some interference of an English idea, but believing that to be a ruse to make me employ an agent, I gave the matter up and did nothing more with it, getting interested in something else. About the same time a machine was made in Marysville, at Marysville foundry, I forget by whom, to do the work with revolving drums covered with knife-like projections. These were drawn or rolled over the ground by a steam engine. But after several modifications and failures, it was abandoned. Near about the same period, I think it was Thos. Ogg Shaw had on trial and exhibition a drum which revolved on the ground, and inside was another one full of digging teeth, which were projected into the ground as it revolved by its being on the shaft as an eccentric; that is, the whole wide drum was an eccentric, and the teeth would be out their entire length when they came to a vertical position, being driven in gradually and drawn out the same way as the eccentric revolved. The trouble with this was that the teeth coming out before their work commenced, the whole of it would ride up over the ground.

To obviate this objection was the impulse which brought out my model, and my machinery kept the spade inside till the point was reached where it could be driven vertically into the ground. If anyone with means would like to build a digger such as I describe, I will furnish drawings for the purpose. Some time hence I will give you a chapter on our recent steam shoveling.

Vallejo, Cal.

Napa Notes.

EDITORS PRESS:—Will you allow an old reader of your valuable paper to say a word in regard to Napa valley? On a trip up this beautiful valley I visited the vineyards of Mr. Wheeler, Mr. Gluyas and Mr. Field, and some others I do not remember; and such a sight never met the gaze of the human eye. Just think of grapes being piled up around a vine and still be fast to the vine. It seems that a new feature in staking and pruning is the cause of this enormous yield. Mr. Wheeler's are old vines, nine years old, and I am told will yield 18 or 20 tons to the acre, and I do not dispute, as there are probably 50 lbs. to the vine, from appearance, if I can judge the weight. Mr. Field's are young vines. I was told the portion trained high were only three years old; and such a sight! You can hardly see the vines for grapes! I can hardly give them justice in the way I speak. The other vineyards are mostly pruned low, but very full. It is a sight worth seeing. Go to Pine station and see for yourself.

Calistoga is a beautiful little place, surrounded by hills and evergreens. The climate throughout the valley is most delightful, and the scenery is beautiful to behold. For one who comes from a grain-growing country, to see the whole surface of the valley covered with green vines is a spectacle indeed. I am told the doctors are almost starved out; all that keeps them up is the people who come for their health from other localities. The roads up the valley are filled with a line of hay wagons hauling hay from near Napa to St. Helena and vicinity, as it is more of a hay-growing country near Napa. Still I am told a great many vines have been put out in the lower part of the valley. I have written more than I intended, but have not said half I could in behalf of this beautiful valley.

SUBSCRIBER (from Salinas).

Calistoga, August 6, 1882.

United Effort Against the Squirrels.

EDITORS PRESS:—W. M. Barry has written a memorial to the Supervisors of Santa Clara county, stating that he has found a sure cure for squirrels, and urging a united effort in the shape of a syndicate to destroy the pests. I know nothing of Mr. Barry's process or prospects, but the fact that he is trying to "move on the enemies' works" gives his enterprise a claim to some consideration. I believe there is a growing sentiment that this grand State needs a day of rest every week, and that public evils and enemies should be controlled by the "will of the people," or law. Individual interest and enterprise will not clear the State of its squirrel dens. It is much like trusting it to land owners to keep in repair the roads which pass through or border their premises. There would be as little uniformity of road as there now is of control of rodents; each man would repair the road at spots he must use himself, and broken axles and stalled teams would be frequent. The objection of the landless or the small land owner to pay for the killing of the pests on the larger tracts is no harder to meet than the objection of the poor to paying a road poll-tax. The true interest of "us, the people," means comfort and prosperity to all. Too heavy a load placed on industry and enterprise has a tendency to drive the same from the State, then capital finds itself unable to locate where it can draw interest. (Thanks to the "will of the people," it now has to pay taxes.)

Yesterday I looked over an orchard and small ranch that had not a squirrel den on it; yet the owner often puts bisulphide into and stops the holes on adjoining property, caring for a strip several rods wide around his bounds. Nevertheless, along his back fence the prune pits spot and cloud the ground, the squirrels taking desperate chances for a stolen prune. I have some reason to believe squirrels, in such cases, work during the night.

San Jose, Cal.

CHAS. A. WYMAN.

THE DAIRY.

Lassen County Dairies.

EDITORS PRESS:—I will give you some jottings of my wandering, and a few of the points of attraction as they came under my notice. From Susanville, the county seat of Lassen county (which is a very pleasantly located little town at the head of Honey Lake valley), I started out to make a tour of the valleys of Lassen and Modoc counties, and some of the valleys of Lake county, Oregon. In a northerly direction, about 12 miles distant from the above-named town, after crossing a low range of hills, the traveler gazes on the opening expanse of the Willow Creek valley, which is some ten miles in length, and varies from one-half to four miles in width. There are some 12 or 15 ranches in the valley. The chief industries are dairying and stock raising, mixed with farming. I visited the dairies of Mr. Abram Tunison and Mr. M. O. Folsom. Mr. Tunison milks about 40 to 50 cows, makes butter, feeds nothing but hay during the winter, and natural grass in summer. He stables his cows in winter, having a large, warm and commodious barn.

Mr. Folsom, of Merrillville, Lassen county, is an old, practical and experienced dairyman. He keeps a choice dairy of 32 cows, from which he made last season 4,500 lbs. of butter from natural grass alone. The yield thus far, up to date, has been 3,000 lbs. from 26 head. Mr. Folsom has a novel but first-class method of preserving his butter. After the butter has been well washed in the churn, it is taken out and salted in the proportion of 1 lb. of salt to 10 lbs. of butter. The salt is worked in well with the butter worker; then it is allowed to stand 24 hours. It is then worked a second time; then pounded down solid in tin cans, which are made in two sizes—10 and 50 lbs. capacity. They are stowed away on shelves in the butter-room, which is built so as to keep very cool. They are filled within an inch of the top, which is kept filled up with strong brine. The cans are made with a flare of about an inch, so that the purchaser can turn it bottom-side up on a table, and the butter will drop out of the can. A copper wire is used to cut the butter in layers of about two inches in thickness. It is then returned to the can, and the user can thus take it out without any waste or trouble. The can is sold to the consumer. By putting butter up in this very neat and attractive form, Mr. Folsom was enabled to get 40 cents per pound in Virginia City readily when the market price of butter was but 25 cents per pound.

Mr. Folsom cuts and puts up about 600 or 700 tons of wild hay, which he feeds to his cattle and horses, usually feeding quite a number of beef cattle.

Mr. Benj. Newhaus keeps a dairy of 50 cows, from which he made 8,000 lbs. of cheese last season. He makes butter through the winter and fall, making cheese only three months in the year.

From here I go, via Eagle lake and Grasshopper valley, to Big valley, from which place I will give you some further jottings.

GEO. W. FREEMAN.

Willow Creek valley, Lassen Co., Cal.

HORTICULTURE.

A Prophet on Apricots.

The Riverside Press and Horticulturist recently arrested Mr. George Crawford, a large apricot grower of Riverside, and led him into a strain of prophecy on the apricot. We take a cross-section of the outlook as follows:

Rep.: What will be the yield of apricots in the Riverside settlement five years from date, from the trees now planted?

Crawford: How many trees are there in the settlement now?

Rep.: In round numbers, 60,000 in orchard.

Crawford: In five years more these 60,000 trees will bear an average of 200 lbs. to the tree, or 6,000 tons of fruit. This crop, at an average of, say, two cents per pound, will yield the producers the sum of \$240,000. Two hundred pounds to the tree is not a high average. There are trees in the valley that will produce from 800 to 1,000 lbs. next season. There is one large tree on the old Clapp place, one of the oldest trees in the valley, that up to two years ago was not pruned at all to speak of. When the place changed hands, this tree, which was very large, was pruned back very heavily—it was all cut to pieces. The result was that last year it produced no fruit; this year it yielded 300 lbs., and next year it will yield 1,000 lbs., if it is a good apricot season.

Rep.: Has there as yet been a light apricot crop in this valley?

Crawford: No, sir; the yield thus far has been satisfactory every year. There has been nothing as yet approaching even a light crop. This tree of which I was speaking is a very large one; there ought not to be another tree within 40 ft. of it. The mistake is being very generally made of planting apricot trees too close together. Many orchards are planted but 16 ft. apart. This gives 170 trees to the acre. When the trees get large, if the orchardist takes out every other tree in each row, it will still leave 85 to the acre; and if he takes out every other row and then every other tree in the remaining rows, the trees will still be 32 ft. apart, and will be close enough for such large trees as they will eventually become; but this thinning out of the trees will make no difference with the total yield, except it be to increase it and increase the proportion of fine fruit.

Rep.: Mr. Crawford, what will our people do five years hence with 6,000 tons of apricots?

Crawford: Mr. Reporter, that is a large-sized conundrum; it is a practical question that must be answered in course of time, in a practical manner; to-day we can only deal with it theoretically. Six thousand tons of apricots means, say, about 3,000 tons of canning fruit and 3,000 tons of drying fruit. This division will be varied, according to the demands of the market and according to the care taken in the orchards. The apricot season only lasts about 20 working days; to dry 3,000 tons of fruit in 20 days will require that 150 tons per day be put out to dry. It will require at least five persons to the ton to take care of the fruit after it is delivered from the orchard, or a total of 750 persons for handling the 150 tons per day. To can 3,000 tons requires a vast amount of capital and labor. The present cannery at Riverside can be put in shape to put up 10 tons per day by another year, with a force of 150 hands. This is on the supposition that they take nothing but canning fruit. It will then require 15 such canneries to handle the canning portion of the crop, employing 2,250 hands, or a total of 3,000 hands to save the apricot crop of the Riverside valley five years hence, if no more trees are planted, to say nothing of the force of hands required to pick the fruit and haul it to the canneries and driers. A gradual increase of the crop may be looked for; say 1,000 tons next year, and an additional 1,000 tons a year for the five years. Next year another cannery will be more of a necessity than the present cannery was this year; then, if 200 tons is sold to the Riverside cannery, 200 tons to Mr. Wright's cannery, at Colton, and 200 tons to the new cannery to be established (if another is built), and then the fruit growers will have 400 tons to dry on their own account.

Rep.: The item of shipping this fruit when dried and canned will be something to look after.

Crawford: Yes; five years hence the canned and dried crop will weigh 4,000 tons, and will load 400 cars—about 15 carloads a day for a month.

Rep.: But what about a market for all this fruit?

Crawford: There is but little doubt but that an occasional glut of the apricot market will occur, but it will not be of long duration. The civilized world is learning to eat apricots. The countries that will produce the apricot successfully are not plenty. There is not so much of the earth's surface that will produce the apricot successfully as will produce the orange. The apricot can be canned or dried, and thus sent at pleasure to all parts of the world. Fifty millions of people in the United States east of the Rocky mountains would eat apricots if they could get them, and none of them can grow the crop. Canada will take them also; so will England and other European countries. The Pacific coast as yet hardly produces a sample crop. It will take time to open up the markets and teach

the people to eat them; and while this is being done, prices may occasionally be depressed; but there is not so much danger of glutting the apricot market as there is of overstocking the apple market, for apples are raised everywhere, and apricots are only raised in favored localities. Six thousand tons of fresh apricots seem like a great amount of fruit; but once put it upon the markets of the world and it will soon be lost, and consumers will be begging for more. They shall have it.

FORESTRY.

Forest Trees of California—No. 8.*

Lawson's Fragrant Cypress.

(*Chamaecyparis lawsoniana*.)

"In Autumn, when the sunlight crowns the cedar-cov. croc hill, Shadows lengthen in the valley—shadows ominous and still."

Spirited before you stands undoubtedly the handsomest of all our cypress family, the graceful Oregon cedar—Port Orford cedar, known also as ginger pine of lumbermen—every form of it a curve or line of beauty. Behold in detail the little flat and fan-like sprays, every one of them laterally bent and gracefully curved, as the lesser waves curve on the great swell that rolls responsive over another sea of emerald; and the long leader bough that crowns the pinnacle of its glory, bending off at a right-angle as it bows to the breeze, the most graceful among the ever-graceful ostrich-like plumes, as wavelets o'er waves are piled, climbing her ever-verdant pyramid of foliage until lost in the clouds or merged far up in the blue; and, over all this, a softened sheen of almost invisible silvery gloss, lovely as an infant's or maiden's skin. Indeed, there is not a masculine, scarce a mere intellectual angular feature, anywhere to be found about this charming tree. Granted space to spread freely in sunlight and air, the slender branches, although early ascending horizontal or depending with rising extremities, nevertheless the final boughs and ultimate sprays always hang down their modest heads—those below, nearly to the ground—and so maintain the ruling feminine expression at all points and at all stages of growth. Free, in the land of the free, she develops as all orderly things should, upon her own God-given type, a light, columnoid, conic-topped tree of refreshing symmetry; and no thanks to thee, oh barbarous scissiors—the abomination of all the trees. When closed in and crowded by aggressive neighbors, the body is prouidish and straight to a line often 50 to 100 feet, with neither knot nor limb. In such cases trees often attain to 150 to 200 feet or more, with that elegant shaft four to eight feet in diameter. The timber is held in very high estimation for floors, blinds and doors, finishing work, and for manifold purposes where clear, free, soft and durable wood is requisite; is rich, very delicately cream-tinted, finishes uniformly smooth, like Eastern white pine; for ceilings of rooms the aroma is found to be in a high degree sanitary; it has become the principal wood used for tubs, pails, etc., and is found excellent for boats and ships, for hollow wood-ware, when bound with brazen hoops, exceedingly neat and lasting. It should be observed, however, that it is to be avoided for most cabinet work, i. e., where delicate linen and the like are kept, on account of the volatile resin permeating and discolored all such like goods, and that to such a degree as to utterly ruin them; also, smooth and hard bodies condense it rapidly, and are soon all gummed over with dewy and ever-increasing dots, or rubbed or wine-colored resin, that tarnishes to an intolerable nuisance, to say the least. For shingles, this, with redwood and incense cedars and the like, the State and coast has the amplest supply, besides that vast sylvan mine of the Great Sequoias.

A tree so choice for rural adornment requires a word of caution concerning its culture. Perhaps one of the greatest and most radical faults in the propagation of these and similar trees is that of covering the seed with soil. In nature they germinate on the surface, root down, and shoot up from that point, so that the pith is never below the moistened earth-level whence they spring, therefore they never sicken, sour, and, in their agony, succor abnormally, become stunted and precocious, crippled from the cradle, but go on in the harmony and order of nature, prospering and to prosper. True, this is hidden to all but the intelligent eye until the charm of their youth is gone. A hint to the wise in passing must suffice. Having so often seen the ill effects of a contrary course, as duty demands, we enter our protest against the profanity that ignores the sacred lessons inscribed on every page of the great Book of Nature. Easy would it be to point out the rationale on physiological grounds, but this must be left to the inquiry and intuitions of those whom it may most concern. There are many other important points of interest, best known to cultivators, that require to be observed in treating trees, especially those designed for a hardy endurance of severe climes. This beautiful winter-green conifer is found on the Coast and Sierra connecting ranges of mountains of northern California, in the Shasta and Scott mountain ranges, only a few rarely straggling along south.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

THE FIELD.

The Question of Water Rights.

The Surveyor-General, Mr. Shanklin, and the State Engineer, Mr. Hall, have been indulging in a discussion of matters underlying a State irrigation system, in the columns of the *Record-Union*. We quoted recently from the writing of the Surveyor-General, to show his opinion with regard to water rights, and now we take a few paragraphs from an article by the State Engineer on the same subject. Mr. Hall writes:

Having been charged with an official investigation of the subject, I am not free to speak unofficially, except in so far as I have already reported; but as Mr. Shanklin, in calling attention to that which I have written and submitted, has, unintentionally, no doubt, misstated my position on the question, I venture to make a correction.

Toward the end of his third paper, in your issue of July 31st, after referring to my report of 1881 in a very graceful manner, and after saying, "We agree as to what should be done were all obstacles removed, but we differ in this"—namely, the removal or manner of removing obstacles, Mr. Shanklin concludes: "His (my) proposed plan would merely require legislation to quiet title in the present claimants (to water), virtually giving them control of the waters of the State; while my idea is that legislation is required to bring all users to a common level without giving preferred rights to favored classes, but giving to each cultivator of the soil in proportion to the land he cultivates, when there is water enough for all, or when there is scarcity, then the distribution as to quantity shall be proportionately diminished, but no one excluded."

I make no criticism upon Mr. Shanklin's proposition, but desire to state my own position, seeing that the above interpretation of it is erroneous.

Being instructed under the laws to make "an investigation of the problems of irrigation," and to "make such examinations as may appear to be necessary for the full and complete solution of these problems," I find, amongst other things, in the irrigation counties, hundreds of claims to water existing without intelligible record of their extent, nature or foundation. As Mr. Shanklin has explained, there have been a number of general and local or special laws on the subject of irrigation enacted in the State; and many decisions under these, the common law and the United States statutes, affecting rights or claims which have been initiated under them or under the custom of appropriation, have made been by the courts, until, as a result, there is a perfect hodge-podge of claims and counter-claims active, sleeping or perhaps dead, and no one can go into any irrigation county of the State and, from the records or the facts to be ascertained by inquiry, find out what claims exist, much less what rights have been established.

Hence, there is a never-ending appeal to the courts by water claimants for settlement of their disputes, and a very great distrust abroad in the safety of irrigation enterprise, entertained by those who would settle in the country as farmers and fruit growers.

I look upon this condition of things as the most unfortunate that could well obtain, and I honestly believe that it is doing more to retard the advancement of this State in acquiring a desirable population than any other cause now operating, for I have had many opportunities of judging of the disappointment on this score which has met men of small capital who have come here in search of homes and investment, and I know of the feelings with which they have gone away.

Thinking thus, I have strongly recommended, as a first move, that the Legislature take such steps as will establish as soon as possible the status of each of these waters claims, and make it, so far as it is a good and valid claim, properly of record; and then require each claimant of water to keep his claim posted up to date in the Recorder's office by an annual sworn statement of the extent of his diversion and distribution for use. Going beyond this, I have suggested that the State take control of the distribution of the waters from the natural streams to the artificial canals, and thus see that the water is dealt out according to the recognized claims, as it is done in every other irrigation country, and thus stop this eternal squabbling in the courts and warfare on the streams. And going still further, I have pointed out that the State should retain the power, under any circumstances, to insist upon an economical use of waters in irrigation, so that all the lands which it is possible to serve with the supply may be watered.

The legislation outlined in my report of 1881, as was specially stated therein, was offered as a suggestion, only to serve as a starting point for discussion.

I have not ventured to express an opinion as to whether there exist any valid exclusive claims or rights to water for irrigation or not, or what is the nature of the claims, if any well founded. But I have tried, without attacking any class of claims, to point out the absurd condition in which this irrigation interest now is—to show that it is simply a bird of one kind for the legal fraternity to pluck, and, at the same time, an object of another kind to scare away would-be

settlers in the country—that in reality, water appropriators, riparian proprietors and dry-land owners, one and all, are suffering for the want of a defined and active policy on the part of the State in the matter of irrigation, and that it is the duty of the State to initiate such proceedings as will bring these troubles to a speedy termination.

Mr. Shanklin, unconsciously, perhaps, has conveyed the idea that I would confirm existing water claims as a solution of the problem. This is not in accordance with what I have reported. But I do say now that it were better to set up and recognize water monopolies by legislative action at once, and then regulate them by statute under the Constitution, than to let matters drift as they are drifting at present in this regard, for to this end will we come at last, and then the whole matter will be in a most unmanageable form, for many reasons which it would take too much space to present here.

I see in the not distant future, an outcome wherein this subject will be so muddled by piecemeal treatment in the courts, as point by point—in no consecutive order or broad scope—the questions at law are brought before them, that nothing but continued and everlasting litigation can be made of it. When other thousands upon thousands of dollars will have been expended in wrangling, and other millions will have been wasted in flimsy works in duplicate and without system, and when a desirable class of settlers will have been kept from our State, then will there be cause for outcry more widespread than any which now exists, and one which will come as near home as any cause well can come.

Now, I want to avoid this as a first step, by State legislation, authorizing and directing some constituted authority to call upon all claimants of water to prove up their claims to the extent they have been made good, if at all, under the laws and Constitution, and make them of record, according to some general standard of measurement as to amount. This is a preliminary step only; and if, perchance, there are no valid water claims for irrigation existing in the State, as I understand Mr. Shanklin to maintain, then the courts will so find, no doubt, and the whole matter will be greatly simplified. Or if, perchance, the Legislature has complete control over all waters in the streams, and can regulate their disposition without regard to private claims, as Mr. Shanklin thinks it can, it (the Legislature) may find this out when it comes to consider the subject on a broad basis.

My aim has been to urge legislative consideration and action looking to State regulation of irrigation affairs, to the end that the water be caused to irrigate all the land it can be made to serve, and that at a minimum of cost to the irrigators.

A settlement of water-right quarrels and a State supervision of works and diversions of water is necessary to accomplish this end.

The difference between Mr. Shanklin and myself is, therefore, that I have not ventured an opinion on legal points—as to State authority—but press the State to exercise what authority she has, at once, to effect a solution; while Mr. Shanklin, being a lawyer, has written a very interesting opinion to the point that the State has complete control over the waters and can do as she sees fit by legislative enactment in the premises.

POULTRY YARD.

The Best Breeds.

EDITORS PRESS:—Comparisons are many times odious, and the enthusiastic admirer of the Cochin or the Brahma will oftentimes tell you that they will beat Leghorns at their own game. This may be accounted for, as I suggested in my last communication, for it is a matter of fact that, if a man strictly fancies a variety of even second-rate egg-producing qualities, he may, by good feeding, care and attention, make his pets excel other more prolific varieties that are simply tolerated about his premises. No man should, however, base his opinions on any such ground, much less give expression to them.

Experimental tests, being repeatedly made, demonstrate that certain varieties are better than other certain varieties, and it is only through the medium of the *RURAL PRESS* and other journals of a similar character that the masses may acquire the experience of those who give this matter their very close attention. We give below the result of a practical test of four of the prominent varieties by a man well-known in poultry circles as a thorough, practical breeder. He says:

"To ascertain which variety of fowls would pay the best, I penned up seven Plymouth Rocks, four Houdans, 13 Dark Brahmas, five Buff Cochins, with the following result during 180 days.

"Seven Plymouth Rock hens laid 742 eggs; average, 106 eggs, at 12 cents, \$1.06. Four Houdans laid 316 eggs; average, 79, at 12 cents, 79 cents. Thirteen Dark Brahmas laid 611 eggs; average, 47 eggs, at 12 cents, 47 cents. Five Buff Cochins laid 275 eggs; average, 55 eggs, at 12 cents, 53 cents.

"Plymouth Rocks—Cost of food, each, 41 cents; value of eggs, \$1.06; value of meat, 8

lbs., average, at 6 cents, 48 cents; net profit, \$1.13 each.

"Houdans—Cost of food, each, 41 cents; value of eggs, 79 cents; value of meat, 6 lbs., average, at 6 cents, 36 cents; net profit, 74 cents each.

"Dark Brahmas—Cost of food, each, 73 cents; value of eggs, 47 cents; value of meat, 9 lbs., average, at 6 cents, 54 cents; net profit, 28 cents each.

"Buff Cochins—Cost of food, each, 75 cents; value of eggs, 53 cents; value of meat, 51 cents; net profit, 29 cents each."

The above account was kept correctly, and the feed was measured off to ascertain the exact amount each fowl would eat, and the above figures are as correct as possible.

We learn from this that it does make a difference in the profits which varieties are kept, and that good fowls will pay. Let those who entertain doubts as to the profits of poultry keeping, compare prices, as above, with those ruling on this coast, and tell me, if you can, what will pay as well for the capital invested.

L. C. BYCE.

Petaluma, Cal.

THE STABLE.

Entries for the State Fair Races.

In our issue of July 22d we gave the speed programme for the State fair, which will open in Sacramento on September 11th, and continue during the week. The entries for these races are now in and indicate an unusually successful meeting. Following is the complete card, with the full list of entries: No. 1—Introduction stake, three-quarters of a mile, eleven entries: Ella Doane, Forest King, Kate Carson, Bob, Joe Daniels, Jr. (Green's), Mary B., Atlanta, Jim Douglas, Duke of Monday, Jim Rennick and Premium, the latter a new-comer from Oregon with a good repute. No. 2—Breeders' stake, closed with 19 nominations, a dash of a mile and half: Captain Kidd, Lizzie P., Cy Mulkey, Hattie Ball, Belle S., Maria F., Duke of Monday, Judge McKinstry, Rhoderick Dhu, Annie Laurie, Evangeline, Cornucopia, Conquest, Precious, Duchess of Norfolk, Del Norte, Mattie A. filly, and Idler. This stake closed on March 1st last, and although a great many have been retired from the turf, there will probably be about half the number who will face the starter. No. 3—Selling race, mile and repeat, nine entries: Patrol, Inauguration, Shiner, Jack Douglas, Sister to Lottery, Haddington, Vila Randlett, Eucher and Joe Howell, the latter being another well-known visitor from Oregon. This race is a handicap made by the owners themselves, as the horse that is entered to be sold for \$1,500 carries his entitled weight, and then one pound is taken off for each \$100 under that valuation. The last race on the first day is \$1,000 for the 2:40 class, in which there are 11 entries: Vanderlynn, Freestone, Frank Moscow, Allen Roy, Marie, Louis D., Rowdy Boy, Big Lize and Edwin Forrest. From the exhibition of speed and lasting qualities given by Vanderlynn in last Saturday's race, he will be hard to beat in this class whenever he is entered.

The Second and Third Days.

On the Tuesday, No. 5, \$1,200 for the 2:25 class, the entries are Starr King, Ashley, Del Sur, Captain Smith, Crown Point, Honesty, Reliance, Director and Cairo. This 2:25 class promises to afford the finest-disputed contests of the season. No. 6, \$600 for three years old and under; there are but two entries, Bertha and Bonita, and, as they are both from the Palo Alto stable, it will be probably but an exhibition of speed. No. 7, \$500 for two-year-olds, a mile and repeat—Neliska, Ruby, Pride, Flower Girl and Sallie Benton. Wednesday, filly stake for two-year-olds, five-eighths of a mile—Flou Flou, Satanela, Satinet, Lou Spencer, Rosa B., Augusta E., Nubia and Irene. California Derby, a mile and a half for three-year-olds—Precious, Captain Kidd, Hattie B., Maria F., the Duke of Monday and Judge McKinstry. The latter is a fine colt by Grinstead, from Katie Pease, and in the Breeders' stake. It being the first appearance of any of the stock of that famous mare, great interest is felt as to whether the colt will uphold the repute of his sire and dam. The Jennie B. stake for all ages, one mile, the stake to be named after the winner, if 1:42½—Jennie B.'s time—is beaten: May D., Forest King, Bob, Fostriss, Nighthawk, Duke of Norfolk, Atlanta, Lizzie P., Frank Rhoades, Jim Douglas, Fred Collier and Red Boy, a new claimant for turf honors, he coming from Salt Lake, where he has recently run some very good races. No. 11—Selling race, \$250, a mile and an eighth: Joe Daniels, Jr. (Randall's), Lady Partisan, Jubilee, Sister to Lottery, Vila Randlett, Cy Mulkey, Eucher and Joe Howell. It would appear as if there are two colts named Joe Daniels, Jr. So to prevent confusion it would be well to change the name of one to Colonel McDaniels, the veteran turfman who trained his sire, Harry Bassett, Springbok, Katie Pease and a host of other celebrities. The last race of the day, No. 12, is \$1,200, for the 2:30 class, in which there are Blanch, Poscora Hayward, Marion, Sweetness, Albert W., Nellie R., Turnip Winstron, formerly named Kent.

Fourth and Fifth Days.

On the Thursday, No. 13—\$1,200 for the 2:23

class: Brigadier, Romero and Belle Echo, and if these horses come to the start in fine condition, it ought to be the best-contested race of the meeting. Brigadier and Romero have both records of 2:23½, while Belle Echo has 2:23½ to her name. No. 14—Pacing, \$500, for the 2:25 class: Covette, Oakland Boy, Ouida and Lady Hays. No. 15—\$800, two miles and repeat, for the 2:40 horses: San Mateo Belle, Vanderlynn, Freestone, Slim Jim, Exile and Edwin Forrest. On Friday, \$200, two year-olds, a dash of a mile: Panama, Flou Flou, Certiorari, Satanela, May B., Lou Spencer, Augusta E., Nubia, Irene and Young Flush. No. 17—Selling race, \$300, one mile and a quarter: Ella Doane, Belshaw, Idler, George Bender, Shiner, Jubilee, Sister to Lottery, Haddington, Vila Randlett, Cy Mulkey, Eucher and Joe Hauck. No. 18—Post stake, \$500, with \$100 entrance, a dash of three miles, the horses' names to be given in on the evening previous to the race—Messrs. Boots, Pritchard, Hearst, Gilmer, Stemler and Ayers and Palo Alto stock farm. As each nominator has the right to enter any horse at his command, there ought to be in the race the very pick of seasoned thoroughbreds on the Pacific coast. No. 19—Consolation purse for all horses beaten at the meeting, \$250, one mile and repeat. On Saturday, No. 20 was a purse of \$1,200 for the 2:19 class, but as there were but three entries—Brigadier, Director and Gibraltar—it was declared off, and a free-for-all purse of \$1,000 will be given in its place, the entries to which will close on Saturday, August 19th.

The End of the List.

No. 21—\$800, for double teams of 2:30 horses: Carlisle and mate, Don Elisha and mate, Inca and Sweetness. This is a novel attraction that will create much interest. No. 22—The Occident stake of 1872; closed last year with 12 nominations. No. 23—Special purse of \$250 for any stallion to beat the record of Santa Claus, 2:17½; but as there is not likely to be any attempt made, the Board now offers a purse of \$300 for yearling trotters, a dash of a mile to rule. There is a gentlemen's jockey purse of \$100 for saddle horses that have never been trained or run in public, and a like sum is appropriated to the exhibition of equestrianism by ladies, divided into \$60, \$25 and \$15. The executive officers may fairly be congratulated on the success of their programme, that will alike please the owners of horses and the general public, and a larger attendance may be expected than ever was known in the history of the State fair.

Lameness of Horses.

D. D. Slade, Professor of Agricultural Zoology, Harvard University, gives, in the *American Agriculturist* for June, a very full account of the symptoms that will enable owners of horses to detect different varieties of lameness, and their treatment. He says:

"Shoulder lameness is frequently due to a strain, or to direct violence, and is shown in repose by the hanging of the limb, from disinclination to move the muscles, and during motion by the dragging and difficulty to bring forward the limb, which is done by a rotary movement. It is also shown by the flinching when the foot is lifted and carried forward and backward. If the elbow is affected, there will be a singular 'hanging' of the limb and excessive nodding of the head in motion.

"In splint, lameness is usually much increased by exercise. Pressure on the limb shows tenderness, and there is increased heat, with more or less swelling. A small splint, in developing, may give much more pain, shown by lameness, than one fully formed. Ring-bone and ossified side cartilages in their early stages may be recognized as causes of a peculiar stiffened gait, with the weight thrown upon the heels. The lameness nearly or entirely disappears before the bony deposit appears about the middle or lower pastern. Strains of posterior and other ligaments and tendons of the lower limb evidence themselves by the local symptoms and alternation in gait. But there are cases of temporary lameness, from very obscure causes, attributable only to a sudden strain of some ligament whose exact situation can only be surmised.

"The short, quick step of the horse with that inflammation of the feet known as chronic laminitis, in which the weight is thrown upon the heels of the fore limbs, is easily recognized. In the less frequent affection, navicular disease, the weight is thrown upon the toes, the gait is short and the lameness, slight at first, is increased by exercise.

"Corns are discovered by rapping and pinching the sole at the space between the bars and the quarters in the fore feet. Disease of the frog is self-evident by the peculiar odor. A sand-crack sufficient to produce lameness cannot escape observation. Accidental injuries to the feet will generally be known by the history of the case. Lameness in and about the hip-joint is most frequently the result of strain, and is to be recognized by the peculiar want of movement of the hind-quarter and, if of long standing, by the wasting of the muscles of the region."

LUMINOUS PHOTOGRAPHS.—A film is made of perchloride of iron and tartaric acid on a surface of softened glass; when it has been exposed, sulphide of calcium, rubbed to a very fine powder through a sieve, is dusted over it. The image is formed in the same way as if it had been dusted with any other powder, and it can then be transferred to paper.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Subjects for August.

The Lecturer of the National Grange submits the following suggestions for discussion by the Subordinate Granges during the present month:

Question 1.—Are railroad corporations subject to legislative control?

Suggestions.—Railroads have rights that must be respected, and they should be protected in them. They are an important factor in the commerce of the country; a useful appendage to agricultural prosperity; properly managed, an advantage to the whole country. Their relations with other interests should be of the most amicable character. When these corporations assume authority not justified, there they, in a measure, destroy the right of respect. When they deny that agriculture, which furnishes 85% of their trade, is not of as much importance to them as they are to agriculture, they ignore the element that supports them. When they become arbitrary in their management and oppressive in their demands, then they lose their usefulness, and ignore the objects for which they were created. Railroad corporations have received in subsidies, local and national, over 200,000,000 acres of public land, and over \$300,000,000 in money and its equivalent, in aid of their construction. Corporate owners claim now that it is all their private property, and as such could not be controlled by legislation. A man invests his money in a grist mill; it is his private property; but when he turns it into public use, the public, by legislative laws, controls the amount of toll the owner may take. So it is with ferries; the boat owned by an individual is private property, but its use and charges are controlled by law. Private property turned into public use has always been controlled by legislation; and why should not railroads also be so controlled? Let this question be well considered, so as to be thoroughly understood; then we can act wisely in the premises.

Interest and Labor.

Interest is a tax gatherer.
It enters into every workshop, field and mine, and gathers labor's profits.
Labor has a wife and family to support.
Labor needs food, clothing and rest.
Labor works six days out of every seven, and 10 hours out of every 24.
Labor gets sick and has doctor bills to pay.
Labor gets old and wears out and cannot be repaired.
Interest works seven days in the week, and 24 hours each day.
Interest needs no clothing or food.
Interest never gets sick or tired.
Interest has no family to support or doctor's bill to pay.
Interest produces nothing, but consumes everything.
Interest gathers where labor reaps, and reaps where labor sows.
Labor erects itself a house, and pays interest's rent on it.
Labor produces bread, and interest eats it.
Interest is master; labor is a slave.

—Exchange.

[And yet, without capital and interest, but few enterprises could be carried forward. There is no true case against a fair interest, but usury and extortion are foes of labor and progress. Fortunately, in California, the era of a fairer interest is dawning, and the result is greater prosperity and comfort.—EDS. PRESS.]

Harvest Feast at Stockton Grange.

EDITORS PRESS:—On Saturday, Aug. 19th, Stockton Grange, No. 70, P. of H., will give a grand harvest feast, at which time the third and fourth degrees will be conferred on a class of 13. Bro. Flint, Worthy Master of State Grange, has promised to be present. All members of the Order are cordially invited to attend. We shall meet promptly at 10 o'clock A. M., in Good Templars' hall, in Austin's building, on Main street.

MRS. L. E. OVERHISER,
Stockton, Aug. 7th. Secretary.

[We trust this invitation will be remembered by all good Grangers within reach of Stockton. The Stockton reunions are profitable and enjoyable occasions.—EDS. PRESS.]

GRANGE BUILDING AT PORT COSTA.—The Martinez Gazette says: To meet the needs of their rapidly growing business, the California Grangers' Association is about to erect a hotel boarding-house adjacent to its warehouses on the straits below Port Costa. The building is to be two and one-half stories, 32x72 ft., with lodging-room accommodations for 50 or 60 guests. The association will also erect a three-room building for its warehouse offices. The property of the association, with its two wharf franchises, embraces the tide-land strip for 2,000 ft., outside of the railroad right of way, extending to ship channel. Their present wharf is 650 ft. long by about 140 ft. in width, upon which stands the warehouse, 625 ft. long by

100 ft. in width, capable of storing, exclusive of alley ways, 19,000 tons of wheat. From Mr. H. T. Daily, the superintendent, we learn that the increasing requirements for storing and shipping facilities will probably determine the association to largely extend its wharf and warehouse structures for next season's business.

The Government and the Agricultural Industry.

The elevation of the Department of Agriculture is a measure which the Patrons of Husbandry in all parts of the country have claimed from their Representatives in Congress, but it seems without avail. The *Husbandman*, of New York, says: The bill to enlarge the powers and duties of the Department of Agriculture remains in the Senate, where it is likely to stay until the close of the session without notice. Without doubt a vast majority of farmers in the United States desire the passage of the bill. They have given expression to the opinion again and again, always favoring the measures incorporated in this bill, which passed the House by a nearly unanimous vote. Perhaps it is not much matter at present whether the Senate give favorable consideration to the bill or not. The time is coming when honorable gentlemen in the smaller branch of Congress will have wholesome respect for the will of the people. Agriculture is the greatest, the most comprehensive industry of this country. It furnishes of the exports four-fifths of the total value. This proportion has been maintained for many years. It is scarcely represented in any department of Government. The revenues are derived in large part from this industry. Tobacco and spirits, both coming directly from the soil, pay more than any other two articles; in fact, about as much as all else that comes through internal revenue. The tariff bears with harder effect upon farmers than upon others. Take everything together, revenues derived by taxing the industries of the country and through the tariff, farmers certainly pay much more than half, yet they are denied voice in the executive departments of the Government.

Notes on Loading Wheat Ships.

Whatever relates to the methods and expense of loading wheat for export must be of some interest to the farmers who raise this staple commodity; and the system upon which it is handled and loaded into the ships at Port Costa is, in brief, as follows: The wheat is put into the ship by the contracting stevedore at a specified rate per ton (37½ cents is the present established rate), which charge is paid by the ship, the wheat being delivered alongside, from warehouse or cars, on the wharf or in vessels, by the charterer. As a rule, the contracting stevedore is held under obligations to take the wheat and stow it as fast as it may be delivered alongside, and that is sometimes fast enough to oblige him to employ two or three gangs of 20 or 25 men each, taking it in at all the ship's hatchways at the same time, but, ordinarily, one gang of from 20 to 30 men can take the wheat as fast as it is delivered alongside, and usually there is more or less waiting and time lost, for which the contracting stevedore is obliged to pay his men—though they, being hired by the hour, are off pay except during the brief waiting periods, of which no account is taken. The men are paid at the rate of 55 cents an hour, and, under favorable circumstances, a gang of 20 or 25 men, with nine hours' work, will put in and stow 600 tons of wheat, and load an ordinary cargo in three days; but, as an average, the loading of such a cargo occupies about six days with that number of men.

The ship, in preparation for a wheat cargo, is "dunnaged" throughout with inch boards, to keep the wheat from contact with the ceiling, sides or deck, and the lower hold is spread with old sails, over the heavy dunnage, to catch the loose wheat, and prevent its getting into the "limbers" or the bilge water upon the floor ceiling, should any accumulate there.

Allowing for what the dunnage lumber will bring at the port of discharge, the loading of a wheat cargo may be reckoned to cost the ship about 40 cents per ton, and it will probably approximate an equal cost to discharge it, making the actual loading and unloading expenses 75 or 80 cents per ton, or about \$1,400 on an 1,800 ton cargo, besides interest on the value of the ship, insurance, wear and tear expenses, depreciation, general port charges, victualling, and pay of officers and crew.—*Contra Costa Gazette*.

A CARTRIDGE IN A THRASHER.—The Anaheim Gazette tells of a peculiar disaster which overtook a thrasher: Suddenly an explosion was heard, and flames shot out of the machine and speedily enveloped it. Before they were extinguished, the grain belt, straw carrier, derrick and derrick wagon, ropes, etc., and stack of grain were burned, inflicting a loss of about \$500 on the machine. The value of the grain destroyed has not been learned. The cause of the accident was found to be a shotgun cartridge, which had been either maliciously or accidentally dropped into the straw, and when it was tossed into the thrasher it exploded, upon reaching the cylinder, with the result stated.

TWO HUNDRED of the constabulary at Belfast, Ireland, have adopted a memorial to the Inspector-General, pointing out their grievances and requesting increase of pay.

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

SUNDAY ON GLENN'S RANCH.—Chico Enterprise: R. M. Cochran, the superintendent of the repair shops on the Glenn ranch, was in town this forenoon, and in answer to our query if harvesting was carried on at the ranch on Sundays, answered with a decided "no." He says that the only work done there on Sunday is done voluntarily by the men who take pride in their machines, and give them an overhauling on Sunday. All field work is suspended. Mr. Cochran informs us that there are about 500 hands employed on the ranch, many of whom are Chinamen, but who are made to give place to good white men when they come along. The harvest is turning out much better than was expected, and although there may not be 10,000,000 bushels realized, there will be enough to make nearly an average crop.

CONTRA COSTA.

DRY YEAR CROPS.—Walnut Creek Independent, Aug. 4: Three thousand five hundred pounds of wheat to the acre is what Andrew Porter raised on 60 acres of summer-fallowed land at Point of Timber this season. So much for well cultivated land in a dry season. Some of his neighbors did not raise anything, comparatively. Mr. John R. Byer, an Eden Plain farmer, had Messrs. Norman & Griggsby thrash his grain last Saturday. The result was 112 sacks of wheat and five tons of straw. Last year, from the same land and with the same thrashers, the yield was 4,000 sacks of wheat and nearly 200 tons of straw. Considerable difference.

MONTEREY.

SALINAS VALLEY CROPS.—Democrat, August 5: So far as can be ascertained at the present time, the yield of grain, comprising wheat and barley, in this valley, promises to be abundant and of a good quality. The barley crop is nearly all thrashed, and although dark in color, is plump and clean, and is an excellent sample for feed, and commands a high price. As yet, but little wheat has been garnered, but it is certain that the crop will be far beyond the expectation of the farmers.

PRODUCE AND SHIPPING.—Grain buyers inform us that there are not cars enough necessary for the transportation of the grain which this valley is at present producing. The regular freight trains north are now almost exclusively monopolized by cattle dealers; they have the preference over the grain shippers; grain will keep, but cattle will starve unless immediately shipped. Under these circumstances it is impossible for farmers to take advantage of the present rate offered for grain. We want another railroad or more accommodation.

MERCED.

CROPS.—Merced Argus, Aug. 5: V. C. W. Hooper, one of the successful Bear creek farmers, has just finished harvesting 1,200 acres of wheat on his farm, which yielded 18 bushels to the acre. Mr. H. is a model farmer, and deserves his good fortune. The gentleman also informs us that Mr. C. H. Huffman is harvesting, on his Hartley field, wheat that is yielding, on an average, fully 30 bushels per acre, and that there are portions of the field that will turn out 40 or 50 bushels to the acre.

NAPA.

THE CROP OUTLOOK.—Reporter, August 4: The harvest of cereals for 1882 has been a better one than for the two preceding years, although in some portions of the county the grain has not turned out as well as was promised earlier in the season. Berryessa crops suffered for lack of a few late rains, and the succeeding warm dry spell resulted in shriveling the grain while it was hardening in the milk. Still that valley has no cause to complain, for the crops there will average as well as in any other portion of the county. The bulk of the wheat production will be in that narrow but fertile belt of valley land. Below and above Napa quite a number of fields of wheat have yielded fifteen sacks to the acre, although the average will not reach over 8 or 10. In Chile valley all reports say that the yield of the cereals has been beyond the average, while in Pope the grain was rather thin. A good deal of hay was made in some parts of this valley, and also in the middle and upper Napa valley. The fruit crop has not been up to the average for early fruits, frost having cut off the cherry and peach crop to considerable extent, although an immense quantity of cherries were marketed nevertheless. The peach crop, owing to various causes, will be short, but in the matter of harder fruits, excepting pears, the crop will be bountiful. It is estimated that the fruit crop of Napa valley is worth about \$300,000 annually, which includes all descriptions, excluding grapes made into wine. The vineyard industry is rapidly becoming the great interest of the middle and upper portions of this valley, and along the thermal belt adjacent to Napa. Although some injury was done by frost in cutting short the prospective grape crop, the estimate of the wine vintage for the whole valley is 1,900,000 gallons.

SANTA CLARA.

SUMMER PRUNING OF VINES.—L. P. Combs, before the San Jose Viticultural Society: The necessity of summer pruning being generally admitted, a brief address upon the theory will be sufficient here. The argument against this

process is based upon the idea that it interferes too much with the natural growth of the vine. The generality of domestic fruits are undoubtedly the result of artificial treatment, by which the plant is made to produce fruit far superior to the original. Any theory, therefore, that takes us back toward any primitive method of cultivation of the vine must necessarily be erroneous. The principal advantage derived from the processes of summer pruning are three in number: 1. The checking of the sap, diverting it temporarily from the production of wood, will favor the fruit in course of formation. 2. The production of a perfect shade, without which no marketable grapes can be produced. This is undoubtedly obtained through the abundant supply of lateral that will grow. 3. Instead of a long, slender cane, we shall have a stronger growth, a point of much importance in the training of a young vineyard, either in strengthening the stock or forming a head to the vine by the production of lateral of the year's growth. The production of cuttings need not be prevented entirely, as in most cases the canes may be left of sufficient strength to form a cutting, and the lateral will often answer the same purpose. The first summer pruning should be done as soon after the bloom as it would be considered safe, without disturbing the blossoms by the jarring of the canes. The second could take place whenever the canes or lateral extend beyond the length necessary to shade the grapes. The usual manner of executing this work is to fashion a piece of an old scythe into the shape of a short saber, 15 or 18 inches in length, and cut a few inches off the tops with a swift stroke. And, in conclusion, I would say, keep your left hand out of the way.

SMALL FARMS.—Mercury, Aug. 3: The large number of sales of small farms which are being continuously made by our real estate agents is most satisfactory proof that the Santa Clara valley is entering upon an era of substantial prosperity hitherto unknown. The parties who buy these small tracts are for the most part thrifty men, with some capital, from the Eastern States, who know that small farms thoroughly and intelligently worked are far more profitable than large tracts conducted in a slipshod, half-hearted manner. They understand what they are about, and most of them will realize their anticipations. As a sample of the business now being transacted, a partial list of the sales made during the present month is quoted: Forty acres of the Kerr place, between Saratoga and Los Gatos, to E. B. Austin, a miner from Nevada; price \$5,500. Mr. Austin has also purchased 20 acres of the McKinnon place adjoining, paying \$100 per acre. Frank Cosgrove, recently from the San Joaquin valley, has purchased seven acres in the Freeman tract, improved, for \$1,500. William Foley and William Lowery, Eastern men, have purchased respectively four and two-acre lots in the Freeman tract, and erected thereon substantial residences. Lyman Brownstein, who has resided many years in India, has become the owner of the Hutchinson farm (35 acres, 12 of which are in fruit), near Saratoga, paying therefor \$5,500. Ten acres of the Kennedy tract, Los Gatos, have been purchased by D. M. Deserous for \$1,050. Wm. Rice to E. B. Terwilliger, 16 acres, in fruit, \$3,000. Hotel de Redwood, with 80 acres of land, to Sylvester Woodbridge, \$6,000. Judge Senter has sold 60 acres of his farm to D. Freeman. This will be put upon the market in 5 and 10-acre lots.

SONOMA.

HEALDSBURG FRUIT FIGURES.—Enterprise, Aug. 3: Mr. Sawtell, just across the river, has, we understand, sold his fruit crop to Mr. Grove, a local peddler, for \$270 an acre, on the trees. All the good orchards here pay handsomely. Mr. Gladden sold his peach crop to the Santa Rosa cannery for \$42 a ton, to deliver 50 tons. He has also sold about \$600 worth of peaches to peddlers. His place (less than 50 acres) will this year yield him fully \$4,000, 15 acres of orchard now bearing fruit. He has 22 acres set to fruit, all of which will bear some next year, and in his nursery he has 20,000 trees, mostly budded. He will set out 40 acres to fruit in all, and after dividing yield and price by two (for Mr. G. never figures extravagantly), he counts on an annual income of \$8,000.

BIG YIELDS.—J. F. Tombs' thrasher is busily engaged in these parts, and J. L. Warner has also thrashed out a number of crops, but is now operating between Healdsburg and Santa Rosa. Last week we published 'Squire Willson's' yield of 62 bushels to the acre, 14 acres going 72 bushels. John McClish is crowding the 'Squire. Frank Tombs says John had 62½ bushels as an average on 30 acres, and on 5 acres had 72 3/5 bushels as an average. Mr. Tombs says there are many big yields this year, and all the wheat crops are good. A. J. Galloway got 51 bushels per acre, John R. Truitt 51 bushels on stubble land, Ira Proctor 40 bushels, and 6 or 8 bushels per acre was lost by the grain shelling out on account of heading when too ripe. Dave Hopper, Nate Cox, Frank Cunningham, and others, got extra big yields, all of which goes to prove the wonderful richness and superiority of our bottom lands.

THE NEW FAIR PAVILION.—Petaluma Argus, Aug. 4: The Sonoma and Marin district fair will commence at Petaluma on the 28th of August, and continue to the 2d of September inclusive. The new pavilion is the largest and best arranged building, of its character, in the State of California, only excepting that of the Mechanics' Institute of San Francisco, and it

has no advantage over the pavilion at Petaluma except in size. The stock grounds and stables are as perfect, in every respect, as could be desired. The grand stand is about double the capacity of the old one—and that met the requirements of the district in its day—and is, in every way, better arranged, so that the large number who will occupy it can be comfortably seated, and be absolutely free from the common annoyance of dust, wind and the afternoon sun.

SACRAMENTO.

LOW LAND CROPS.—*Bee*, Aug. 3: Mr. John Miller, the owner of Tyler island, in this county, will have 27,000 sacks of barley this year, and he has 200 acres of wheat that will yield 70 bushels to the acre, besides 100 acres of potatoes and 100 acres of beans, both crops in fine bearing. These island lands, where they can be protected from floods, have no superior anywhere, and there is a chance to save them if hydraulic mining can be stopped.

SAN JOAQUIN.

YIELD OF SUMMER-FALLOW.—*Stockton Independent*, Aug. 3: Mr. George Moshier, who owns a fine ranch near L. U. Shippee's stock farm, six miles from Stockton, says that grain is turning out finely in that section—much better than the most sanguine anticipated. A point of great importance to farmers is the fact that summer-fallowed land yielded from 38 to 40 bushels to the acre, and winter-sown fields produced 28 bushels to the acre—an important difference in favor of summer-fallow.

THE MOKELUMNE DISTRICT.—*Independent*, Aug. 7: All along the Mokelumne river the wheat yield is more than up to the average. The work of heading has been generally completed, and thrashing will be completed in a short time. Ex-County Assessor Stampee says that his crops this season far exceed the expectations entertained by him several months ago. The harvest result this year will demonstrate the fact that the Mokelumne section is by far the best wheat district in central California.

SANTA CRUZ.

WATSONVILLE DISTRICT.—*Pajaronian*, Aug. 3: Barley is turning out at least an average yield, being larger in proportion to acreage sown than it was last year. Wheat is also turning out better than last year, and promises to be a big crop. The wheat on the Kelly and Chittenden hills, which is of superior quality and extra clean, is said to far surpass any before grown on those lands. Wheat thrashing is now under way in this valley.

SUTTER.

THE GRAIN CROP.—*Yuba City Farmer*, Aug. 4: Our city presents a lively appearance at the present. Wheat is coming in in large quantities, and the number of teams hauling is simply immense. While a large proportion is being taken to the Buckeye mills and to other dealers, the warehouses of the Farmers' Co-operative Union are being filled quite rapidly. The receipts on Tuesday were about 280 tons, and rather more than that on Wednesday. It would make the heart of a grain speculator rejoice to see the rush of teams. Six and eight-mule teams are numerous, while four are as plentiful as blackberries in July. These teams draw two wagons generally, but as many as three may be observed. As they stand in long lines waiting for their turn to be unloaded, the most casual observer cannot but be convinced of the productiveness of Sutter county's soil. This is but one of the many landings for grain. Considerable is being banked at Starr Bend. T. F. McVey shipped his from this point. N. Best is hauling to Hull's landing, and we have heard that several others intend to do the same. Thos. Davis and several others are hauling to the landing at Hock farm. The plan of hauling across the tule to the Sacramento is also being discussed, but the road is reported to be still out of order. Few sales are reported as yet. Thos. F. McVey sold 2,450 sacks of wheat, averaging 140 lbs. per sack, to Dressbach & Co., Port Costa, at \$1.60 per cental. Wm. O'Banion has sold to the Buckeye Mill Company for \$1.62½.

SAN LUIS OBISPO.

EDITORS PRESS:—After drifting about home-seeking two years for climate and soil favorable, with a people somewhat enterprising, I thought I would visit this locality, and, so far, I am much pleased. The wheat returns are very good. The straw is very short, with full, plump heads. A sack sewer was complaining of this; the immense return and quickness with which the straw runs through the thrasher. There is a very large breadth of beans and other crops; also flax, and everything is brisk. The people generally around are jubilant. Poor dried peaches here are 15 cents per pound, showing the opening for dried fruit. The weather is comparatively cool, except one or two hours at noonday, and a heavy fog, almost a rain, is often very prevalent some mornings. Trees seem to do well, and there are some fine old grape vines. Orchards are mostly young ones, and doing splendid, but need pruning badly, which is a general want.—M. J. O'B., San Luis Obispo.

SANTA BARBARA.

THE CANNERY.—*Press*, Aug. 5: The Santa Barbara cannery is an institution which is proving of inestimable value to the fruit growers of Santa Barbara county. This is the third summer that it has been in operation, and a business already has been built up that is assuming mammoth proportions. The first year the can-

nery was owned and conducted by its founders, E. S. Sheffield and Walter N. Dimmick; the second year Mr. F. H. Knight became a partner, and this summer the ownership is merged into a joint stock company, with our leading business men as shareholders. The yield of the cannery this year will greatly exceed that of both the former years. Nearly all the farmers from Rincon Point to Goleta are bringing in their fruit, and the aggregate quantity will be very great. The present capacity of the cannery is from three to six tons per day, and this can be increased if necessary. As Mr. Knight says, they never refuse a load of good fruit. The price paid for apricots this year has been two cents per pound. The year before the cannery started the fruit went begging at a cent a pound, and quantities rotted on the trees. Thousands of trees have since come into bearing, and tens of thousands have been set out, yet all the fruit that is now grown, and all that will ever be produced, will find a ready cash sale at the cannery.

SAN BERNARDINO.

ALFALFA.—*Riverside Press*, Aug. 5: M. D. Horton has 10 acres of alfalfa on his ranch, in Arlington, which is paying him very well. He has cut it this year three times already, and expects to cut it three times more. Each cutting nets him about \$150 per crop, or a total of \$900 for the season; this is at the rate of \$90 per acre, and pays interest on land at \$900 per acre. He says this is not so good as apricots and vineyards, but it will do very well.

THE SULTANAS.—Much has been written about this grape, but until within a few years it has been a comparative stranger in our valley. This year it has fruited. Mr. A. P. Combs has 220 vines in bearing. They are four years from the cuttings, and many of them have 50 lbs. of fruit. Two years ago, D. W. McLeod planted 1,000 rooted vines. Many of them have clusters over 12 inches in length, and will bear at least 10 pounds of fruit. There are no signs of mildew upon them. They are strong, vigorous growers, and will withstand mildew and other attacks better than the Muscatel. They ripen at least one month earlier than the Muscatel, and as they require only a few days for curing, they are all out of the way before the Muscatel is ripe. Thus the producer can extend his labor over a longer period, and the expense for trays is only one-half, since the same trays may be used first in drying apricots, then the Sultanas grape, and later the Muscatel. The clusters are very compact and very heavy shouldered. The berry adheres tenaciously, so that the picking will be easy. The packing is very simple. When taken off trays and dumped into sweat boxes, all that is necessary is to stir them around while dry and the berries all fall off.

The Averill Mixed Paints.

Those contemplating painting will do well to examine the paint stock advertised in this week's *PRESS*, by O. S. Orrick, general agent for the Averill mixed paints made by the California Paint Company. These paints have demonstrated their value by long and severe tests. They were awarded the first premium at the Mechanic's fair in this city, by a committee who examined all the paints exhibited, chemically and practically. The advertisement in this issue shows the triumph of these paints at the late International exhibition in Sydney. Aside from these public victories, there is strong evidence in favor of the paints in the experience of users in all parts of California. Several of our readers have sent us unsolicited opinions in favor of the paints, as durable and sold in a form which makes them ready for use, which is a great advantage to many people. The office of the company, at 403 Market street, contains a selection of all things useful to painters.

EQUESTRIANSHIP AT THE STATE FAIR.—At the meeting of the State Board of Agriculture last week, the board appropriated \$100 in three prizes, \$60, \$25 and \$15, to the equestrian tournament. A purse of \$100 was offered for saddle horses that have never been trained or run in public, professional riders excluded, weight not less than 140 lbs. At the solicitation of breeders, it was decided to offer a purse of \$300, divided into first, second and third moneys, for yearling trotters, mile dash to rule.

GRAPE PRICES.—It seems probable that pretty good prices will be paid for grapes this year, and that money will be plenty again in the grape counties. At the last meeting of the San Jose Viticultural Society, contract sales were reported at \$25 and \$30 per ton, and for choice varieties of wine grapes, such as the Charbonneau, still better prices had been offered. The general opinion seemed to be that \$30 was a fair average price.

GOING EAST.—Mr. William Niles, the well-known live-stock grower of Los Angeles, whose departure for the East was chronicled in yesterday's *Times*, will go to his former home at Niles, Michigan, subsequently visit the chief cities of the East, and also many leading stock farms. Mr. Niles will be absent some two months, and during the interval, his brother, John B. Niles, will have charge of his interests here.—*Los Angeles Times*, Aug. 6th.

Cream of Tartar.

Its Production and Uses.

Few industries on this coast have a greater future than the wine interest, which is already a prominent feature in our exports. It is necessary, of course, that every thing in connection with the wine should be utilized, as it is only in that way that our wine growers are enabled to compete with foreign producers, whose economy and thrift are so widely known.

Only a few years ago we were entirely dependent on foreign manufacturers for our supplies of cream of tartar, which is manufactured from argols developed in the manufacture of wine. Until within a short time, the wine makers on the Pacific coast cast the argols aside as being of little or no value. The establishment of manufactories which utilize this product is rapidly freeing us from our dependence on importations. While cream of tartar is used for numerous purposes, still, the larger proportion is used by baking-powder manufacturers, and there is certainly no reason why California, with its facilities for producing argols, should be dependent upon the East or Europe for supplies.

We recently called upon Messrs. A. Schilling & Co., the proprietors of the Pioneer Baking Powder Company, by far the largest consumers of cream of tartar on this coast, and, in a conversation with their chemist, in reference to what constituted a pure baking powder, we learned that cream of tartar and bi-carbonate of soda are the only ingredients that should be used in the manufacture of baking powder. To have the baking powder perfect, it is necessary to combine the cream of tartar and soda in such a way that the ingredients will neutralize each other, thus giving the proper action to them and producing the largest amount of carbonic gas necessary for baking purposes. To what extent the success of the baking powder depends on the proper combination of the two materials was proven to us by his having other baking powder, put up by other firms, which, although containing cream of tartar and soda only, did not develop the full amount of carbonic gas. This was owing, no doubt, to the excess of bi-carbonate of soda used; but whether this was due to the firms not being able to enjoy the services of a competent chemist to superintend the combination, or whether it was merely because cream of tartar being high in cost, while bi-carbonate of soda only costs one-sixth as much, was hard for us to determine.

We believe that home industries should be encouraged; the more it is done, the better it is for this coast; and institutions that are promoting home enterprises should be encouraged as long as they use legitimate means to increase their business. For this reason we sought Messrs. A. Schilling & Co., to get information in reference to the supply and demand of cream tartar.

The effrontery and mendacity of some large Eastern companies in introducing to the people on this coast, baking powders which contain a large percentage of starch, and endeavoring to push them on the innocent public by means of glaring advertisements and tricks deserves the condemnation of every right-thinking person.

When any portion of the cream of tartar and soda, which are necessary for the production of carbonic gas, are removed, it is absolutely necessary to replace it with some material possessing the power to produce the same effect. One of the most common articles used for this purpose is ammonia. It is a well-known fact that carbonic gas is produced in nature in many ways.

There is hardly a child that has not noticed the bloated condition of animal carcasses. This condition is due to the action of the ammonia in the animal developing carbonic gas, which causes the bloated appearance of the carcass. Ammonia being a product of organic decomposition, it is not a very nice ingredient in bread making, though, unquestionably, a very powerful gas producer. The manufacturers of baking powder, composed entirely of cream of tartar and soda, only, cannot compete with powders composed largely of starch and containing so powerful and nasty an element as ammonia, nor can they indulge in high-priced advertisements in praising the merits of a so-called "absolutely pure" baking powder. To persons desirous of informing themselves in regard to ammonia, we would refer them to the "United States Dispensatory," folios 112 and 114, where they will find a detailed statement of what it is obtained from, the details being unfit for publication here. We are certain that the public cannot be aware of the uncleanness of ammonia, or they would be more careful to avoid the use of baking powders that contain it.

A certain Eastern baking powder company has constantly kept its brand before the public, and has styled it as being "absolutely pure," and has recently published an elaborate diagram showing the strength of the different baking powders produced by large firms in the United States. These diagrams are being published broadcast over the country. This company manufactures a baking powder containing a large percentage of starch, and they use ammonia to replace the strength lost by the removal of the cream of tartar and bicarbonate of soda.

We are informed that this company has spent a very large amount of money in advertising their baking powder, and have taken pains to maliciously slander other brands that undoubtedly have more merit. The large profit made by this company, no doubt, justifies them in expending so much in advertising

so extensively, while manufacturers on this coast, who are giving better value, and endeavoring to aid the industrial interests of the State, are not in a position, on account of the small profit they are making, to keep their brand of baking powder before the public in newspapers. These Eastern firms, however, are selling an adulterated article, and advertise on the principle that the party making an excessive profit can do more "blowing" than manufacturers of a better quality whose limited profit does not permit them to enjoy extensive newspaper advertisements. As a rule, houses putting up fine goods care but little for slanderous utterances, as they return, "boomerang"-like, to the injury of the originators. The "baking" of rivals, who are selling their goods as patent medicines are sold, can easily be answered by facts, and we understand that the manufacturers of a superior article of baking powder propose publishing the analysis of the baking powder offered by these parties, showing what their powder contains, if they persist in running down brands that they know are better than their own. Sworn statements of prominent chemists will soon explode their claim of selling an absolutely pure baking powder; but we will drop this baking powder subject until some future time when we can devote more space to it.

Cream of tartar is used to some extent for medical purposes, and there is also considerable consumption of it for cooking purposes, aside from its use, combined with bicarbonate of soda, as a baking powder. To all consumers who appreciate a pure article the development of its manufacture at home is a matter of interest.

We will, at some future time, endeavor to give our readers a full account of the manner in which cream of tartar is developed in wine making, and the processes through which it passes after leaving the wine maker's hands.

News in Brief.

OVER 70,000 persons are said to be members of the Amalgamated Association of Iron and Steel Workers.

ON Saturday afternoon a fire occurred in the coal pits of the iron mine at Grass Valley, and spreading to the forest, the fire did considerable damage, burning some 1,500 cords of wood.

AN order has been approved by the President, allowing the shipment of liquors to Alaska for medicinal purposes during the prevalence of the present epidemic of measles and scarlet fever.

THE German temperance element has called a German Temperance Convention in Chicago, on August 25th, and has elected two delegates to represent it in the National Temperance Convention, to be held on Aug. 23d.

DR. REEVES, Secretary of the State Board of Health of West Virginia, has received information of a new cattle disease in several counties of the State, and has ordered specific reports. It seems to be a contagious febrile affection.

TWO men, while attempting to climb over the railing of the Tuileries gardens in Paris, during a display of fireworks on Monday night, caught hold of an electric wire used in the illumination of the grounds, and both were struck dead instantly.

COMMANDER PEARSON reports that no trouble is apprehended in Sitka between the Indians and the miners, and says the rumors are put in circulation by traders and rum sellers, who want a first-class man-of-war on the station because of the \$6,000 or \$8,000 disbursed.

SECRETARY CHANDLER cabled the United States Minister at St. Petersburg that Congress had made provision for bringing home the remains of Lieutenant-Commander De Long and his companions, and asked that he telegraph to Lieutenant Harber, at Irkutsk, to have sledges built to bring the bodies to Orenburg, where metallic cases will be found in waiting.

THE California Silk Manufacturing Co., whose factory was totally destroyed by fire in South San Francisco a few months ago, has decided not to rebuild in its old location. The company considers the Mission the most favorable location for the erection of a building, and, it is reported, has been negotiating for property. The building will be larger than the old factory. About \$25,000 worth of new machinery has been ordered from the East.

A CONSPICUOUS feature of the markets during the past week was the great variety of fruit displayed. Both extremities of the season were represented. Among the varieties noticed were apples, peaches, apricots, pears, plums, prunes, pomegranates, crabapples, lemons, fresh and dried figs, limes, oranges, pineapples, nectarines, bananas, cantaloupes, tamarinds, currants, raspberries, blackberries, grapes of several varieties, strawberries, watermelons, and nutmeg and muskmelons.

A FARGO special says: Rufus Hatch and a party of English and New York capitalists have purchased 750,000 acres of grazing lands lying between the Little Missouri and Powder rivers, in Montana, from the Northern Pacific railroad, at one dollar per acre and seven years' time. As the grant to the road only takes alternate sections, they will have practical pasturage of 1,500,000 acres, as it will have the use of the intervening sections of Government lands. It is proposed to stock it with 50,000 head of cattle.



A Country Picture.

Then down into the vale he gazed,
And held his breath as if amazed
By all its wondrous loveliness;
For as the sun its depth did bless,
It lighted up from side to side,
A close shut valley, nothing wide,
But ever full of all things fair.
A little way the hill was bare,
Then clung to it a deep green wood
That guarded many a fertile rood
Of terraced vine and slopes of wheat;
A white way wound about its feet,
Beset with heavy fruited trees
And cleaving orchards through; midst these,
Each hemmed round with its flowery close,
The cottages and homesteads rose;
But the hillside sprang suddenly
From level meadows that did lie
On either side a noble stream
O'er which the morning haze did steam
Made golden now; then rose again
The further hillsides, bright with grain,
And fair with orchard and close wood,
From whence at last the scarped cliffs stood,
And clear now, golden in the morn,
Against the western sky upbore,
Seemed like a guarded wall, lest care
Or unrest yet should creep in there.

William Morris.

The Tables Turned.

It was just such an American village as you see in pictures. A background of superb old mountains clothed in blue green cedars, with a torrent thundering down a deep gorge and falling in foamy billows; a river reflecting the azure of the sky, and a knot of houses with a church-spire at one end and a thicket of factory chimneys at the other, whose black smoke wrote ever-changing hieroglyphics against the brilliancy of the sky.

This was Dappleville, and in the rosy sunshine of a June day the girls were all issuing forth, while General May, the foreman, sat at his desk, a pen behind his ear, and his small, beady eyes drawn back as it were in the shelter of a precipice of shaggy eyebrows.

One by one the girls stopped and received their pay for the week's work, for this was Saturday. One by one they filed out with discontented faces until the last one paused at the desk.

She was slight and tall, with large velvety blue eyes and a complexion as delicately grained and transparent as rose-colored wax, and an abundance of glossy hair of so dark a brown that the casual observer would have pronounced it black, and there was something in the way the blue ribbon at her neck was tied and the manner in which the simple details of her dress were arranged that bespoke her foreign birth.

"Well, Mademoiselle Marie, how do you like factory life?" asked the foreman.

"It is not disagreeable," she answered, a slight accent clinging to her tones like fragrance to a flower, as she extended her hand for the money counted out to her.

"You have given me but four dollars, and it was eight by the contract," she said.

The foreman shrugged his shoulders with an insolent air.

"Humph! you ain't much accustomed to our way of doing things, are you, Mademoiselle? Eight, of course, but we deduct two for a fee."

"A fee! For what?" demanded Marie, with flashing eyes.

"For getting you the situation, of course. Such places don't grow on every bush, and you naturally expect to pay for the privilege."

"I did not."

"Oh, well, all right. You ain't obliged to stay unless you choose."

"Do you mean that if I do not pay this money—" hesitated Marie.

"You can't expect to stay in the works," said May, hitching up his collar.

"But the other two dollars?"

"Oh, that is a percentage the girls all pay," said the foreman.

"But what is it for?"

Mr. May laughed.

"It helps out my salary. Of course you know the girls expect to pay something each week for keeping their situations in a place where there are so many anxious to get in."

"And Mr. Elder?"

"Oh, he hasn't much to do with it. I am master, if you please."

"Mr. Elder owns the works?"

"Well, yes, he owns it, but I manage everything. Mr. Elder reposes the utmost confidence in my ability, and he is a good business man. He understands his business. And if you have any more questions to ask—"

"I have none; but I need this money myself. I work hard for it; I earn it righteously. I cannot afford any more than the others among these poor laboring girls to pay it to your greed."

"Eh?" ejaculated Mr. May, jumping from his seat as if stung.

"And I will not pay it," calmly continued Mademoiselle Marie.

"Very well; just as you like, Mademoiselle, only if you don't conform to the rules of the Dappleville Works—"

"Are these the rules?" scornfully demanded the girl.

"Pray consider your name crossed off the books; you are no longer in my employ. Good evening, Mademoiselle."

Mr. May slammed down the cover of his desk as if it were a patent guillotine and poor Marie's neck were under it.

Two or three of the girls who had hovered around the place to hear the discussion, looked with awe-stricken faces at Marie as she came out with \$4 in her hand.

"You have lost your place, Ma'amselle," whispered Jennie Bass, a pale, dark-eyed girl who supported a crippled mother and two little sisters out of her factory earnings.

"And he'll never take you on again; he is as vindictive as possible," said Mary Rice.

"It matters not. He is a rogue, and rogues sometimes out-general themselves."

"But you can't starve," said Jennie. "Come with me, Ma'amselle. My home is a poor place, but you are welcome to stay there till you can write to your friends."

Marie turned and impulsively kissed Jennie on her lips.

"I thank you, but I do not need your kindness. I have friends nearer than you think."

Marie Duvellé went back to the red brick house, all thatched with the growth of the woodbine, where she lodged with the wife of the man who tended the engines of the Dappleville Works.

"Does he cheat you out of your money, too?" she inquired, when Simon Pettengill came home, smoke-stained and grimy, to his supper.

"One-sixth I have to pay him," said Simon with a groan, as he glanced at the five little ones around his board. "Yes, Miss; he's a villain; but this world is full of such, and I find it a pretty hard world to get on in. Mr. Elder never comes here, or may be things would be different. Mr. Elder lives abroad, in Paris, they say."

"He is in this country now, and I intend to write to him."

"It won't do no good, Miss."

"Yes it will," said Marie quietly.

The petals of the June roses had fallen like a pink carpet along the edge of the woods, and the Dappleville Works were their holiday guise, even down to Simon Pettengill's newly brightened steam engine, for Mr. Elder and his bride were to visit the factory on their wedding tour.

"It is a pity Ma'amselle Marie went away so soon, for they say the master is kind hearted in the main and she might have spoken up for herself," said Simon to his assistant.

Mr. May, in his best broadcloth suit and mustache newly dyed, stood in the entrance smiling as the carriage drove up and Mr. Elder, a handsome blond man, sprang out and assisted a young lady in a dove-colored traveling suit to alight.

"May, how are you?" he said with the carelessness of conscious superiority. "Marie, my love, this is my foreman."

"Mademoiselle Marie!"

Mr. May found himself cringing before the slight French girl whom he had turned from the factory a month before.

"May," said Mr. Elder, authoritatively, "my wife tells me some very strange stories about the way things are managed here. It became so notorious that the rumors reached her at Blythesdale Springs, and she chose to come and see for herself. Marie, my darling, the best wedding gift we can make to these poor girls is a new foreman. May, you are dismissed."

"But, sir—"

"Not a word," cried Mr. Elder, with lowering brow, and Mr. May crept out with an uncomfortable consciousness of Marie's scornful blue eyes following him.

"You were right, my love. The man's face is sufficient evidence against him," he said.

And a new reign began for poor Jennie Bass and the others, as well as for Simon Pettengill. And Marie never regretted her week's apprenticeship at the Dappleville Calico Works.

Wondering.

[Written for the RURAL PRESS by L.]

A pretty aggravation

Is this tiny spirit of wonder!

Deserves her reprobation

Our airy webs to sunder.

Yet how can I speak thus of him

When I know so well I love him.

O'er me supreme he reigns

In my leisure hours of dreaming;

In my waking hours of scheming

Great achievements he attains.

I have just been wondering about people. Oh, but they are queer when you come to think of them, and when you come to think of them again, you wonder what there is queer about them, after all.

We used to have a very old-fashioned sugar-bowl. Well, having grown up with it, I never thought of thinking of it until one day, while I was sitting at table in a half-dreamy mood, it suddenly struck me that that particular bowl was extremely odd, and there immediately came into my mind the picture of an individual who would have been likely to have designed such a queer bowl, and I wondered and wondered about him and his idea until I came to the table again, when, if you'll believe it, I began to puzzle afresh as to what I had wondered at in the first place, and I finally settled my mind to the fact that it was, after all, but a common-place sugar-bowl, and the cobweb was gone.

So, the other day, a fruit vendor asserted

himself as the chief picture in my mind. He was queer, too, with his grizzled hair, his dreamy appearance, his ungainly manner, and his sharp, half-thoughtful eyes. What was he thinking of all day, sitting in his low chair in the sunshine, a piece of canvas stretched to windward? Was he a day-dreamer, or were the pictures of his childhood's home in sunny Italy passing before his mind in panoramic form, or was he a practical, common-sense man. Well, something vexed me just then, and I came to the conclusion that he was, and the picture vanished.

Just so, often, something presents itself, and the very cause that brings it—wonder—will drive it away again.

A Visit to the Santa Cruz Mountains.

EDITORS PRESS:—Over 3,000 feet above the level of the sea, we had traveled into the heights of grandeur, going leisurely the long ascent with our teams and provender, and prepared for camping. We were a small party of five, out for a gala day. You see five is a convenient number for an occasion of this kind. For all debatable questions it provides two disputants for each side and a judge. It is a favorite number in nature, as you will see in many flowers the parts to form the corolla, and the number of points in the representation of a star is five. It also requires that number to be called a cluster. We were then a cluster—not a nebula—among the heavenly bodies, for we were among the clouds; above some of them, if not of them.

Had the good people of Santa Clara valley looked in the direction of Castle Rock after nightfall, they might have observed a new constellation—a strange faint effulgence like a camp-fire at the mountain top. And there, as near the upper round of the ladder—reaching from the valley to the clouds—as one could get, we pitched our tents, to remain a few days to rest and idle.

To rest did I say? Impossible! We imagined we should be tired, but never were we in such exuberant spirits and strength. With an unsatisfied curiosity to see a little further, we could not "bask with folded hands in glory supernal." Every day found us exploring supernal glory upon rocky heights and in mossy depths of Deer Ridge range. Every night found the quintuple cluster returning to camp with genuine fatigue, laden with memento treasures of nature's own curious workmanship.

Deer Ridge Farm.

Upon one of the most prominent points of this grand mountain range, which overlooks the sea, Monterey and Santa Cruz upon one side, Santa Clara valley and San Francisco city and bay upon the other, was a cozy home of three years' planting, several miles from any other habitation.

This mountain cottage has been made comparatively beautiful, without and within, adorned with things as they naturally grow. The posts and brackets of the veranda are made from the madrona tree and bough, cut so as to fit the place. The effect was far prettier than scroll-work from the planing mill. Rustic chairs, benches, garden tables and baskets are made by a skillful workman from the variety of timber in that locality, some parts covered with moss and lichens of extraordinary richness. Much skill is displayed in selecting material with just the right bend, or a curious knot or mistletoe prong in just the right place.

Within the house we found equal ingenuity displayed in the arrangement of things gathered from the mountain top. In a corner of one room was a pyramid of abandoned bird nests, supported by twisted twigs of different colors. This collection was made by a little boy 10 years old, who instructed as well as entertained us with a description of the birds of these nests, their peculiar habits, manner of nest-building and selection of place. A coming Agassiz methought, as I listened, a willing pupil, to this young master.

From the stack of papers and periodicals and the kind of reading matter in the book-cases, we knew these people kept pace with the world below. Shining there in that quiet, cosy home, we found a star of rare luster, a real "jewel," diffusing light and love from shore to shore, sending words of gladness, encouragement and instruction to the mothers and daughters throughout this fair land. This capable woman, knowing well how to make her home attractive, finds something else to do besides embroidery and tidy-knitting. With many cares crowding upon her time, she finds opportunity to send jets of thought to the hungry throng through the medium of her pen.

We are back in our respective homes; the routine of daily toil is resumed. Perchance the cluster will move in broader pathways for the advantages of this delightful mountain trip.

THE LESSER STAR.

CULTURE.—"But you know, pa," said the farmer's daughter, when he spoke to her about the addresses of his neighbor's son, "you know, pa, ma wants me to marry a man of culture." "So do I, my dear, so do I; and there is no better culture in the world than agriculture."

FLOODS in Bohemia have caused an immense loss of property and drowned a large number of persons.

Pioneers.

[Written for the RURAL PRESS by JOHN TAYLOR.]

We shall change the current of thought so as to record an experience of '49 and '50—both memorable years in the history of California. The stirring scenes of those never-to-be-forgotten years will be sought after to grace the pages of history; to be appreciated far more in the future than at present. Such history will be largely made up from scraps of individual experience. And no pioneer exists but who has some remarkable incidents worth recording, stowed away in memory. It takes only a touch to recall scenes which can only transpire once in a decade. We do not intend to write a personal history of '49—that would fill a volume of no mean dimensions; but we will bring to light an incident which was forcibly recalled by the visit of a beautiful young maiden of 18 summers, a few days ago.

Don Pedro's Bar.

On Tuolumne river was our stamping ground during the winters of '49 and '50. Those who have gone through a pioneer's experience can appreciate the ups and downs enshrined within these eventful years. Riches and poverty, hard fare and hard beds, plenty of dust and no use for it; stores empty; pack mules mired; letters from home long delayed; hopes realized and hopes blighted; the weak succumbing to fate, and the pioneer ever grand in his unlimited liberty. The only great want unsupplied was the association of woman. Oh, how the heart beat with joy when the news spread with electric swift-ness that an emigrant family was approaching the bar in an ox wagon, from across the plains! The first arrival of woman! Is there a '49er in existence who felt not a thrill of pleasure from such an event? Surely Adam never welcomed his Eve with so much pleasure and good will as we of '50, after such a long fast from feminine society. The civilizing influence of women and children is acknowledged by all civilized nations. More especially is this the case in our grand republic, where woman reigns queen of home.

When that lumbering team made its appearance, the glad tidings soon gathered together a crowd of grizzled miners to give a helping and royal welcome. Mr. J. was a man of middle age. Mrs. J. was a hale, active, smiling dame of 30 odd years; but the light of home was a fair maiden of some 16 summers, beautiful even in rough garb, and as good in behavior, as fair in face and graceful in form. There were younger members composing the family, but nothing more remarkable than is to be found in thousands of happy and respectable homes scattered all over our broad domain. A canvas tent was soon erected. A long table proclaimed that the first boarding house was in full operation, supplied with pork and beans, and, grandest of all luxuries to hungry miners, home-made bread, made more delicious by being supplied and tended by the fair-haired and blue-eyed maid of 16.

Ab! ye dainty dames of modern fashionable life and striplings of dandyified manners, do you suppose, for a moment, your enjoyments partake of the keen relish which the miner of '50 enjoyed under the touch of woman's inspiring presence, after months and years of almost Indian life? Those were gala days at Don Pedro's, when on a Sunday afternoon the long table was filled and refilled by a happy, healthy, rough, but by no means ignorant, throng. Many of those men have since filled positions of trust and responsibility, making their mark as law-makers and office holders.

But it is with the past, and its great problem, which occupies our thoughts, and we can only trace subjects so as to follow the fortunes of our first female arrival. Where is the mountain mining camp without this experience? Not one. And the pioneer was of such a mold that where a family pitched their tent, there you would find assistance and means freely given, and thrice repaid by the very sight of feminine apparel and the influence for good from their presence. God bless them under all and every condition of life, for surely they are the earth's saviors, and those who have long been deprived of such associations are those who are best fitted to bear testimony.

Thirty-two years have wrought many changes. Don Pedro's Bar is only the ghost of its former glory. Many of its early settlers have gone to prospect the scenes of summer-land; some are living still within hailing distance of the once rich mining ground. Our boarding master and part of the family found a home in distant Montana. Two or three years sufficed to break up associations which were affectionately cherished, and the long past appeared only as a dream.

In our enterprising village, Chinese Camp, we have many friends of long standing. Especially is this the case with "our Doc," as our late Senator is termed by his friends. Our Doctor has an interesting family of two daughters, young, beautiful and good. The eldest has lately finished her education at the popular seminary conducted by Mr. and Mrs. Harmon, at Berkeley. Among her classmates and friends there was a Miss S., of Lathrop, who came to make a friendly visit to the Doctor's daughter. They made us a social call at Mount Pleasant for the enjoyment of music, etc. A formal introduction took place with the friend from Lathrop. Quietly sitting down to enjoy the company and music, we were asked if we knew the young lady, as Mr. J. was her grandfather. Hence came a revelation: The beautiful young girl

before me was the youngest child of our beautiful pioneer of '50. There she stood as we last beheld her mother—a queen in loveliness and an angel in purity. The old fire flashed from our eyes, and once again we trod the old paths, peopled the deserted glens, and sat at the long table with the fair-haired, blue-eyed maiden in attendance. With all the finery of modern decoration, the palm of beauty was given to the rose which shed its fragrance among the grizzled miners of Don Pedro's Bar. How we grew young again in beholding a living representation of a past generation may be left for your readers' imaginations. Suffice it to say, that the great and grand pioneer life of '49 and '50 still lives and shall live in the memory of your correspondent.

Mount Pleasant, July 30, 1882.

Concerning Comfortable People.

[Written for RURAL PRESS by D. M. D.]

"We mean to be a comfortable couple," wrote a friend about to marry; and upon this hint my thoughts went off after many of the comfortable and uncomfortable people of my acquaintance. The conclusion finally reached was that, to be comfortable to themselves and to others, as my friend meant, would include all the virtues and graces, both natural and acquired, that are ever given to mortals.

It is to be presumed that nobody will deny the existence of a great many of the uncomfortable sort. They seem to be the most numerous. If they are not, they have a most aggravating faculty of making you aware of them. Animals and very young children are very quick to perceive this difference in people, and are not slow to give expression to their likes and dislikes.

This gift of being comfortable is not so much a matter of goodness or badness, of wisdom or folly, of intelligence or ignorance, as we may suppose. We like to associate whatever is best in life with that which is agreeable. We care less than we think for intellectual attainments, when it comes to the matter of daily life and contact. It is the pleasant personal influence which some individuals carry with them to every place and occupation, which is a light in their own and other people's homes, that should be called comfortable. It may be the refinement of love and good will—the graceful expression of much charity for human weakness and enlightened views of life and destiny. It may mean a cheerful acceptance of the present state with comforting hopes concerning the future. It might betoken a perfect physical organization, with a harmonious development of all the faculties. The overflow from an abundant life is sure to be the comfort of some weakly hanger-on to this kind of stitience. "You are so comfortable, Joe," said Beth, in story of "Little Women," and that meant everything to the sick and suffering girl.

Every neighborhood has some comfortable soul, to whom all may go with their troubles and annoyances. Born with a vocation for soothing and comforting the fretful, grown-up children about them, their kindly words and wise counsels are a power for good in a community. In the intimacy of prosy, every-day life, they are pleasant; in the great straits, to which all are liable to come, they are necessary.

A comfortable manner is like a comely countenance—always welcome and pleasing. For human nature's daily needs, no one will deny the comfortableness of perfect health, good nature and an unselfish disposition. "Be equable," is the advice of one who has seen much of life. "I always feel so humiliated when I fail to preserve my equanimity," said another, who had pondered well the causes of happiness and unhappiness in this world. If the uncomfortable portion of the race is the most numerous, there are so many shades and degrees to their discords and discomforts that it is not easy to describe them. There are those who are always uncomfortable to themselves and to others. There are those who are subject to spasmodic affections, and are occasionally uncomfortable. In either case, the poor creatures suggest Hood's "hedgehog rolled up the wrong way, tormenting himself with his prickles."

If one could be entirely miserable without making others so, it would not matter so much; but the lives and traits of individuals are so interwoven that this power to inflict disagreeable conditions must be admitted. Everybody cannot be positive to the peculiarities, coarseness, or fussiness of their companions. A long life might not be sufficient in which to educate themselves up to that serene height of not being affected by inharmonious people. The clearly uncomfortable folks are those who are afflicted with a malady, those who rejoice in some hobby, those who nurse a grievance, and those who are tormented with suspicions. Grumblers, fault-finders and dreadfully-abused persons are most tolerable at a distance. It is a very human consolation to remember that all these troublesome creatures must be more or less uncomfortable to themselves. We are not too good to exult in the justice of this. Who has not experienced a sense of sweet relief over the departure from their home or circle of one of these uncomfortable? Who has not been surprised, and, perhaps, ashamed, to find themselves so joyful over an absence which they might have regretted? Who has not fully realized, when beyond the shadow of an uneasy presence, that they have carried a crushing weight? Commend us always and forever to comfortable men and women, in couples or singly, but certainly comfortable.

Young Folks' Column.

Rock-a-By, Baby.

"Rock-a-by, baby, in the tree top!
When the wind blows, the cradle will rock;
When the bough breaks, the cradle will fall,
Down tumbles baby and cradle and all."

Rock-a-by, baby! the meadow's in bloom,
Laugh at the sunbeams that dance in the room,
Echo the words with your baby tune,
Coo at the sunshine and flowers of June.

Rock-a-by, baby! as softly it swings,
Over the cradle the mother love sings;
Brooding or cooing at even or dawn,
What will it do when the mother is gone?

Rock-a-by, baby! so cloudless the skies,
Blue as the depths of your own laughing eyes;
Sweet is the lullaby over your nest,
That tenderly sings little baby to rest.

Rock-a-by, baby! the blue eyes will dream
Sweetest when mamma's eyes over them beam;
Never again will the world seem so fair,
Sleep, little baby, there are clouds in the air.

Rock-a-by, baby! the blue eyes will burn
And ache with that that your manhood will learn;
Swiftly the years come with sorrow and care,
With burdens the wee, dimpled shoulders must bear.

Rock-a-by, baby! there's coming a day
Whose sorrows a mother's lips can't kiss away,
Days when its song shall be changed to a moan,
Crosses that baby must bear all alone.

Rock-a-by, baby! the meadow's in bloom,
May never the frost pall the beauty in bloom,
Be thy world ever bright, as to-day it is seen.
Rock-a-by, baby! "thy cradle is green."

—London Reader.

The Runaway Pancake.

Every country has its own stock of quaint, fanciful tales, handed down from mothers to children for many a generation. Among the simple Norwegians these traditional tales abound, and one which may amuse our young readers runs much as follows:

There was once a mother who lived, above all things, to make her children happy, and one day she promised them a fine large pancake.

"It will be such a fat pancake," said the mother, tossing it into the pan. She thought it was only an ordinary pancake, whereas I must get you to believe it was most extraordinary and uncommon, for it could hear and understand all that went on.

"You don't believe it?" but then I must tell my story as it is told away in Norway, perhaps in the long days of summer, or in the winter, when there is scarcely any day at all.

The pancake knew perfectly well that it was made to be eaten, and it did not like the prospect at all, so it sprang out of the frying pan, and rolled quickly to the door, and then out upon the steep road, which was fortunately all down hill from the cottage. The woman and her children had stood quite still for a moment, so the pancake got the start, but only for a moment, and then they were all in full pursuit, crying, "Stop! stop!"

Of course such a sensible pancake was not likely to do anything of the sort; away it went, and so quickly that it was soon out of sight, and the hungry children went back to the cottage shedding tears of disappointment, for I am afraid there was no flour or eggs to make another.

As the pancake rolled along an old man came toward it, and he, too, cried "Stop!" for it seemed a pity that it should not be turned to good account and eaten; but it was of no use. A cock and hen, a duck and drake, a goose and a gander, all in turn rushed out, hoping in turn to get a meal, yet the pancake escaped them every one, and went down the hill faster than ever.

At length a pig came to meet it, and, instead of crying "Stop," he said "Good morning," so we must conclude he had received some sort of education and was tolerably well-bred.

"Good day, piggy," replied the pancake; but it was much too cautious to stand talking.

"I think we had better keep company through the wood," said the pig, trotting after it. "They tell me it isn't safe to go through it alone." There was no doubt that the pancake wished to be safe. Why else did it jump out of the frying pan? So now it became alarmed and sighed, "Ah me! what shall I do?" as they came in sight of a running brook.

"If you like to sit on my snout I'll ferry you over," said piggy, turning back; and the pancake agreed, for she was still desperately afraid of being caught and eaten. But what piggy could resist a pancake within such easy reach of its mouth? Not this one at any rate; so, giving a toss to his head, he sent the pancake down his throat, and thus ended its adventures forever.

I don't know if any of the little children can find a lesson in so fanciful a story, and yet suppose we try. Surely it must be the old, old story of how foolish it is to seek to escape what we ought but do not like to do. Something is too hard, too disagreeable for us; we give it up; then worse befalls us, and we wish we could have the time over again. If this had been a really sensible pancake, I am quite sure its last thought, as it slipped into piggy's mouth, would have been, "Dear, dear! I wish I had stayed in the frying pan." It would have been better to have made a dinner for those poor little children than to be swallowed up by a treacherous friend.

GOOD HEALTH.

The Medicinal Value of Vegetables.

A celebrated cook book discusses the medicinal value of vegetables, as follows:

"Asparagus is a strong diuretic, and forms part of the cure for rheumatic patients at such health resorts as Aix-les-Bains. Sorrel is cooling, and forms the staple of that *soupe aux herbes* which a French lady will order for herself after a long and tiring journey. Carrots, as containing a quantity of sugar, are avoided by some people, while others complain of them as indigestible. With regard to the latter accusation, it may be remarked, in passing, that it is the yellow core of the carrot that is difficult of digestion—the outer, a red layer, is tender enough. In Savoy, the peasants have recourse to an infusion of carrots as a specific for jaundice.

"The large, sweet onion is very rich in those alkaline elements which counteract the poison of rheumatic gout. If slowly stewed in weak broth, and eaten with a little Nepal pepper, it will be found to be an admirable article of diet for patients of studious and sedentary habits. The stalks of cauliflower have the same sort of value, only too often the stalk of a cauliflower is so ill-boiled and unpalatable that few persons would thank you for proposing to them to make part of their meal consist of so uninviting an article. Turnips, in the same way, are often thought to be indigestible, and better suited for cows and sheep than for delicate people; but here the fault lies with the cook quite as much as with the root. The cook boils the turnip badly, and then pours some butter over it, and the eater of such a dish is sure to be the worse for it. Try a better way. What shall be said about our lettuces? The plant has a slight narcotic action, of which a French old woman, like a French doctor, well knows the value, and when properly cooked, it is really very easy of digestion."—*Medical Record*.

Researches on Lung Disease.

Fresh proof has lately been obtained by M. Giboux, of the danger in air expired by consumptives. He experimented with four young rabbits of the same litter, and born of healthy parents. Two of them were kept 105 days in a large wooden case, with side gratings, into which was introduced daily a quantity (about 20,000 cubic centimeters) of air expired by animals in a consumptive state. This operation was performed at midday and in the evening, and each time the gratings were kept closed for two hours. In another quite similar case, the two other rabbits were similarly treated, except that the impure air was made to traverse in its way to the case, some wadding impregnated with carbolic acid. The rabbits in the first case, before long, showed loss of appetite, intense thirst, listlessness, diarrhea and loss of flesh. On being killed, both were found to have tubercles in the lungs, the liver, and the kidneys, those in the lungs being the most advanced, and the upper lobes being chiefly affected. The other couple of rabbits presented nothing abnormal while alive, and no organic alteration was observed in their organs after death. They were eaten without repugnance by the author and his family. Again, observations have been recently made by M. M. Grenaut, on both men and the lower animals, regarding the influence of injuries of the lungs on the exhalation of carbonic acid. They prove that the amount of this gas exhaled is less when such disorder exists, even where there is fever. Two explanations are conceivable: The pulmonary change might bar the elimination of carbonic acid, which, in that case, would accumulate in the blood, or the injury might have the effect of diminishing the production of carbonic acid, by affecting the general nutrition.

CARE OF THE TEETH.—The New York *Herald* correspondent with the party in search of the lost crew of the Jeannette, finds among the natives of northern Siberia the "most beautiful teeth in all the wide world." He says: "Three hundred versts from Yakutsk, I have seen old men of 60 and 70 with sets of teeth small and pearly white, and polished and healthy as those of the handsomest American girl of 16. Decay and suffering and unsightliness and loss are actually unknown. A physician of Yakutsk tells me that he believes the reason for this phenomenon is to be found in the habits and the kind of food eaten by the natives, as well as to a certain care taken by them from childhood up. In the first place, the Yakuts do not touch sugar in any form, for the simple reason that they cannot afford to purchase it. Secondly, they are in the habit of drinking daily large quantities of fermented sour milk, summer and winter, which is antiscorbutic and is very beneficial in preserving the teeth. And lastly, they have the habit of chewing a preparation of the resin of the fir tree, a piece of which, tasting like tar, they masticate after every meal, in order specially to clean the teeth and gums of particles of food that may remain after meals. The gum or resin is prepared and sold by all apothecaries in Siberia, and is much used by Russian ladies. The fermented milk is said to be a not very savory drink. First the milk is cooked and then put into a large vase-shaped vessel made of frozen cow's dung, in which it is allowed to ferment until the winter, when it is broken up into blocks and preserved for use in the cellars all the year round."

DOMESTIC ECONOMY.

PICKLES.—Be sure that your cucumbers are fresh, then for three mornings pour hot salt water over them; take one cup of salt to about six quarts of water; have it fresh each morning. The fourth morning heat some weak vinegar with small lumps of alum in it, and turn it over the cucumbers, allowing them to remain in it until the next day; then take them out of the vinegar, put them in stone jars or glass cans, pour over them cold vinegar of good strength, in which put plenty of white mustard seed, about in the proportion of one ounce of seed to one gallon of vinegar; put in also a lump of alum about the size of a butternut; lay fresh horseradish leaves over the cucumbers, cover closely, and set in the cellar. The pickles may be seasoned by putting in sliced onions, or small whole onions, green or red peppers, pieces of horseradish root, spices and brown sugar to taste.

CHEAP INSULATING MATERIAL.—It is thought that the demand for a cheap insulating material has been met by a discovery of a method by which wood, sawdust, cotton waste, paper pulp and other fibrous substances can be converted into a material perfectly impervious to moisture and acids, easily molded, under pressure, into any shape, and capable of being worked or cut into any form. This material is an excellent non-conductor of electricity, and can be used for all forms of battery cells, telegraph insulators, supports for electric-light leads, and telephone work. It affords the means of securing perfect insulation at a very much less cost than ebonite or gatta percha.

HULLED CORN.—Take three quarts of corn, three quarts of wood ashes, six quarts of water; boil the ashes in the water, and skim off the scum, which will rise to the top, then strain the lye and put into a clean kettle with the corn; boil until the skins break easily from the kernels, skim out the corn, rinse it thoroughly in several waters, the last time rubbing it; let it stand in cold water for 10 or 15 minutes, when you can rub off the black chits; rinse again, put back into kettle with clean water and boil till tender. Eat in milk and with sugar and cream.

TO COLOR OLD GOLD.—Any one who is piecing a silk quilt, or expecting to piece one, will be glad to know how to dye silk or satin a beautiful old-gold color. Take green horseradish leaves, steep them in water, make a strong dye. After dipping the silk or satin into the dye thoroughly, wash in soft-soap suds. Iron while damp, laying a cloth over the silk or ribbon. This should always be done when ironing silk or ribbon, even if it has not been washed, but simply sponged. Black silk may be sponged with cold coffee and ammonia.

QUICK PUFF PUDDING.—Stir one pint of flour, two teaspoonfuls of baking powder and a little salt into milk until very soft; place in a steamer some well-greased cups; put in each a spoonful of batter, then one of berries, steamed apples, or any sauce convenient, cover with another spoonful of batter and steam 20 minutes. This pudding is delicious made with fresh strawberries and eaten with a sauce made of two eggs, half a cup of butter and one cup of sugar, beaten thoroughly with a cup of boiling milk and one cup of strawberries.

MOLASSES PUDDING.—Four cupfuls of flour, six eggs, two and a half cupfuls of molasses, one and a half cupfuls of butter, or butter and lard mixed, one cupful of butter, or some cream, and a teaspoonful of soda. Season to your taste with cinnamon, ginger or cloves, and eat with hot boiled molasses as a sauce; or else cold molasses, prepared by adding a small pinch of soda, and stirring until it froths up well. It may be made more palatable by the addition of lemon or nutmeg as flavoring.

PERFECTION CAKE.—Three cups of sugar, one of butter, one of milk, three of flour, one of corn starch, whites of 12 eggs beaten to a stiff froth, two teaspoonfuls of cream tartar in the flour and one of soda in half the milk; dissolve the corn starch in the rest of the milk, and add it to the sugar and butter well beaten together; then the milk and soda and the flour and whites of eggs.

IRISH STEW.—Take a stewpan with a close cover and arrange in it, in layers, two pounds of mutton chops, four pounds of sliced potatoes, and one chopped onion. Add pepper to each layer, but no salt. Cover all with cold water and let it cook slowly for two hours. When nearly done add salt to suit the taste and boil a short time on the back of the range. Serve very hot.

HOW TO BOIL CUSTARD, ETC.—If you have not all the modern conveniences for boiling—that is, one pan to set within another—use a common iron kettle, put a stick across it, and hang a tin pail on the stick. In this way you can boil a custard or blanc-mange without danger of its burning.

FROTHED ORANGE CREAM.—Make a pint of cream very sweet; put it over the fire; let it just boil. Put the juice of a large orange, in which a bit of the peel has been previously steeped, into each glass (they must be narrow and deep, like jelly glasses); and when the cream is almost cold, pour from a teapot upon the juice, holding it as high as possible.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Twenty-four cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may be necessary to secure in the payment of any month's subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$3 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES. 1 week. 1 month. 3 mos. 12 mos.
Per line.....25 .80 \$2.20 \$ 5.00
Half inch (1 square).....\$1.50 \$3.00 10.00 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, August 12, 1882.

TABLE OF CONTENTS.

EDITORIALS—Topography and Rainfall; The Oil Palm of Africa; Rye Grass in Summer and Winter; Machine-Made Hay; Resisting Vines, 97. The Week; Cheese as Food, 104. Holstein Cattle; Lead Poisoning; A New Seed Tester; Recent Discoveries on the Planet Mars, 105. Patents and Inventions; Notices of Recent Patents; Our Rivers and Harbors; Mechanics' Institute Exhibition, 106.

ILLUSTRATIONS—The Oil Palm of Africa, 97. Telescopic Appearance of Mars—Are They Canals? Device for Seed Testing, 105.

CORRESPONDENCE—Steam Digging Machinery; Napa Notes; United Effort Against the Squirrels, 98. THE DAIRY—Lassen County Notes, 98.

HORTICULTURE—A Prophet on Apricots, 98.

FORESTRY—Forest Trees of California—No. 8, 98.

THE FIELD—The Question of Water Rights, 99.

POULTRY YARD—The Best Breeds, 99.

THE STABLE—Entries for the State Fair Races; Lameness of Horses, 99.

PATRONS OF HUSBANDRY—Grange Subjects for August; Interest and Labor; Harvest Feast at Stockton Grange; Grange Building at Port Costa; The Government and the Agricultural Industry, 100.

AGRICULTURAL NOTES, from the various counties of California, 100-101.

NEWS IN BRIEF—On Page 101 and other pages.

HOME CIRCLE—A Country Picture (Poetry); The Tables Turned; Wondering; A Visit to the Santa Cruz Mountains; Culture; Pioneers, 102. Concerning Comfortable People, 103.

YOUNG FOLKS COLUMN—Rock-a-Ey, Baby (Poetry); The Runaway Pancake, 103.

GOOD HEALTH—The Medicinal Value of Vegetables; Researches on Lung Diseases; Care of the Teeth, 103.

DOMESTIC ECONOMY—Pickles; Cheap Insulating Material; Hulled Corn; To Color Old Gold; Quick Puff Pudding; Molasses Pudding; Perfection Cake; Irish Stew; How to Boil Custard, Etc.; Frothed Orange Cream, 103.

QUERIES AND REPLIES—Durable Whitewashes; Budding with Twig Ends; Grapes and Olives; Non-Suckering Corn, 104.

ENTOMOLOGICAL—Work of the California Silk Culture Association; Retiring Pests; Cabbage Lice, 104.

Business Announcements.

Port Costa Warehouses, Geo. W. McNear, Prop'r.
Abel Stearns Ranches, A. Robinson, S. F.
Triple Irrigating Pump, F. W. Krogh & Co., S. F.
Agricultural Implements, Jackson & Truman, S. F.
Halls' Barley Crusher, Baker & Hamilton, S. F. and Sac.
Holstein Cattle, Smiths & Powell, Syracuse, N. Y.
Hardwood Lumber, Ship Timber, Etc., John Wignmore.
Self-Opening Automatic Gate, J. A. Alward, Livermore.
Bucks for Sale, Shoobert & Beale, S. F.
Averill Mixed Paint, O. S. Orrick, S. E.

The Week.

The week has been quiet at home and abroad, save on the Nile, where the British pressed forward after the rebellious Arabi Pasha, and dislodged him from his fortifications, with not a little carnage. As the situation now stands, the British are holding Alexandria, with the intention of going forward. De Lesseps is guarding the Suez canal, and is evidently in sympathy with Arabi and his party. The Sultan does not much like to have the English in Egypt, but cannot help it. The other powers are watching to get their share, if there should be a carving of Turkey. There is quite a possibility of more war and bloodshed.

The only event at the East has been the dissolution of Congress—the body seeming to have died of old age; as reports say, if the hours of meeting be counted, the last Congress has been

the longest since the organization of the Government.

In California, public affairs are almost suspiciously quiet. There is very little to indicate that we are on the verge of a complete revolution of State government, as there is to be a full Legislature and staff of State officers elected. No campaign is yet opened. In fact, but one party has made its nominations. Everyone seems well employed with his own affairs, whether it be gathering fruit, or thrashing grain, or passing the days in health hunting or recreation. Everyone has enough to do and enough to eat, and there is much strength being stored up for an unusually active season of seeding and planting, should the season favor the husbandman.

Cheese as Food.

I am sure that your cheese-making readers will be pleased to hear that the demand for cheese for consumption in America is gradually increasing. The working population of the manufacturing towns and cities is evidently appreciating cheese as an article of food much more than formerly, and at some of the factories which I have visited I find that special orders have been received for a regular supply of what are known in the trade as "soft cheeses" for the Western and Southern States. To meet this demand, and encourage as much as possible the home trade, I find the managers of cheese factories not only willing but anxious to meet the wishes of their customers. This shipping of a portion of the products of the dairy States West and South, instead of the whole being sent to Europe as formerly, is evidently giving a healthy tone to the market, and keeping the price of cheese somewhat higher than it would be but for this competition. —New York Correspondence London Agricultural Gazette.

It is, of course, pleasant news to English cheese makers that Americans are learning to eat up more of their own cheese, for there will be less to ship to Great Britain, and the home makers may expect to get better prices for their product. At present there is the sharpest competition between English and American dairies, and the immense quantities sent from our side of the water makes cheese rather a cheap article in the British markets.

Aside from this prime significance in the announcement above, there are other points worthy of emphasis. The elevation of meat prices in this country is driving the people to the consumption of cheese. Thus here, as in England, cheese is becoming a substitute for the sustaining food which the laborer usually has found in meat. In England this substitution has long prevailed, and meat has been the luxury and cheese the mainstay. The English worker, with his slab of cheese, half loaf of bread and pot of beer, has found himself nourished for the hardest labor.

As meat advances in this country, and there seems every reason now for an era of high rates, the consumption of cheese will increase. Cheese is a good substitute. It is shown, by both analysis and practical use, to contain the elements required in a strong food such as the muscular laborer requires. In his late work, "Dairy Farming," Prof. Sheldon writes: "Pound for pound, cheese contains more nutriment than butchers' meat, and it may, to advantage, be used instead of it, and especially so, as they may both be called 'animal food.' Flesh is, of course, more nearly than cheese a perfect food, though less so than milk. If it were possible that there should be no waste of food in the animal economy, a pound of flesh would produce a pound of flesh on him who ate it. More than this it could not do; but a pound of cheese being stronger and more concentrated, would produce, by simply absorbing water, more than a pound of flesh. It is, consequently, even if they are the same price in the market, the cheaper of the two; for, still further than flesh, it adds to the value of less nutritious kinds of food with which it may be consumed. The following statement of percentages will illustrate our meaning more clearly:

	Flesh	Fat
	Formers.	Formers.
One pound of cheese.....	24.0	31.0
One-half pound of bread.....	5.9	37.0
	29.9	68.0
Two pounds of flesh-meat.....	28.5	69.3

"It will be seen that the pound of cheese and the half-pound of bread are actually richer in both flesh and fat formers than the two pounds of flesh-meat are, whilst the proportions of those substances are in better combination in the former than in the latter."

It must be borne in mind, in reducing these points to practice, that cheese is a hearty food, and only strong digestive organs are fit to care for it properly. It may be the friend of the vigorous outdoor laborer, while it might make the man of weaker organs or of sedentary habits a despondent dyspeptic. It should also be observed that the proper cheese to eat is well-cured and full-milk cheese. The hard "skims," with the casein not properly broken down by the curing process, is a much more severe trial for the digestive apparatus. We can confidently advise those whose natures are fitted for it to make trials of good cheese as a substitute for meat, and we are quite sure they will find it agreeable and satisfactory in results. All food changes should be made with circumspection, and, as a rule, gradually. It cannot be doubted that the American people, especially the laboring classes, can with profit and advantage introduce good cheese more as an article of diet than they have hitherto. The use of a square inch of cheese with a quarter section of pie is a burlesque upon cheese as a food material.

DURING the late hot spell East, Bostonians were compelled to carry umbrellas to protect themselves from the rays of the sun, a thing which the Boston Traveler says they had never done before.

QUERIES AND REPLIES.

Durable Whitewashes.

EDITORS PRESS:—Will you kindly print, in your next issue, a recipe for whitewash suitable for barns and fences, and one which will not wash off?—C. W. NORTON, San Jose.

We cheerfully comply, for, though we have frequently printed such recipes, it will be well to present them again, in the hope that many will be led to ply the brush for the neatness and preservation of their fences and outbuildings. Nothing will beautify and freshen up a rural homestead with so little money and trouble as a coat of durable whitewash, and, when one is mixing, it is so easy to make one which will be reasonably enduring, that labor should not be expended on that which soon presents a sorry appearance.

Good whitewash, well applied to fences, rough siding, and the walls and ceilings of buildings, has a highly sanitary influence, as well as being in the highest degree preservative in its effects. To be durable, whitewash may be prepared in the following manner: Take the very best stone-lime and slack it in a close tub, covered with a cloth to preserve the steam. Salt (as much as can be dissolved in the water used for slacking and reducing the lime) should be applied, and the whole mass carefully strained and thickened with a small quantity of sand, the purer and finer the better. A few pounds of wheat flour mixed as paste may be added, and will give greater durability to the mass, especially when applied to the exterior surface of buildings. With pure lime, properly slacked and mixed with twice its weight of fine sand and sifted woodashes, in equal proportions, almost any color may be made by the addition of pigments. Granite, slate, freestone and other shades may be imitated, and without any detriment to the durability of the wash. This covering is very often applied, and with good effect, to under-pinning, stone fences, roofs and the walls of barns and other outbuildings.

Good lime, slacked with sour milk, and diluted with water till it is about the consistency of ordinary whitewash, is recommended by the *Landwirth* as an excellent coating for woodwork. Fences, rafters, partitions, etc., are effectually protected against the weather for at least 10 years by this application. The casein of the milk, in combination with the lime, forms a permanent film, which dries so quickly in warm weather that heavy rains, falling directly after it has been laid on, will scarcely affect the work.

Budding with Twig Ends.

EDITORS PRESS:—I place at your disposal this report of my experiments with what is to me a new process of fruit propagation: Three years ago, I set a twig of peach upon a plum stock, in a manner similar to the common way of budding, yet differing in some particulars. Instead of cutting a slip of bark with a dormant bud on it, to insert under the bark of the stock, I took about one and a half inches of the end of a twig, at the point of which young leaves were just forming, trimmed off all other leaves, set the knife three-eighths of an inch from the leaf end, and carefully sloped it to a point at the other. This I inserted under the bark of the stock, and wrapped as in common budding, handling the tender point of the twig very carefully. It made a vigorous growth, and is now a bearing tree. About the 15th of July, of the present year, I repeated the experiment on about a dozen plum suckers of thrifty growth. About two-thirds of the twigs are growing finely, the balance yet doubtful. Perhaps the twigs would have done better if set a month later. Shall continue experiments through August. You will observe that this process is a gain of one year's time in growth, compared with dormant buds. —MARTIN WILCOX, Reservation Paskenta, Cal.

Grapes and Olives.

EDITORS PRESS:—Will you kindly inform a reader why it is that no grapes, such as Catawba, Concord, Delaware and other Eastern varieties, are cultivated in California? Is it possible to raise them here, and would they not prove a profitable market commodity? How shall I propagate the olive from cuttings, and at what season of the year?—C. W. D., Oakland, Cal.

The Eastern grapes which our correspondent names, and many others, are grown in California to some extent, with greater or less success. The *vinifera*, or European grapes, succeed so well in our climate and are so excellent that, naturally enough, they are given their great prominence. The *vinifera*, as a rule, takes kindly to the short pruning system which prevails here. To grow the Eastern varieties, trellises or high stakes are needed. There are some varieties, chiefly the Isabella and Catawba, grown for the market. A certain quantity of them sells well, but the demand is for the European varieties.

In making olive cuttings, use old wood, and a thick cutting of it. Bundles of olive cuttings look like faggots of firewood. The cuttings should be inserted while the ground is moist with the winter rains. The olive grows readily from cuttings, although sometimes rather slow about starting.

Non-Suckering Corn.

EDITORS PRESS:—Please let me know if you know of a kind of corn that does not sucker. This is a good place to raise corn, but it suckers too much. If you know of a kind, let me know the name of it?—JAMES DOWNING, Hanford, Cal.

Who will answer?

ENTOMOLOGICAL.

Work of the California Silk Culture Association.

Prof. C. V. Riley, the Government Entomologist has written as follows to Mrs. Hittall, Secretary of the California Silk Culture Association: I have received your favor of the 4th inst., and the 1st annual report of your association, and am much pleased to witness your labors and success. With your principle to spread silk culture broadly and to confine it to a small undertaking in each individual case, you cannot fail to attain success, and benefit your fellow-citizens and your State immensely. Silk culture should receive public as well as private encouragement. I have advocated the establishment of a filature, under the auspices of this Department, that a sure market may be established for the cocoons that are to be produced. With such a market open, great quantities of silk would be produced, and that once accomplished, the supply could be diverted into private channels, whereby a business of silk reeling would be fairly created in this country. If protective tariffs are maintained upon any ground, no more justifiable field for their application exists than one like that of silk culture, where the benefits would accrue to the less wealthy individuals in the country, who are to be the growers of silk, and the enhanced cost of the products, if there is any enhanced cost, will be paid by the wealthy individuals, the consumers. Those who uphold the tariff for its encouragement of home industry, and those who condemn it for its laying a burden on the poor can unite in sustaining a protecting care over the production of raw silk. There can be little question of injury to the manufacturer, for he sells in an easy market; moreover, it is certain that the business of silk manufacture would prosper on a smaller margin of profit than it now possesses.

Retiring Pests.

EDITORS PRESS:—A friend gives me an item that is altogether too good to keep, and almost too good to be true. He says: "Some apple trees near Gilroy that were covered with the scale bug last year, show none this year, although nothing has been applied to them to kill the pest. The bug seems to have left as it came, 'on its own hook.' If that greater curse, the codlin moth, will follow suit, we can indulge in several days of jubilee. One of my good neighbors, Mr. Young, showed me some fine apricot trees that last year were damaged in limb and fruit by the scale bug. This year they show no sign, although no wash was applied to them. Many of the apple and prune trees were nearly 'sprayed' to the death of both bugs and trees. —C. A. W., San Jose, Cal.

Cabbage Lice.

EDITORS PRESS:—I wish to know what will kill the lice on cabbage; they are a great pest and cause a great loss. Any person that will tell us how to get rid of them will do us a great favor in this vicinity. —JAMES HODGE, Rohnerville, Cal.

Shower the plants with soap suds, and follow with clear water after a few hours.

Port Costa as a Shipping Point.

An engraving on page 109 gives a view of Port Costa, on Carquinez straits, which has become one of the great shipping points for California wheat. The situation is admirably adapted to the wheat traffic, and it has been greatly to the advantage of the wheat growers that warehousing and shipping have been done there. A saving of 50 cents per ton railroad freight has been effected. Barges bringing down grain from the interior rivers have been saved from the encounter with the rough waters of the bay, which always occasioned large losses.

The popularity of Port Costa is shown by the fact that 84 ships loaded there in 1880-81, the first year the establishment was opened, and the number was more than doubled during the second year. During the month of July last, out of 32 ships cleared from all points around San Francisco bay, 22 were loaded at McNear's wharves at Port Costa. Thus it appears that Port Costa sprang at once into a leading place as a shipping point, and justified the confidence in its location manifested by Mr. G. W. McNear when he chose it as the site for his warehouses.

The advantage of getting grain into warehouse early is often very marked. The early shipper has plenty of cars at his command, while those who procrastinate are often caught by the early rains, unable to get carriage for their grain because of the mass presented to the railways at the same time.

EXTRA COPIES.—We are sending out a large number of extra copies of this week's paper to persons whom we think may be interested in the subjects usually treated in the *RURAL PRESS*. Our paper is conceded the leading place in the publication of matters pertaining to the varied agriculture of the Pacific coast, and is the medium of communication between producers. We are anxious to extend the circle of our readers, for we find that as our subscription list increases, we are able to draw upon a larger fund of practical experience. We ask you to give us the support of your patronage and the results of your observation on all subjects connected with Pacific coast agriculture.

Holstein Cattle.

It cannot be doubted that the California dairymen are not giving as much attention to the Holland cattle as their merit deserves. There are a few being bred, and their owners are well pleased with their milking qualities. They are splendid, large animals, with a great capacity for manufacturing food into milk, and that is just what the large dairyman needs above all things. The Holland cattle have been bred for a century by the famous dairymen of the low country with a special view of developing their secretive function, and the result is a yield of milk which we believe no other breed of cattle has attained. There should be far more attention paid to the Holstein dairymen, especially on our cheese-making ranges. There are various breeds, which have various adaptations. These characteristics are not so clearly defined but that they verge into each other somewhat—enough to give the friends of each good breed something to rest their claims upon. Without, then, casting any reflections upon other breeds, we would call general attention to the Holsteins as splendidly adapted to level or rolling lands, and to make excellent use of the rich feed which the best of such lands afford. The size of the Holstein, which adapts the Holstein to a comparatively flat country is a decided advantage to the owners of such lands, because the capacity of the animals, which requires size, makes them most liberal milk producers. The ranches in the coast valleys, from north to south, would do well to consider the Holstein. In the moist lands, which yield such immense quantities of cow feed, in alfalfa, squashes and the like, the Holstein should certainly be given due consideration, as well as the other dairy breeds.

Concerning the dairy quality of the Holsteins, there is now much American testimony, because the cows are now well distributed throughout the Eastern dairy districts. The last volume of the Holstein Herd Book, lately received, gives an account of Illinois experience with these cattle, which contains some points which we have never seen recorded before. The statement is made by I. E. Grant, a cheese and butter factory owner, who apparently was led to make tests to determine what kind of cows furnished the best milk to his factory. He says:

The dairies in this locality are composed of mixed grades and natives, the grades being chiefly of Short Horn, Ayrshire and Jersey crosses; and, comparing them with dairies in the vicinity of my other factories, farther north in the county, I think them fully up to the average. Having the milk of a large herd of full-blood Holsteins, among that of other patrons, I determined some time ago to institute a careful comparison of the Holstein milk with that of other dairies. We have noticed all summer that our testers (cream gauges) showed in favor of the Holstein milk, and therefore were prepared for the favorable showing in the recent experiments. I set the milk of Holstein cows (about 50 head) by itself, and in precisely the same manner as the other milk, the cream churned separately, and the cheese also made by itself, and all in the same way, as I wished, for my own satisfaction, to make the trial strictly impartial. From 100 lbs. of Holstein milk I averaged 4 1/16 lbs. of butter and 7.47 lbs. of cheese. The butter was very firm and No. 1 in all respects, and the cheese of very superior quality. From my other milk I averaged 3 lbs. of butter and 7 lbs. of cheese per 100 lbs. of milk. The Holstein milk produced 14% cream, and the other 11% to 12%. The Holstein milk is drawn three miles, and the other ranging from half a mile to four miles. In both cases the night and morning milk were mixed and reset, and, of course, we could not gain as favorable results from either as we could have done if we had had the milk fresh from the cows; and I think that treatment operated more against the Holstein milk than against the other, for the reason that the Holstein milk is more dense than the other, and hence the cream would not again separate so readily; but this peculiarity in the Holstein milk is offset by another which I have noticed particularly—it is that it is the best keeping milk I ever handled, therefore it can be held longer, a fact that ought to operate in its favor for marketing.

Concerning the large yield of milk by Holstein cows our readers must be well informed, for we have published several records, for the season, of cows owned by Smiths & Powell, of Syracuse, N. Y. We may, at another time, review these statements and present other data.

The Yreka Journal says the amount of mail carried by the California and Oregon stages at present is enormous. Extra stages are run to relieve the pressure. The stages going north carry every trip 4,500 to 5,000 lbs., in addition to passengers, express and baggage, the mail having the precedence of everything. There never has been such an extensive quantity of mail since the old California Stage Co.'s days.

TWENTY victims of the toy pistol are in a dying condition at Chicago from lockjaw.

Lead Poisoning.

Few people, with the exception of those who are brought into immediate contact with the metal, by reason of their employment in base metal mines, smelting furnaces or painters' materials, have any idea of the horrors or results of lead poisoning. It is not alone the immediate danger to life, nor the pain and debility produced by this disease which are its most unpleasant features. Probably the most awful result to be contemplated by those unfortunates whose blood has been impregnated with this poison is, that the disease is inherited by their children, in the same manner as some others of the most terrible diseases known to the human race. It is still a mooted question whether the poison remains in the system of children so inheriting; but the fact remains, that the children born of parents who are so poisoned, come into the world covered with boils and ulcers, and in many cases die immediately after birth; and the burden of proof goes to show that the poison remains in the blood indefinitely, appearing on the surface in the form of eruptions, periodically.

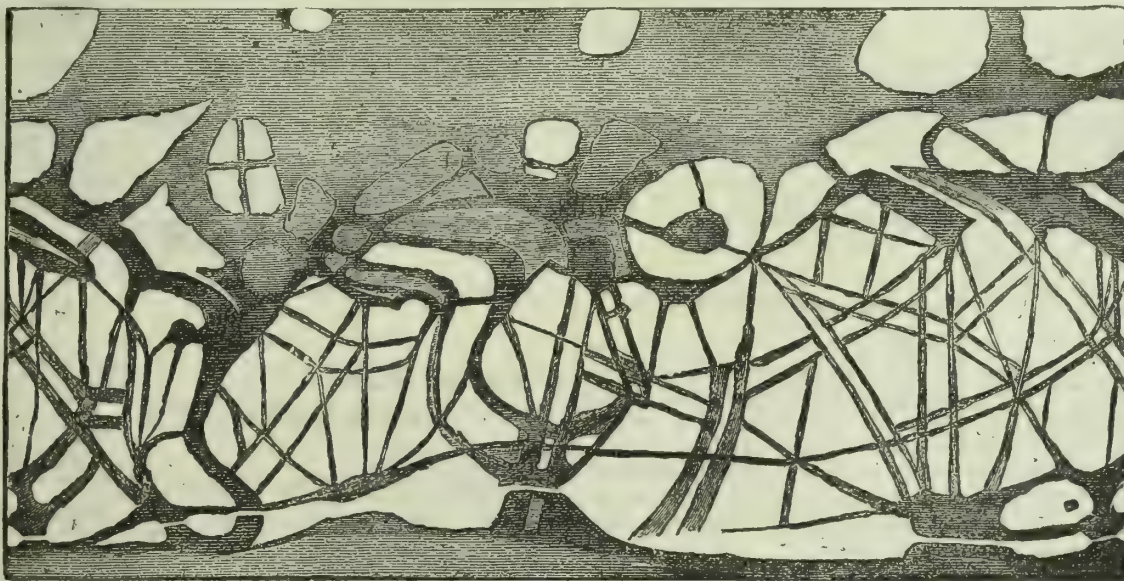
The first symptom of lead poisoning is a severe colic, followed by debility, and a whitening of the skin. Other symptoms of the presence of lead poison in the blood are dizziness in the morning, with failing sight, and an increasing deafness, very much the same symptoms as appear when the liver is out of order. Persons suffering from this poison are very liable to have the slightest cold turn into pneumonia, as it weakens the lungs, and leaves them an easy prey to that terrible disease.

When persons are attacked very severely by lead poisoning they of course take it in hand, and by the use of a milk diet, and bathing in

or the law-makers in this country, and some people even consider it is time a law was passed prohibiting the use of solder in putting up canned goods.

A New Seed Tester.

Those who are dealing in seeds or are using them on a large scale need to know the germinating power of the material which is offered them in the market. Sowing experimental lots in the greenhouse or hot bed usually takes too much time in demonstrating results. We give on this page an engraving of a little apparatus put forward by Therburn & Titus, of 158 Chambers street, New York, which is claimed to tell the story in the vitality of seeds in about 30 hours, although some hard seeds may require two days' time. It is, of course, a device for bringing the two requisites—heat and moisture—to bear upon the seeds so as to hasten their exhibition of life. The apparatus consists of a square box, which is filled with water to within a quarter of an inch of a perforated cover. Upon this perforated cover cloth pieces are laid, so that projecting points pass through the perforations in the cover and hang in the water below, thus drawing up the water by capillary attraction and keeping the cloth moist. The seeds are placed upon this cloth and pressed down, so that they will adhere, and then they are covered with the bell glasses seen in the picture. At the right may be seen the lamp and other arrangements for keeping the water warm—from 90° to 110° being the requisite temperature. In summer time the exposure of the machine to the sunlight carries on the operation without the aid of the lamp. For ordinary seeds the exposure upon the damp cloth is said



TELESCOPIC APPEARANCE OF MARS—ARE THEY CANALS?

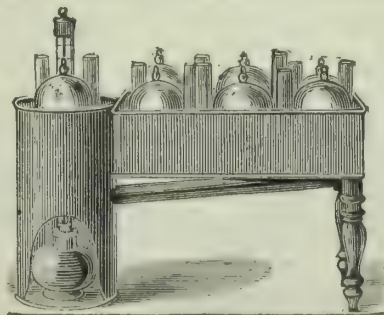
and drinking mineral water which is strongly impregnated with sulphur and carbolic acid gas, and by a general tonic treatment, they eliminate the poison from the system; but where the attack is slight, in many cases, very little attention is paid to it, and, in time, it becomes chronic, and results in years of misery, which is attributed to any other than the right cause. Of course, the poisoning very often proves fatal, but we are merely dealing now with the ills that accrue to the living. It is much easier than is popularly supposed to be placed in danger of lead poisoning. It is not necessary to work in lead mines, over smelting furnaces, or in mixing the paint known as white lead, to contract this disease. The fumes coming from the chimneys of smelting furnaces, breathed by persons on the street, are liable to cause lead poisoning; the drinking of water which has lain in lead pipe for a short time, salts of lead produced from the lead lining of tea chests, where moisture reaches the tea; and, in fact, in every article of consumption which is brought into contact with lead, in any way, where there is the least fermentation or moisture, there is great danger of lead poisoning.

In Germany a movement is on foot looking to the passing of a law prohibiting the importation of tea in lead-lined boxes, and this brings us to a danger which is little appreciated—the danger of lead-poisoning from drinking tea which has been imported in lead-lined boxes. The lead is used to preserve the flavor and aroma of the tea, which would be lost were the air allowed to reach it, but while it has the desired effect of preserving the flavor and aroma, it creates a danger of lead-poisoning; and it is a thing to be noticed, in this connection, that women, who are the principal tea drinkers, suffer very much from symptoms such as would be produced by lead poison, such as colic, debility, swimming in the head and a whitening of the skin.

Many merchants in America, being aware of the danger of so lining tea boxes have substituted tin for the lead, and where these tea cans can be put together without the use of solder, they would have the effect of holding the flavor and aroma of the tea, without the danger which comes from the use of lead.

This matter of lead poisoning has not received sufficient attention from either the people

to be all the preparation that is required, but for smaller kinds a clay saucer with cloth inside (both wet before using) is placed on top of the larger cloth, with the glass cover on as before. For the very smallest seeds the glass tubes must be used with a stopper of loose cotton in both ends, the seeds being placed inside on the lower stopper, and the tube inserted in the projecting tubes of the tester shown in the engraving. The cotton in both ends of the glass tubes should be dampened. This is neces-



Device for Seed Testing.

sary, in order that delicate seeds may not be injured by too much moisture.

ALTERATION IN FLOUR THROUGH THE ACTION OF THE SUN.—It frequently happens that wheat or rye flour, in spite of the greatest care in baking, yields an inferior loaf, and the failure is commonly attributed to adulteration; but when submitted to investigation neither microscopic nor chemical tests reveal any adulteration. Such flour is returned to the miller or dealer as unfit for use. The miller says the flour was injured by the heating of the stones, and the dealer attributes the defect to the circumstance that the sun must have shone upon the sacks during transportation. It has been proved by numerous experiments that flour cannot bear the action of the sun, even when not exposed directly to its rays. When flour is exposed to the heat of the sun an alteration takes place in the gluten similar to that produced by the heating of the stones. For this reason it is advisable that the transportation of flour should take place,

Recent Discoveries on the Planet Mars.

A curious discovery has recently been made by Sen. Schiaparelli, Director of the Royal Observatory at Milan, which may well start anew the old question, "Are the planets inhabited?" This Italian astronomer has long been known as a most constant watcher of the planet Mars. In 1877-8 he detected a number of dusky bands which traverse what appears to be a region of dry land, comprising a wide equatorial belt around that planet and separating its northern and southern oceans, as shown upon the accompanying diagram. The next year, when the planet once more came to a position favorable for observation, he again identified the same appearances.

But his most remarkable discoveries were made during the months of January and February last, when, under peculiarly favorable conditions, he noticed that these lines, or "canals," as they are now called, began to become duplicated, as though the inhabitants of that ruddy planet had suddenly become possessed with a mania for internal improvement in the way of new and duplicate water ways. Several of these new canals seemed to unfold themselves immediately under the observer's eye, as he watched them from night to night.

Pending a more elaborate and detailed memoir of this remarkable discovery, the professor has published a short paper upon this interesting subject, which he recently read before the *Accademia dei Lincei*. The accompanying diagram was originally prepared for *Nature*, and has been taken from a photograph which accompanied the paper, and hence may be considered substantially correct, even in detail.

A discussion which recently took place in the British Astronomical Society, as published in *Nature*, substantiates strongly, by independent evidence, the existence of these peculiar appearances upon our neighbor planet. It was suggested that some differences of opinion might be entertained in regard to them, but not as to the fact of their existence. It is stated that the atmosphere of Mars was peculiarly favorable for observations while they were in progress.

The statement is also made that some other remarkable changes have been noted, particularly a progressive enlargement of the "Kaiser sea" and the brightening of certain supposed large islands toward the northern and southern poles of the planet, as shown in the diagram. Much interest is attached to these remarkable discoveries, and expectations are indulged in of discoveries of still further importance, not only from the extraordinary talent and diligence of the distinguished professor at Milan, with his present instruments, but more especially by aid of the much larger telescope, with which rumor says that observatory is soon to be provided. It is to be hoped that no time will be lost by the Lick trustees in getting ready our own promised "largest telescope in the world" at Mt. Hamilton, from which, aided by the pure atmosphere of California and the great elevation of that observatory, it may reasonably be expected further and still more important discoveries may be made, not only in regard to the physical condition of this peculiarly interesting planet, but also in relation to that of the moon and many other astronomical objects.

PUTTING UP APRICOTS.—Our exchanges located in the canning towns of the interior show clearly that there has been intense activity in apricot canning this year. The *Los Angeles Times* says the Southern California cannery, in that city, has put up more than 60,000 cans of apricots and over 400 gallons of apricot jam. The Riverside and Colton canneries have been running in full force, and we suppose the Santa Barbara institution has not been idle. According to the *Mercury*, the San Jose canneries reached an average of 30,000 cans per day during the height of the apricot season. There has also been much done in apricot drying. In the Upper Ojai valley, Ventura county, apricot drying gave full occupation to the two driers already built, which will turn out a superior quality of fruit. Other localities are still to be heard from. The Fresno Packing Co. lately advertised for 50 more women to work in their cannery. They were employing about 70 hands and are working over hours, but could not handle fruit as fast as it came in.

ANOTHER APPLICATION OF ELECTRICITY.—The call for an electrical sheep shearer, made some time since by a New Zealand gentleman, and copied into these columns, has brought forth fruit as follows: The head of the Hudson Bay Fur Co., of England, who, by the way, is a Vermonter, has announced that he has applied electricity to the trimming of seal skins. The skin is drawn over a knife-edge bar, above which is stretched a fine platinum wire, which, raised to a white heat by an electric current, meets the larger hairs which rise above the under fur, and mows them down.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 262 Market St. S. F.

FOR THE WEEK ENDING JULY 17, 1882.

261,437.—BRASS AND STEEL RAIL STREET CARS—R. F. Bridwell, S. F.
261,206.—BALANCE SLIDE VALVES—John B. Conrad, Portland, Oregon.
261,144.—DEVICE FOR REMOVING SNOW AND ICE FROM RAILS AND CONTIGUOUS TO RAILWAY TRACKS—L. D. Craig, R. F. 261,332.—CHAIR BRACE—John A. Gallagher, Chinese Camp, Cal.
261,349.—WATCH OIL—AND HOLDER—F. Goodolph, Portland, Oregon.
261,156.—SOAP TABLET—W. J. Houston, S. F.
261,439.—SHOE—Loo Chu Fan, S. F.
261,141.—KNOWLEDGE MEANS OF AMERICA—R. H. Lucas, S. F. (re-issue).
261,306.—SOLDERING MACHINE—A. Lusk, S. F.
261,372.—TWO-WHEELED VEHICLE—D. R. McLennan, St. Helena, Cal.
261,248.—CARPET SEWING MACHINE—A. Neustadt, S. F.
261,256.—VEHICLE BRAKE—R. M. Quackenbush, Santa Rosa, Cal.
261,386.—SULKY HARROW—John W. Rush, Stockton, Cal.
261,405.—PRESERVING PILES—William Taggart, S. F.
261,182.—GANG PLOW—Edward Topham, Milpitas, Cal.
261,370.—RAILWAY TRAIN TELEGRAPH—Charles F. McGowan, Santa Barbara, Cal.

FOR THE WEEK ENDING JULY 25, 1882.

261,404.—GRAIN CRANING APPARATUS—T. S. Bayley, Ukiah, Cal.
261,667.—MAGAZINE FIRE ARM—J. M. & M. S. Browning, Ogden, U. T.
261,672.—SANITARY STEAMING STOVE—H. Cartwright, Portland, Oregon.
261,700.—DIRECT-acting STEAM PUMP—John Gates, Portland, Oregon.
261,744.—CARRIAGE BRAKE—Angus McKellar, Fort Douglas, U. T.
261,759.—DIRT SCRAPER—Jas Porteous, Fresno, Cal.
261,773.—BLIND BRIDLE—Joseph C. Simpson, Oakland, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through DEWEY & CO.'S SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

LEATHER CREASER.—Charles H. Corey, San Jose, No. 260,847. Dated July 11, 1882. In the ordinary construction of machines for creasing and ornamenting tugs and straps for harness and other leatherwork, two flanged rollers are employed having the creasing ridges formed upon their peripheries. These rollers are geared to run together so that the ridges will exactly correspond upon each side and the flanges upon their sides guide the leather as it passes through. In its progress between these rollers, however, the leather becomes stretched or elongated, so that the ridges would not follow the same marks if the leather were again put through the rollers. Consequently the creasing must be completed at one operation, and if it is imperfect in any part, it can only be remedied by hand. The machine under consideration is designed to hold the leather so that a single creasing roller without flanges may be passed over it any number of times and the ridges upon the rollers follow the indentations exactly. The creasing roller has suitably shaped creasing ridges formed on its surface. The shaft of the roller runs in a frame, which moves above a table or bench having an adjustable channel in which the leather to be operated on lies, and by which it is prevented from stretching, so that the creaser may be passed over it a number of times and follow the original marks.

HEADER.—M. N. Laufenberg, assignor to Baker & Hamilton, S. F. No. 260,882. Dated July 11, 1882. This invention in headers consists in a means for balancing the machine so that the weight of the elevator spout will assist in raising and depressing the lever by which the sickle is adjusted to the proper height. In the ordinary header the bearing wheels support a frame, the front of which carries the sickle bar and carrying belt for the cut grain, while the elevator spout is hinged at one end of the front portion. The pole to which the team is harnessed is hinged to the rear of the frame, and a lever secured to the front of the frame extends back above the pole so as to be within easy reach of the driver, in the usual manner of constructing these machines. When at work, however, the strain is so great that it is almost impossible to move the lever when it is desired to raise the sickle, on account of the weight of the forward part of the machine and the overhanging spout. This invention is intended to equalize this weight by so connecting the rope which suspends the spout with the frame and tongue that the weight of the spout counterbalances the pressure upon the lever.

SHOE.—Loo Chew Fan, S. F. No. 261,439. Dated July 18, 1882. This improvement in shoes consists in the formation of the uppers in a single piece each, their edges coming together in front without overlapping. The tongue extends down inside the butt seam, and an ornamental tip extends up over the outside, both being stitched in place, so that an easy fit for the foot is made at that point.

Our Rivers and Harbors.

This coast fares better than it ever did before in the river and harbor appropriations. The total amount of money appropriated by the bill is \$18,743,875, of which the Pacific coast gets \$1,156,500, as follows:

Petaluma creek, California, completing improvement. \$14,000
Sacramento river, California. 250,000
San Joaquin river and Mokelumne, California. 400,000
Constructing canal around cascades of Columbia river, Oregon. 265,000
Upper Columbia river, Oregon. 6,000
Lower Willamette and Columbia rivers, from Portland, Oregon, to the sea, including bar at mouth of Columbia river. 100,000
Upper Willamette river. 5,000
Lower Clearwater river, Idaho. 5,000
Cowlitz river, Washington Territory. 1,000
Chehalis river, Washington Territory. 3,000
Improving Siletzquahish, Nootack, Snohomish and Snoqualmie rivers, Washington Territory, to build, equip and operate snag-boat for one year. 20,000
Improving mouth of Coquille river, Oregon. 10,000
For expenses of a Board of Engineers to examine in detail the mouth of the Columbia river, Oregon. 7,000
Humboldt harbor and bay, California. 40,000
Harbor at Oakland. 200,000
Improving harbor at Wilmington, California. 100,000
Improving entrance to Coos bay and harbor, Oregon. 80,000
Improving entrance to Yaquina bay, Oregon. 60,000

California receives of this the sum of \$644,000. The bill, which was vetoed by the President, was afterwards passed over the veto, so it is now a law.

These appropriations are of great interest to the engineering fraternity, for employment will be given to a great many engineers in carrying out the works for which the money is given.

In the immediate vicinity of San Francisco, the Oakland harbor and the Sacramento river appropriations, are the most important, and the largest. Oakland harbor has now on hand, left over from the last appropriation, \$75,000; so this makes a total of \$275,000 for the work there. It is understood that a main part of this will be expended in dredging. The training walls are nearly finished. As soon as the litigation is ended work will be commenced on the canal to connect Oakland harbor with the Alameda basin. Then the depth will be maintained in the channel.

There is a great deal of engineering work to be done on the Sacramento river. All these works are carried out under the supervision of the U. S. engineer officers.

Mechanics' Institute Exhibition.

The annual industrial exhibition, under the auspices of the Mechanics' Institute, of this city, will open on the 15th inst. Mr. Culver, the Secretary, informs us, on inquiry, that it is expected the forthcoming exposition will excel any which has taken place. He says that already they are experiencing difficulties in a lotting space, owing to the numerous demands of intending exhibitors.

These annually recurring fairs have been of great usefulness to this city. They have directed the attention of our citizens and people of the interior to the home manufactures which have been established among us, and encouraged them to purchase the home-made in preference to the imported article.

The exhibitors have an opportunity of displaying before their customers the things they make in this city for sale, and these exhibitions are therefore first rate from an advertising point of view.

We are glad to know that this time the advantages were so well appreciated that no difficulty was found in having all the space properly filled. The new building is a fine, large one, and will be opened with suitable ceremonies.

It is better arranged than the old one was; the displays will be in more compact form. Mr. Culver says there will be many novelties this year.

If there are any who have neglected to apply for space, it will be well for them to see about the matter at once. It is probable that the building will be pretty well crowded.

Volunteer Testimonials

SAN LUIS OBISPO, CAL., Aug. 9, 1880.

The undersigned Committee, appointed by San Luis Obispo Grange, P. of H., No. 28, have used the Squirrel and Gopher Poison prepared by A. R. Booth, at the Eagle Drug Store, San Luis Obispo, during the growing season, when there was plenty of green things for squirrels and gophers to live upon, and we find that they take the Poison, above described, at this season of the year, and that the effect is as destructive as could be wished; and it is the cheapest and best Squirrel and Gopher Poison with which we are acquainted, or ever experimented with.

Attest: E. W. STEELE, } Com.
A. T. MASON, }
F. F. WHITE, }
Sec'y P. of H., No. 28. L. M. WARDEN, }

EMMET, CAL., Nov. 23, 1880.

A. R. BOOTH:—I gave your Squirrel Poison a fair trial, and gave some to my neighbors. We find it as good as recommended, and are satisfied it is the best we have ever used. There will be no trouble in selling it in this county.

HUGH MATTHEWS.

CALIFORNIA'S Exposition.

The Twenty-ninth

Annual State Fair

Begins at

SACRAMENTO, CAL

On the 11th, and ends on the 16th of September.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

LIVE STOCK, MACHINERY, IMPLEMENTS, ETC., TEXTILE FABRICS, MECHANICAL, AGRICULTURAL, HORTICULTURAL PRODUCTS, and FINE ARTS, ETC.

Any further information may be had upon application to the Secretary, from whom Premium Lists may be procured.

HUGH M. LARUE, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacramento, Cal.

UNUSUAL ATTRACTIONS!

\$13,000 Gold Coin in Purses!

THE LARGEST PURSES OFFERED IN THE STATE.

STOCKTON FAIR!

Sept. 19th to 23rd, inclusive.

Also, UNRIVALED DISPLAY OF

LIVE STOCK, FARM PRODUCTS, AND Agricultural Machinery.

L. C. SHIPPEE, President. J. L. PHELPS, Secretary.
P. O. Box 133 Stockton, Cal.

SEVENTEENTH

Industrial Exhibition

OF THE

MECHANICS' INSTITUTE

Will open to the public on

Tuesday, August 15th, 1882,

AT THE

NEW PAVILION,

Larkin, Hayer, Polk and Grove Sts.,

AND CONTINUE UNTIL SEPTEMBER 16.

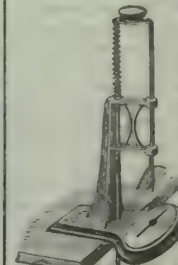
PREMIUMS of Gold, Silver and Bronze Medals, Diplomas and Cash, will be awarded to meritorious exhibits in Art, Manufactures and Natural Products.

Full information will be given or sent by applying at the office, 27 Post street.

P. B. CORNWALL, Pres't. J. H. CULVER, Sec'y
J. H. GILMORE, Supt.

Excelsior Fruit Pitter.

Invented by A. Donatella.



This machine recommends itself by the following good qualities:

Rapidity of work, and operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the riddle for the Drier. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Prunes, Apricots or Nectarines pitted with this machine dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address, A. DONATELLA, Healdsburg, Cal.

WIESTER & CO., General Agents, 17 New Montgomery Street, San Francisco.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

THE ONLY TRUE

"RICHARDSON."

If you wish to get the only true "Richardson" and there is only one, be particular to order by the whole title:

Richardson's New Method

FOR THE

PIANO-FORTE.

By NATAN RICHARDSON.

Part I, \$3 25

AMERICAN AND FOREIGN FINGERING

It is the most wonderfully successful instruction book ever published.

OVER 300,000 COPIES

Have been sold, and still its popularity does not wane. With its perfect and progressive system and thoroughly practical course of musical study, it stands without a peer as the

Most Perfect of Music Books,

Ats duly without errors, and a universal favorite

DON'T FORGET THE TITLE!

OLIVER DITSON & CO., BOSTON.

Established 1834.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. [Name for Paper]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO.

Agents for the Pacific Coast.

CLEAR LAKE

AND

CALISTOGA STAGE LINE.

San Francisco

TO



LAKEPORT

In Eleven Hours.

Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays stages leave Calistoga for Lakeport via Middleton, Glenbrook, Kelseyville and Soda Bay; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES! Driven by the most skillful drivers on the coast. For full information and tickets apply to SAM MILLER, Tourist and Ticket Agent, 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12.00. Single Tickets, \$6.50.

Lakeport office at W. W. Green's Hotel.

JOHN CLARK, Agent. W. F. FISHER, Proprietor.

Compound Oxygen

NEW TREATMENT BY INHALATION for Consumption, Asthma, Bronchitis, Dyspepsia, Catarrh, Headache, Debility, Rheumatism, Neuralgia, and all Chronic and Nervous Disorders. Prepared by DR. STARKEY & PALLEN, Philadelphia.

Pa. Package contains full directions, and is easily sent by express, ready for use at HOME. H. E. MATTHEWS, Forwarding Agent, 806 Montgomery Street, San Francisco, Cal. Send for Free Pamphlets.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.

Circulars furnished on application.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Marine and Scientific Press, San Francisco, at favorable rates.

A. W. SANBORN & CO.,

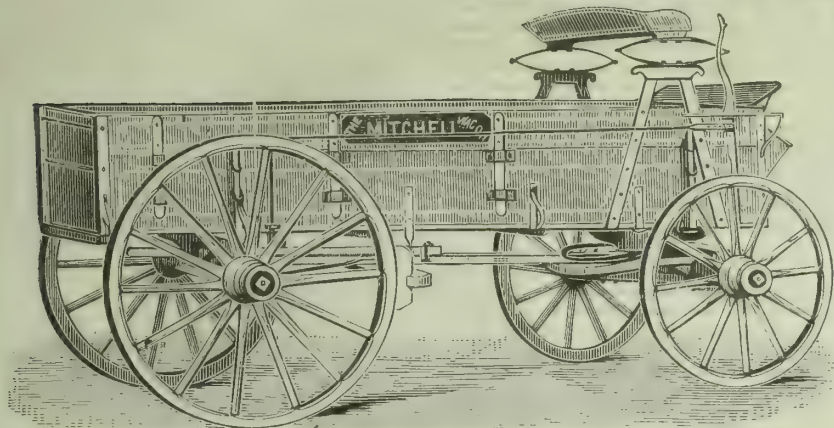
Manufacturers and Dealers in

CARRIAGES, EXPRESS, THOROBRACE & BUSINESS WAGONS,

From their own Manufactory in Manchester, N. H. Also Agents for the

MITCHELL FARM AND SPRING WAGONS,

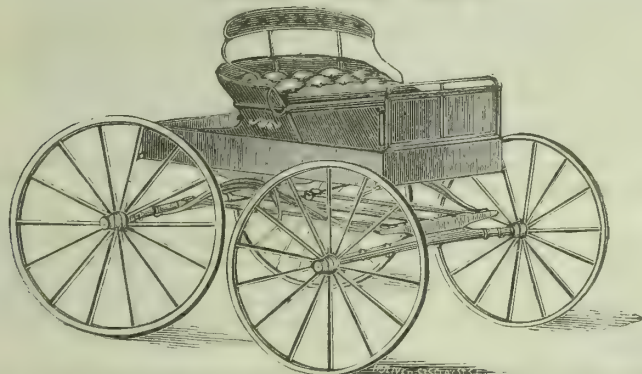
Nos. 24 and 26 Beale Street, San Francisco.



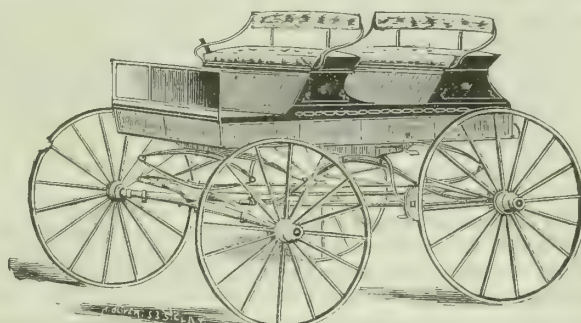
MITCHELL FARM WAGON.



THOROBRACE WAGON-TWO OR THREE SEATS-THREE SIZES.



SIDE SPRING BUSINESS WAGON-THREE SIZES.



FOUR SPRING WAGON FOR RANCH AND FAMILY USE-THREE SIZES.

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON
and Mrs. F. W. HARMON, for the last 10
years principals of Washington College

The HARMON SEMINARY will receive girls of all
ages; the instruction comprising Primary, Preparatory
and Academic. Thorough course in the English
branches. The Arts, Music and Modern Languages in
charge of well known masters. Special course prepara-
tory to the State University.

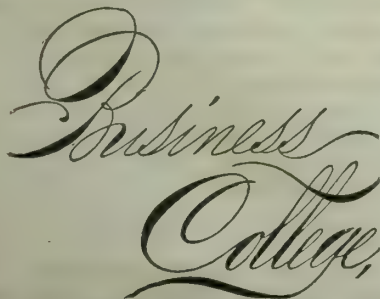
The HARMON SEMINARY will be first-class in all re-
spects, and will combine the best educational advantages
with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter
street and Miner Avenue, Stockton, Cal. Largest School of
its kind on this coast. Open day and evening. Tuition and
expenses less than one-half the usual rate. Excellent board,
\$10 per month. Courses of Study: Full Business Course,
Full Normal Course, Review Course, Special Courses, Teach-
ers' Course, Preparatory Course, Telegraphy, Languages. The
College Journal, containing full information, will be sent
post paid to any address. F. E. CLARK, Principal.

Silos, Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular.

NOTICE!

To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for
years throughout the entire Pacific Coast, and has been found without an equal as a
Liniment for man and beast. We have now added to our list of medicines "The H. H. H.
Hoof and Healing Ointment," and the "H. H. H. Condition Powders." No stock-
raiser, once having used our medicines will ever be without them in the house. For
sale everywhere.

Trade H. H. H. {Mark	Trade H. H. H. {Mark	Trade H. H. H. {Mark
Hoof and Healing Ointment	Horse Liniment	Condition Powders.
For Brittle Hoofs, Fever in Feet, Founder, Contracted Hoofs, Sand Cracks, Quarter Cracks, Collar Galls, Harness Galls, Scratches, Mud Fever, Etc., Etc.	The most effectual liniment ever used for Ringbone, Spavin, Sweeney, Callous Lumps, Old Sores, Sprains, Stiff Joints, Bruises, Windgalls, Etc.	For Inward Strains, Hide Bound, Loss of Appetite, Yellow Water, Poll Evil, Scratches, Mange, Rheumatism, Epizootic, Coughs, Colds, Etc.
H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.	H. H. MOORE & SON, Sole Proprietors.

To Farmers, Miners, Wine-Makers AND OTHERS.

PUMPS

For Wine, Mines, Ditches, Ships, Irrigation, Wells,
Tanks, Etc. Hand, Horse, Steam or Wind
Power. Best Pump in use.

A SMALL INVOICE FOR SALE CHEAP TO CLOSE A
CONSIGNMENT.

By W. S. RAYNOR,

At Linforth, Rice & Co.'s, Hardware Dealers,
323 Market St., San Francisco.

50 LARGE SIZE New Chromos, with name, 10c.
TODD & CO., late Wise & Co., Clintonville, Conn.

California Inventors

Should con-
sult DEWEY
& CO., AMER-
ICAN AND FOREIGN PATENT SOLICITORS, for obtaining Pat-
ents and Caveats. Established in 1860. Their long ex-
perience as journalists and large practice as patent attor-
neys enables them to offer Pacific Coast inventors far bet-
ter service than they can obtain elsewhere. Send for free
circulars of information. Office of the MINING AND
SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Mar-
ket St., S. F. Elevator, 12 Front St.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

30 California St., SAN FRANCISCO

PACIFIC BRANCH.



GEO. D. DORNIN.....Manager.
WM. SEXTON.....Asst. Manager.

INSURES ON GROWING CROPS under a
plain and easily understood Contract, also on Grain in
Warehouse, Dwellings, Barns and other Farm Property.

ASK FOR A LION POLICY.

RESIDENT AGENTS FOR

THE LION

IN ALL PRINCIPAL LOCALITIES.

Lane's Mineral Springs,
CALAVERAS COUNTY, CAL

Pine and Hemlock Chemical-Vapor and
Electro-Thermal Baths.

Connected with these Springs are Hot and Cold Baths.
The Water of these Springs is Cold, Clear and Palatable,
having been used 20 years for Medical purposes.

These Four signs of Health are located 35 miles east of
Stockton, in the foothills of the Sierras; at an altitude of
1,000 feet above the level of the sea. Always ready, Winter
and Summer, for the reception of patients, on account of
the even temperature of this most genial climate.

The accommodations consist of a Hotel, Cottages, Camp
Grounds and Stables.
Stage leaves Commercial Hotel, Stockton, at 7 A. M.,
Tuesdays and Saturdays.

P. O. Address, Knight's Ferry, Stanislaus Co., Cal.

JAMES HUTCHINS, Proprietor.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to
\$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Men's
Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; Cali-
fornia Leather, \$3.50; Men's Working Shoes from \$2.50 to
\$3; Children's Shoes made to order. Persons in the coun-
try ordering to the amount of \$12, I pay the express
charges. I sell nothing but my own manufacture.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,560 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kiddler, Redlands.....	10
J. F. Walsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Israel Beal, Redlands.....	10
C. E. Tuedell, Redlands.....	20
R. E. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	12
Mrs. E. E. Seymour, Redlands.....	20
P. R. Brown, Redlands.....	20
A. G. Simms, Redlands.....	10
Simson Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassady, Redlands.....	10
Orsen Van Leuven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	50
A. S. White, Riverside.....	20
L. M. Holt, Riverside.....	20
N. F. Overton, Riverside.....	10
G. W. Boggs, Riverside.....	10
A. W. Boggs, Riverside.....	20
S. R. Weil, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Annabel, Riverside.....	50
J. P. Greaves, Riverside.....	10
D. U. Findlay, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. E. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10
B. F. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. B. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	20
Mrs. Sarah J. Morey, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	30
F. P. Morrison.....	25
A. T. Dewey, San Francisco.....	12
W. B. Ewer, San Francisco.....	10
B. F. Watrous.....	10
H. I. Rutgers.....	20
J. W. Bashford.....	5
S. Comey.....	5
Mrs. B. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene E. Cutler, Carson, City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20

Total sold.....1,004.

Judson & Brown (San Bernardino, P. O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

PRESCOTT HOUSE.



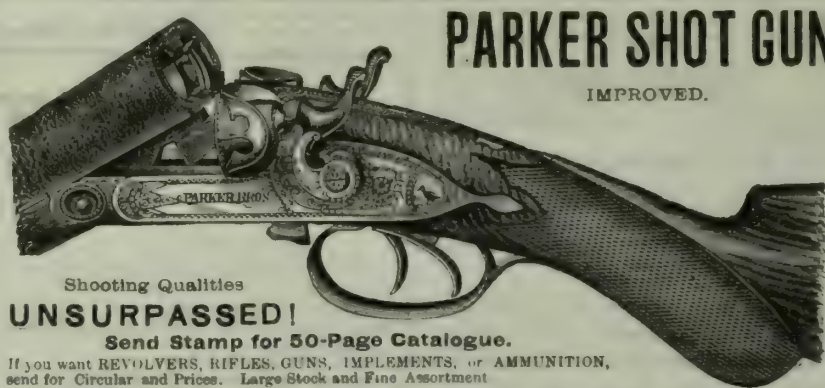
S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

PARKER SHOT GUN.

IMPROVED.



Shooting Qualities

UNSURPASSED!

Send Stamp for 50-Page Catalogue.

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION, send for Circular and Prices. Large Stock and Fine Assortment

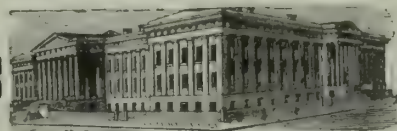
E. T. ALLEN, Agent for the Pacific Coast.

NO 416 MARKET STREET.

SAN FRANCISCO, CAL.

DEWEY & CO.'S

Scientific Press



Patent Agency.

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

IMPROVED FARM IMPLEMENTS.

Non-Explosive Steam Engines Best Railway and Lever Horse Powers. Threshing Machines. Straw-Pressing Thrashers. La Pows Disc and Steel Spring Tooth Harrows. Eagle Sulky Horse Rakes. Cultivators. Peet Mills. Feed Steamers, &c. &c. WHEELER & MERRICK CO., Albany, N. Y. Established 1880. Send for Illustrated Catalogue.

This paper is printed with ink furnished by Ohas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph H. Doroty 527 Commercial St., S. F.

The American Driven WELL WATER SUPPLY SYSTEM

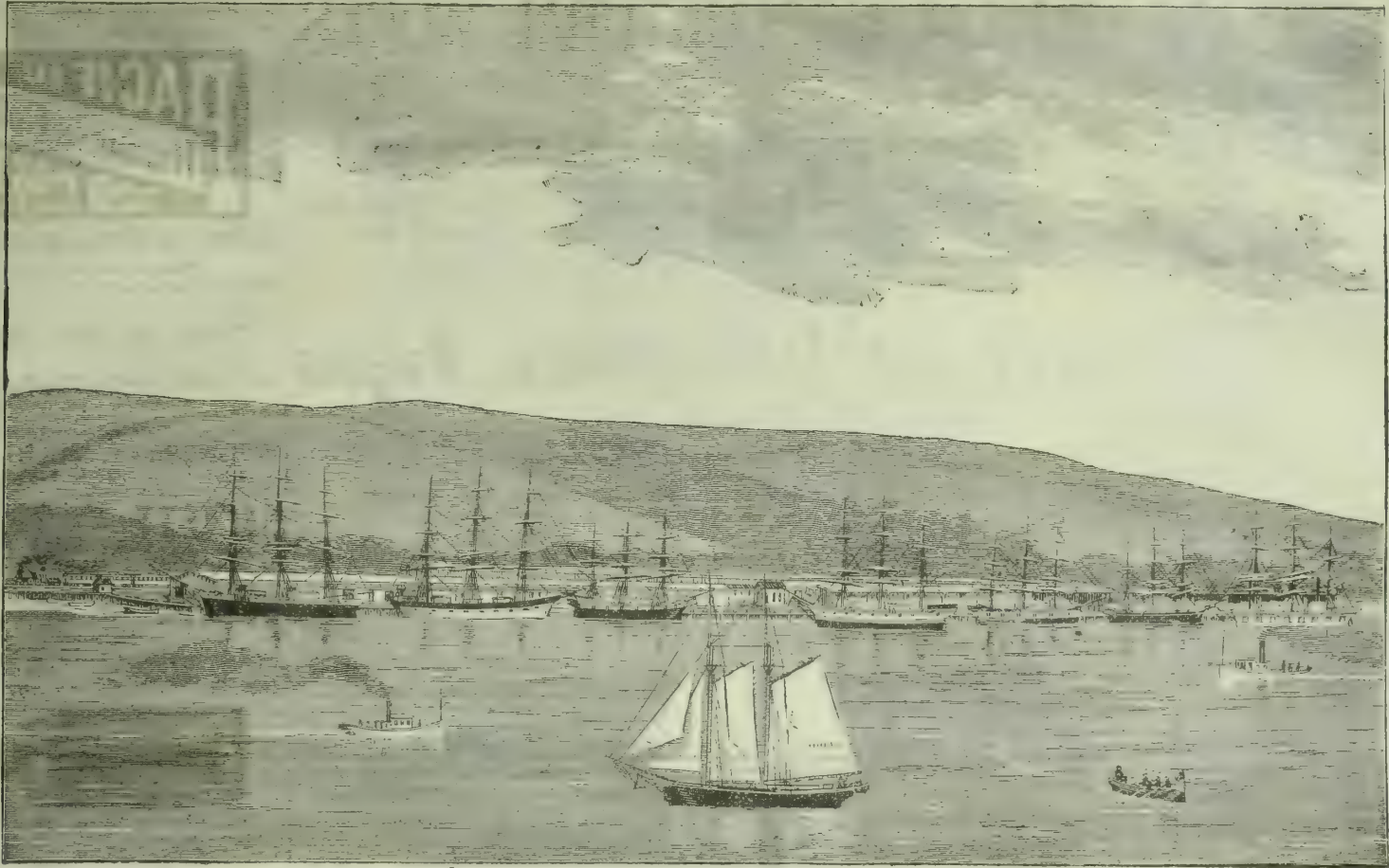
FOR MINING, IRRIGATION, MECHANICAL DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO., 40 Merchants' Exchange San Francisco, Cal.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

PORT COSTA, CALIFORNIA.



WHARVES AND WAREHOUSES, PORT COSTA, CALIFORNIA.—GEO W. MCNEAR, PROPRIETOR.

Storage capacity of Warehouses, 55,000 tons. Storage rates per season ending June 1, 1883, \$1.00 per ton. Storage rates by month, 25c. per ton per month until it amounts to \$1.25. Balance of season FREE. Weighing into Warehouse, FREE. Weighing out of Warehouse, 10c. per ton. No charge for Wharfage on Wheat received for Storage. Highest San Francisco price paid for Wheat at Port Costa. Insurance in A I Companies at low rates. Liberal advances made at low rates. Prompt returns and full satisfaction guaranteed. Every modern appliance used to dispatch business. Low charges and special facilities given to exporters of Wheat and Flour. Wharf facilities upwards of two thousand (2,000) feet, with double railroad tracks the entire length. Loading facilities for eight (8) ships at same time. Depth of water at Wharves, 30 to 35 feet. Money saved by growers, speculators and shippers of Grain by storing at Port Costa. A central point for delivery by Rail, Barge, Sail and Steamer. Port Costa Water Company supplies ships with pure mountain spring water, at one-half cent per gallon.

SAN FRANCISCO OFFICE, 20 California Street.

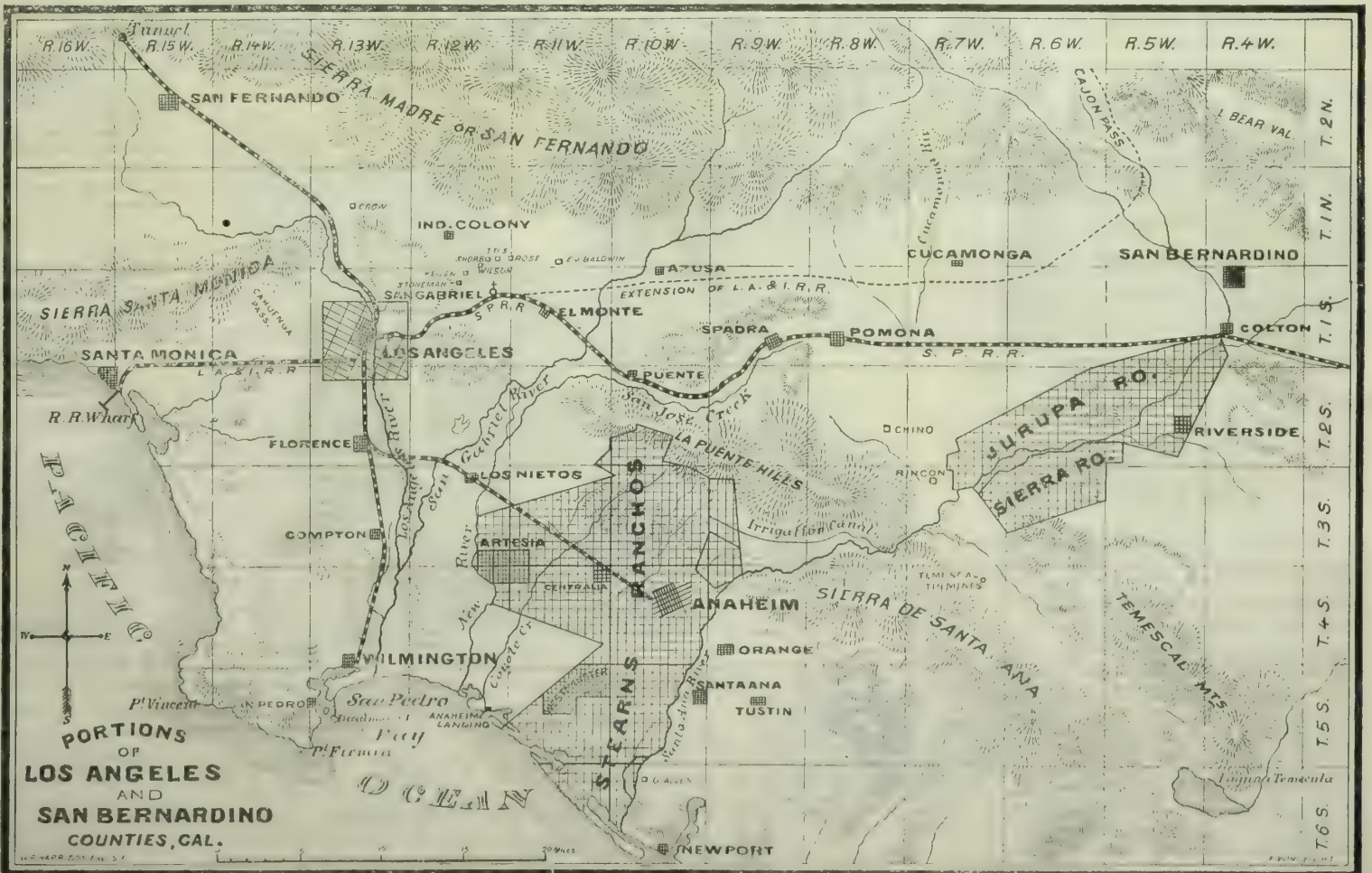
"Abel Stearns RANCHOS."

The Center of Los Angeles Valley.

Embracing Anaheim, Westminster, Artesia, Garden Grove, etc. Thirteen miles southeast of Los Angeles City, within the Artesian Well Belt. Hundreds of flowing pipe wells. Water near the surface. Rivers on two sides; ever-flowing creek runs through the tract. Front on the Ocean. Transportation and passage by Steamships or Railroad. Southern Pacific Railroad through the tract. Twenty-one hours from San Francisco. The unsold land for sale or lease in sections or fractions. Apply to Trustee A. ROBINSON, 318 California St., San Francisco.

Or to ROBERT J. NORTHAM, Anaheim, Cal., or concerning Westminster Colony, to REV. ROBERT STRONG, Westminster, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent. per annum. Send for Circulars and Maps.



PETER MEYER. LOUIS MEYER.
MEYER BROS. & CO.,
—IMPORTERS AND—
Wholesale Grocers,
—AND DEALERS IN—
TOBACCO AND CIGARS.
412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco
Special attention given to country traders.
P. O. Box 1940.

DALTON & GRAY,
Commission Merchants
And Dealers in
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.
404 & 406 DAVIS STREET,
P. O. Box 1936
SAN FRANCISCO.
CONSIGNMENTS SOLICITED.

ESTABLISHED 1860.
P. STEINHAGEN & CO.,
(Successors to J. W. GALE & CO.)
Fruit and General Commission Merchants,
And Wholesale Dealers in California and Oregon Produce,
Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs,
Butter and Honey.
Brick Stores: No. 402 Davis Street, and
120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

MOORE, FERGUSON & CO.,
COMMISSION MERCHANTS
Grain, Flour, Wool, Etc.
(Members of the San Francisco Produce Exchange)
211 and 213 Clay St., S. F.
Liberal advances made on Consignments.
Dewey & Co. { 252 } Patent Agt's
Market St.

HORTON & KENNEDY'S

FAMOUS
ENTERPRISE
Self-Regulating
WINDMILL

Is recognized as the
Best.

Always gives satisfaction. SIMPLE,
STRONG and DURABLE in all parts.
Solid Wrought Iron Crank Shaft with
no loose bearings for the crank to
work in, all turned and run in against
solid cast-iron bushes.

Positively Self-Regulating

With no coil springs, or springs of any
kind. No little rods, joints, levers, or anything of the
kind to get out of order as such things do. Mills in use
6 to 12 years in good order now, that have never cost one
cent for repairs. All genuine Enterprise Mills for the
Pacific Coast trade come only through this agency, and
none, whether of the old or latest pattern, are genuine, ex-
cept those bearing the "Enterprise Co." stamp. Look out
for this, as inferior mills are being offered with tes-
timonials applied to them which were given for ours.
Prices to suit all times. Full particulars free. Best
Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, **LINFORTH, RICE
& CO.,** 323 & 325 Market St., S. F.

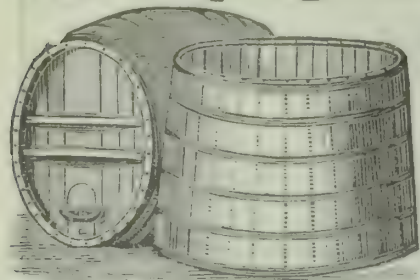
New Crop Insect Powder.
BUHACH! BUHACH!



SURE DEATH TO ALL INSECTS.

An associated product of a single fly is often a sometimes
serious pest. But only one brand bears our trade mark.
All other brands are not genuine and keepers of price list.
BUHACH PRODUCE & MANUFACTURING CO.,
154 Leavenworth Street, Stockton, Cal.

CALIFORNIA
Wine Cooperage Co.



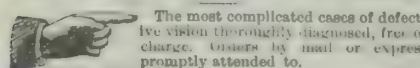
FULDA BROS. Proprietors.
30 to 40 Spear St., S. F.
ALL KINDS OF CASKS, TANKS, ETC.
Ship, Mining and Water Tanks a Specialty

BUY LAND

Where you can get a crop every year;
where you will make something every
season; where you are sure of having a crop
when prices are high; where you have a
healthy place to live; where you can raise
semi-tropical as well as other fruits; where
you can raise a diversity of grain and vege-
tables and get a good price for them. Go
and see the old Reading Grant (in the
upper Sacramento Valley), and you will
find such land for sale in sub-divisions to
suit purchasers—at reasonable rates and
on easy terms. Send stamp for map and
circular to **EDWARD FRISBIE**, proprietor,
(on the Grant), Anderson, Shasta Co., Cal.

Only "PEBBLE" Establishment.

Muller's Optical Depot,
135 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defect-
ive vision thoroughly diagnosed, free of
charge. Orders by mail or express
promptly attended to.

Compound Astigmatic Lenses Mounted to

Order. Two Hours Notice.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Har-
rows, Cultivators, Seed Sowers, Hay Presses, Haying and Har-
vesting Machinery, Headers, Iron Farm and Freight
Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain
Cleaners, Barley Crushers, Eureka Ditching and Grad-
ing Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,000 ft. in length, and have a floor surface of 105,492 square feet, or nearly 2½ acres.
The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square
ft., including warehouses. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth
Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and
furnish the best long service, or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving
time, labor, and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus
making a good saving for parties in the interior who order goods from these Works. We particularly invite correspon-
dence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufactur-
ing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron
Gear Spring Wagons with the celebrated Patent Iron Wheel, also the Sweepstake Patent Iron Farm and Freight Wagon.
We are sole manufacturers of the celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, o.
which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a
clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hun-
dred dollars.

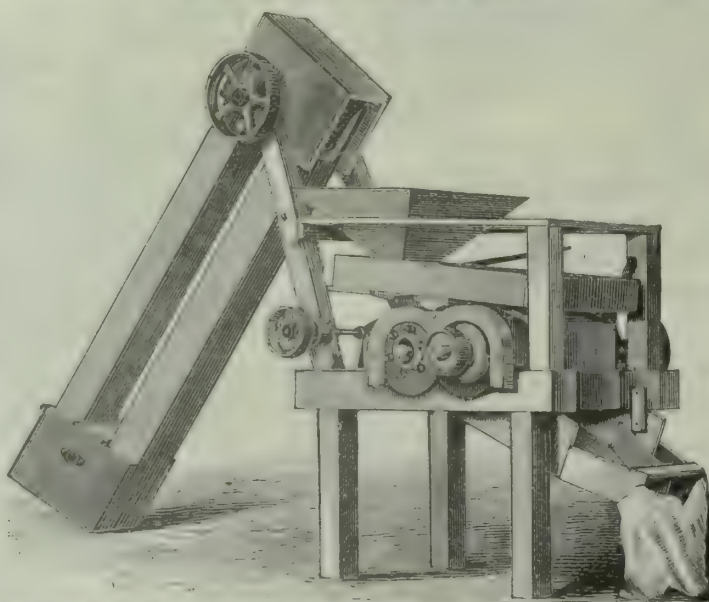
WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller	Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers.
" Improved Granger Gang.	" Plows.
" Improved Single and Double Plow.	" Side Hill Gang.
" Single Plow.	" Double Deep Tiller.
	Fresno Ditching and Grading Plow.
	Cultivators.
	Grain Seed Sowers.
	Hill's Improved Headers.
	Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freight. That dealers, farmers and others living at, or
near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying
Goods direct from the BENICIA AGRICULTURAL WORKS, either direct or through MESSRS. BAKER & HAMILTON,
agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the in-
terior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and con-
sumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of
California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best
implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast,
both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science
can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send
Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,Or Agents, **BAKER & HAMILTON**, San Francisco and Sacramento**"THE PIONEER BARLEY CRUSHER,"**

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has
met with general favor, there now being over 100 in use in California. It is the most economical and durable feed
mill made. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

Nathaniel Curry & Bro..

113 Sansome Street, San Francisco,

**AGENTS FOR****W. W. Greener's Celebrated Breech Loading Double Guns.**

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER,
KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.
Ammunition in quantities to suit. A liberal discount to the trade. Price List on Application

Educational.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON

**LIFE SCHOLARSHIPS, \$70.**

Paid in Installments, \$75.

Send for circulars.

THE HOME SCHOOL

-FOR-

YOUNG LADIES,
1825 Telegraph Avenue, Oakland, Cal.

The next year will begin on

WEDNESDAY, JULY 26, 1882.
H. N. FIELD, Principal.**SACKETT**Takes first rank for thorough-
ness and ability of its teachers;
also for home care.

(FOR BOYS)

**Business, Classical, and
English Departments.****SCHOOL.**

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M.,
Principal, Oakland, Cal.

417 Kearny Street, San Francisco.

C. N. ANDREWS,
President.G. B. BARNARD,
Business Manager.

Send for Circulars

Lands for Sale and to Let.**Fruit and Homestead Lands
FOR SALE.**

Having purchased the tract of land adjoining the town
of Vacaville, known as the Mason-Wilson tract, contain-
ing 492 acres, and subdivided the same, I am prepared to
sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its
early and superior fruits, offers valuable inducements to
those desiring to engage in the business, or for pleasant
country homes.

For climate, healthfulness and school facilities it is un-
surpassed in the State, and easy of access by a branch
railroad from Elmira.

I will sell upon favorable terms. For particulars
Apply to **W. B. PARKER.**
Vacaville, Solano Co., Cal.

**Good Crops Every Season
Without Irrigation.**

Free by mail, specimen number of "The California Real
Estate Exchange and Mart," full of reliable information on
climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.

One of the best and well-known farms
in Alameda County; near station; all
level bottom land; very productive. Two
thousand acres at the low price of \$80
per acre not including the present crop,
worth over \$30 per acre. Terms, Cash,
or part deferred payments, low interest.

ALBERT E. CRANE,
410 Montgomery St.**Stock Range.**

Parties wishing to purchase good stock raising lands,
unaffected by severe drouths, will do well to address the
undersigned. The lands can be purchased cheap, in lots
from 100 to 2,000 acres. It is partly low table and
rolling land, partly clear and level. Good for vine and
fruit raising. Will raise vegetables and all kinds of
grain. Crops certain every year. Near town and a
\$10,000 public school house. Price, \$3 to \$5 per acre.
Good local market for fruit, vegetables, grain, poultry
and dairy produce. Address the proprietor,
EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez,
in Contra Costa county. Substantial improvements; well
adapted to grain and stock. Reference, Judge Brown,
Berry Baldwin, or S. Bennet, Martinez, and the proprie-
tor on the place,
WM. C. PRINCE.

Dewey & Co. { 252 } Patent Agt's
Market St.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAKS & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale. Also, cross-bred Merino and Shropshire.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

L. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address

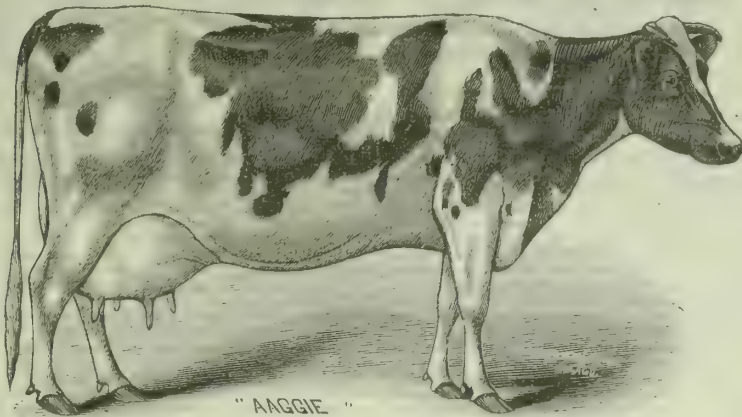
G. G. WICKSON, 319 Market St., S. F.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewey & Co., at published rates.

HOLSTEIN CATTLE.

THEY COMBINE MILK, CHEESE, BUTTER AND BEEF
Far More Successfully than any other Breed.



"AGGIE"
MILK RECORD 18004 LBS. 15 OZ. IN ONE YEAR.

THE LARGEST HERD IN THE WORLD.

Every Animal Recorded in the Holstein Herd Book of America.
425 pure-bred, selected animals, nearly all imported, and selected personally by us from the best herds in Holland, regardless of price, and all from the deepest milking families. An unusually large and fine lot of Bull and Heifer Calves and yearling Heifers in calf. Prices very low, for the quality and breeding of these animals.

CLYDESDALE HORSES.

A large and elegant stud of Stallions and Mares on hand, and new importations constantly being added. Unusual inducements offered.

HAMBLETONIAN HORSES.

A magnificent stud, from the best trotting families. A large number of superior Young Stallions, Mares and Driving Horses for sale at low figures.
Catalogues of each class of stock sent free on application. Correspondence solicited. Call and satisfy yourselves before buying. To breed from the best is always the cheapest.

SMITHS & POWELL,

Lakeside Stock Farm, Syracuse, N. Y.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAKS & HOMER P. SAKS.

PETER SAKS & SON

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHbred



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHA DUSENBERG & CO, Sole Agents, 314 Sacramento St. San Francisco.

ONE HUNDRED SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

Cornwall Station, Contra Costa County.

RAMS FOR SALE.

350 THOROUGHbred

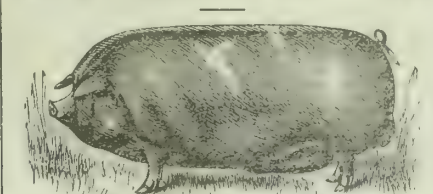
And Graded

SPANISH MERINO

Rams For Sale.

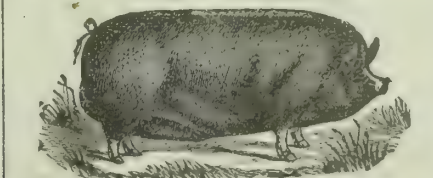
Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High-Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R. P. O. address, MRS. E. MCCONNELL WILSON, Elk Grove, Sacramento Co., Cal.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Banford, Tulsa Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Boss, Bismark and other noted families. Imported from a King of Bonny View and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

FOR SALE.



Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to FALKNER, BELL & CO., San Francisco

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice President
ALBERT MONTELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
L. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Oakland Poultry Yards,

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$90.

No. 2, " 250 " " 65.

No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to

Box 1771, San Francisco.

Poultry and Stock Book

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country says that neither the Horse and Carriage Powder sold here are worth a farthing. He says that Sheridan's Condition Powders are absolutely pure and numerous valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Do not be deceived by cheap imitations. Send for circular or send by mail for right letter stamp. J. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

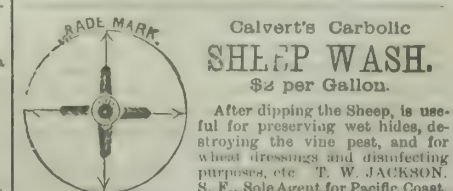
Baden Station - - San Mateo Co.

BUCKS FOR SALE.

Spanish Merino, French Merino, LEICESTER.

Apply SHOOBERT & BEALE,

405 Montgomery St., San Francisco.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheel dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

Mission Rock Dock and Grain Warehouse, San Francisco, Cal.

45,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—318 California Street, Room 2.

The Best Is The Cheapest!

AVERILL MIXED PAINT.



Manufactured by the California Paint Company.

THE BEST, MOST DURABLE,

Most Beautiful and Cheapest Paint in the World

For Buildings, Outside and Inside, on Wood, Brick, Iron or Tin,

AND FOR ALL PURPOSES FOR WHICH PAINT IS USED

IT IS WITHOUT AN EQUAL!!!



This Paint is prepared in liquid form, **READY FOR USE**, requiring no further addition of oil or spirits. It is of Pure White, and of any shade or color. It is composed of Pure Linseed Oil, strictly Pure White Lead and Zinc, which by our process of manufacture, are so thoroughly united that they cannot separate. Hence, **IT WILL NEVER CHALK, CRACK, OR PEEL OFF**, and for Brilliancy of Color and Beauty of Finish it has no rival. Buildings painted with this Paint Five Years ago look bright and fresh as if newly painted. Of no other Paint can this be said. It is put up in convenient packages, containing from one quart to ten gallons. Be sure and send for Sample Cards of Colors and Price Lists, which are mailed free on application.

O. S. ORRICK, General Agent,

Also Dealer in Paints, Oils, Varnishes, Brushes, etc. And Sole Agent for the

GENUINE SAN FRANCISCO RUBBER PAINT.

No. 403 Market Street,

SAN FRANCISCO, CAL.

Commission Merchants.

JAS. P. HULME, JACKSON HART.
Late Miller & Co.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

SEND YOUR CONSIGNMENTS TO



HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange.)

20 California Street,

San Francisco.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

HORTICULTURISTS AND NURSERYMEN can have specimens of their fruits or plants engraved for newspaper, book, catalogue or circular printing, by sending samples or photographs to the S. F. Engraving Co., No. 405 Kearny St. Prices moderate, by Photo-relief, Zincograph, and other improved methods.

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES—HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

**HARDWOOD LUMBER,
Ship Timber,
VENEERS AND FANCY WOODS.**

JOHN WIGMORE,

129 to 147 Spear Street and 26 and 28 Howard St., San Francisco.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose. Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Leach, Marysville; T. B. Wait, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.



Dewey & Co. { 252 Market Street, Patent Agts

A PUBLISHER WANTED.

A good printer, or a steady and able business man, with a good reputation and a little means, can purchase (at less than two-thirds its value) the whole or a part of a long and well-established and paying newspaper and job printing office, in one of the rising business centers of this State.

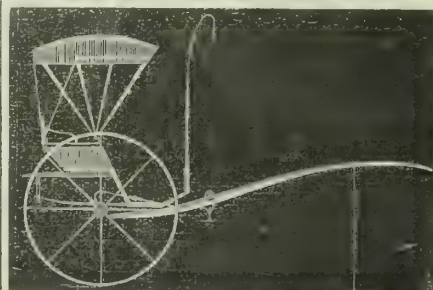
Principals only need apply, (and that soon) to DEWEY & CO., at the office of this paper.

P. S.—A first-class printer can secure a permanent situation by applying soon. Also, a steady country boy a situation as janitor.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

SAN LEANDRO SULKIES,

WITH PHAETON OR PIANO BOX BODIES.



The above cut is a diminished copy of the scale drawing from which my Phaeton Sulkies are made.

It will be seen that for elegance of design, grace and proportion, it is superior to anything yet made having only two wheels.

It is mounted on platform springs, and has the patent leveling device used in my Piano Box Business Sulky.

It is guaranteed to be free from that bobbing motion common to all other Sulkies, and which renders riding in them a toil instead of a pleasure, and is warranted to ride easier than most buggies.

This important result is obtained by my method of hanging the body free from the shafts, so that their motion, or the motion of the horse, is not communicated to the seat or body at all.

This method of hanging the body also allows it to move up and down level, whether it has a heavy or light load.

The leveling device enables the rider to instantly change the level of the bed should it become necessary to change from a small to a large horse, or vice versa.

With all other Sulkies, if a large horse is used or a heavy load is carried, the Sulky tips back, thus throwing it out of balance and making it ride uncomfortably.

This method of making two-wheeled vehicles is new, both in this country and Europe, and is destined to bring them into favor rapidly, both as business and pleasure carriers.

The Phaeton style (with or without top) is designed for ladies and children, or for doctors and commercial travelers. They are thoroughly well made, and range in price from \$90 upwards.

My Piano Box Business Sulky and Breaking Cart, of which a cut appeared in these columns a few weeks since, has recently been somewhat improved in its proportions, and is the best thing that can be obtained in its line for mail carriers, overseers of large ranches, paper carriers, hunters, advertising agents, etc. Prices, from \$75 upward, according to style and finish. For circulars, giving fuller information, price lists, etc. Address

JACOB PRICE.,

At Works of San Leandro Plow Co.,
San Leandro, Cal.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers, who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire.

HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire.

The Barbs are short, and broad at the base, where strength is required.

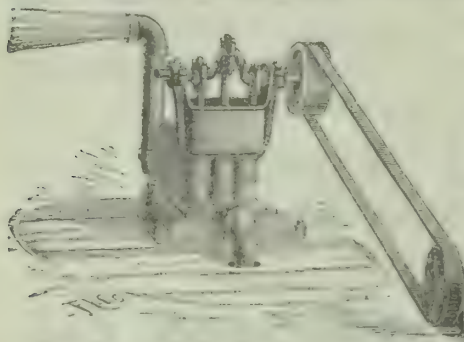
THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.



TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These Pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.

F. W. KROGH & CO.,

Manufacturers
And Sole Proprietors,

No. 51 Beale Street,
SAN FRANCISCO

CHEAP CASH GROCERIES

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

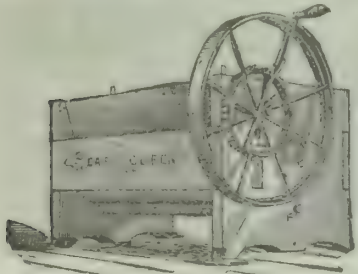
1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

"THE DAIRY QUEEN"
Improved Churn and Butter-Worker.
Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



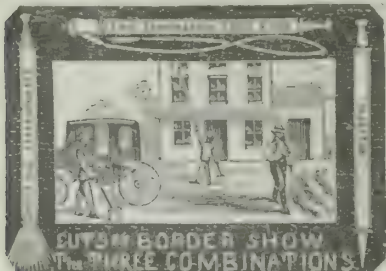
This Churn is the most perfect machine of its class ever made; the result of several years' study and experiment, by a practical dairymaid. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Oakland, Cal.

Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS



Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Grant.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for free circulars containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE,
Anderson, Shasta County, Cal.

LAND

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorety, 527 Commercial St., S. F.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

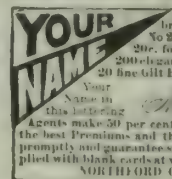
Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY



On 50 large size CARDS. Remembrance, Sentiment, Handkerchief, etc. 50 all in, 10c, 15c, 20c, 25c, 30c, 35c, 40c, 45c, 50c, 55c, 60c, 65c, 70c, 75c, 80c, 85c, 90c, 95c, 1.00. 200 elegant premiums and reduced prices. 20 fine gilt Bevel Edge cards, turned corner, 10c.

Agents make 50 per cent. We offer the largest line of cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, Proprietors.

These Springs are particularly beneficial in purifying the blood, and unsurpassed by any in the State for the cure of rheumatism, dropsy, scrofula, weak lungs, dyspepsia, colic, neuralgia, liver and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Board and Room per week \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake, two and one-half miles from the Siskiyou Springs, two and one-half miles from "Lassett's" place, in Cobb Valley, only six miles by a good trail from the Harlan Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport Stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day. Fare, \$7.50. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

Send to the office of this paper and get a copy of this popular book.
PRICE, 25 cents, postpaid.

HALL'S BARLEY CRUSHER,

Manufactured by the

BENICIA AGRICULTURAL WORKS,

PRICE

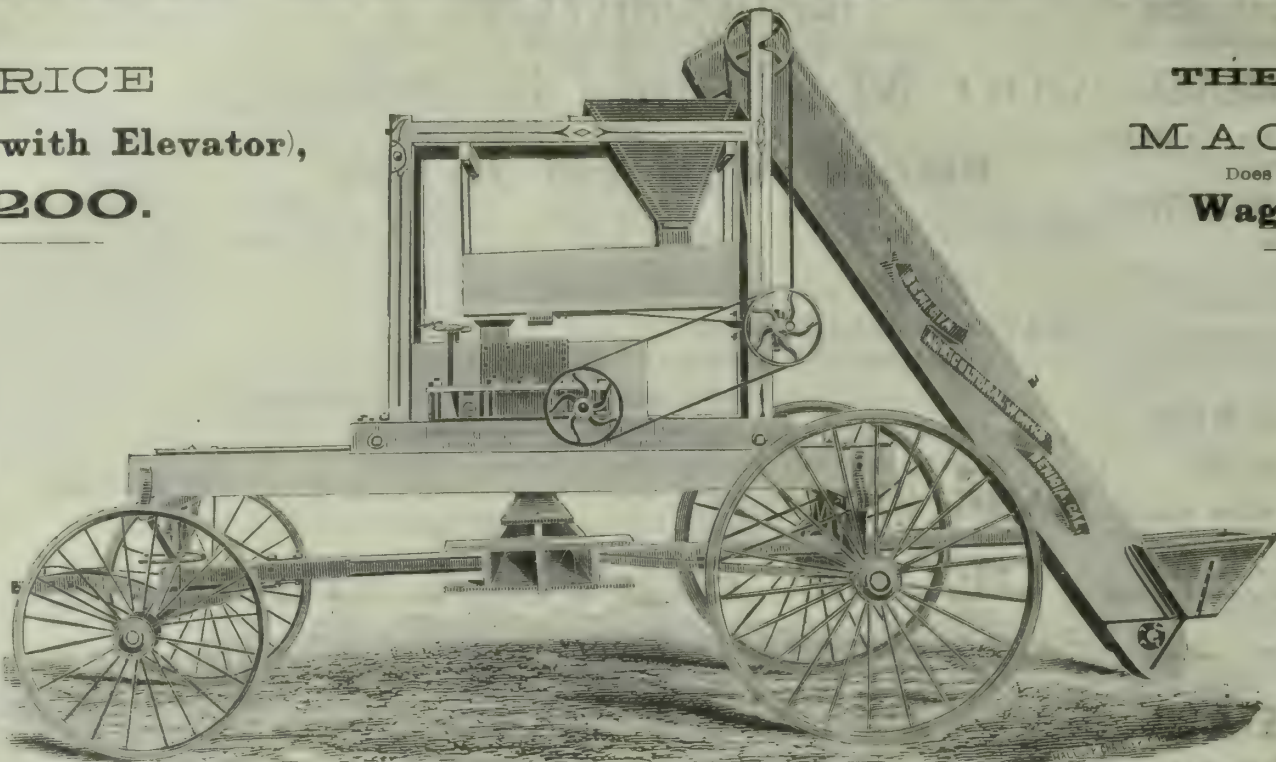
(Complete with Elevator),
\$200.

THE PRICE

FOR THE
MACHINE

Does Not Include the
Wagon Gear.

THE MACHINE
(As Shown in Cut)
Is Mounted on Our
CELEBRATED SWEEPSTAKE
Patent Iron Wagon Gear.



SEND
— FOR —
Catalogue
— OF —
IRON WAGONS.

Is the best machine for CRUSHING BARLEY that has ever been invented. It does its work effectually without separating the grain and hull, and cleans it from all foul seed. Barley cleaned and crushed by this mill can be fed to stock with a certainty that no foul seed will be scattered, which is, of itself, an important feature and improvement. It is practical, simple in construction, durable and not liable to get out of repair.
To those who wish to see the machine in operation we invite them to call at our works and examine for themselves. Numerous machines have been built and placed on the market for sale as Feed and Barley Mills, etc., but when put to a practical test have proved to be comparatively useless. It is not alone our experience, but that of others, that stock fed on barley crushed by this machine thrive much better and require less feed than when fed on what is usually called ground barley. The feed is also free from all dirt, sand, or grit of any kind.

PRICE LIST:

Complete, with Elevator, - - - - - \$200.00
(Capacity, from 30 tons upwards per day. Weight, about 1,400 lbs. Power required, from 8 to 10 horse)

Address, **BAKER & HAMILTON, San Francisco and Sacramento.**

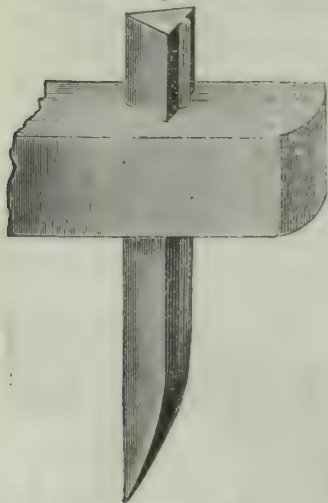
Important
TO
Farmers.

JACKSON & TRUMAN.

Important
TO
Merchants

WOOD.

Solid Steel V-Shaped Tooth Harrow.



Will do MORE work, and EASIER
Will do BETTER work, and FASTER
Will make a HANDSOMER job, and NEATER
Will produce a QUICKER yield, and GREATER
Will do MORE KINDS of work, and READIER
Will take LESS REPAIRS, and LAST LONGER
Than any other Harrow known to modern civilization
WHY IT IS THE BEST.

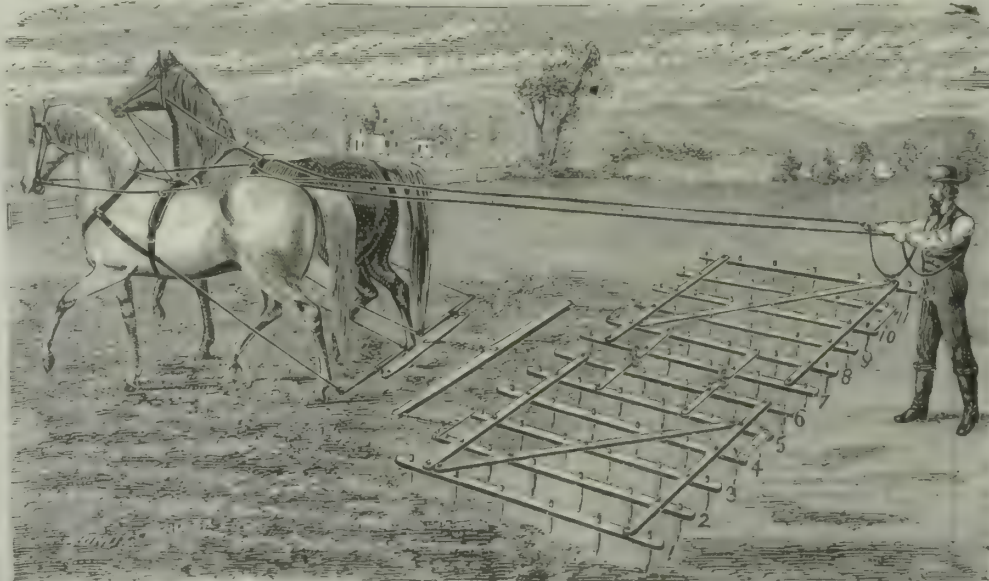
First. Invented, improved and perfected by a practical farmer of large experience; the result of the most patient study and experiment.
Second. The V-shaped tooth presents a sharp edge to the soil, which materially lessens the draft over any other form of teeth.
Third. Every principle of mechanical science declares the V-shape to give greater strength to same weight of metal than any other form.
Fourth. Having a V-shaped rib on the back makes it self-fastening, and it is the simplest and most perfect method known to mechanics.

This Superior Harrow is Made in the Following Regular Sizes:

8 Bars, 2 Sections, 48 Teeth, 8 feet cut, weight, 1135 lbs. Price, \$20
10 Bars, 2 Sections, 60 Teeth, 10 feet cut, weight, 160 lbs. Price, \$25
12 Bars, 2 Sections, 72 Teeth, 12 feet cut, weight, 190 lbs. Price, \$30
15 Bars, 3 Sections, 90 Teeth, 15 feet cut, weight, 235 lbs. Price, \$35
18 Bars, 3 Sections, 108 Teeth, 17 1/2 feet cut, weight, 285 lbs. Price, \$40

JACKSON & TRUMAN'S V-TOOTH HARROW.

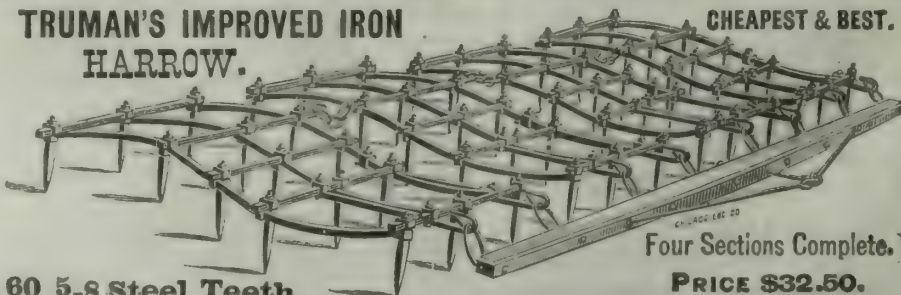
THE BEST WOODEN HARROW IN THE WORLD.



THE BEST WOODEN HARROW AND THE BEST IRON HARROW.

TRUMAN'S IMPROVED IRON HARROW.

CHEAPEST & BEST.



60 5.8 Steel Teeth.

Four Sections Complete.

PRICE \$32.50.

SEND FOR SPECIAL CIRCULAR.

IRON.

Truman Harrows.

No. 1 has three sections, 45 1/2 steel teeth; cuts 9 feet wide. This is a light size for two horses. Weight, 165 lbs. Price, \$25

No. 2 (represented in the cut) has four sections, 60 1/2 steel teeth; cuts 12 feet wide. This is our standard style for two horses (generally used). Weight, 230 lbs. Price, \$32.50

No. 3 has five sections, 75 1/2 steel teeth; cuts 15 feet wide. This is our 3-horse Harrow; can leave off one section and use two horses with the same draft-bar. Weight, 291 lbs. Price, \$37.50

No. 4 has six sections, 90 1/2 steel teeth; cuts 18 feet. For this size we use four horses abreast, with two draft-bars coupled together at the ends; adapted for large farms. Weight, 336 lbs. Price, \$48

The following sizes are for heavy soil, and have been made to meet some of the suggestions of the large farmers of the Pacific coast:

No. 2 A has 3 sections of 4 bars each; 60 1/2 steel teeth; cuts 12 feet wide. Two horses generally used. Weight, 275 lbs. Price, \$32.50

No. 4 A has 4 sections of 4 bars each; 96 1/2 steel teeth; cuts 18 feet; for this size we use four horses abreast. Weight, 396 lbs. Price, \$48

These No. 2 A and 4 A Harrows are for very heavy soil.

The Truman Harrow

Can be taken apart and packed very closely for shipment. We ship them over the entire coast. They are the most

SUCCESSFUL HARROWS

Ever introduced to the farmers. We have received a great number of testimonials. They all speak very highly of the Truman Harrow:

"Your Harrow is a good one."—M. Madden.

"They give perfect satisfaction."—Jas. Cass & Co.

"Your Truman Harrow is a good one and fully met my expectations."—Dr. L. F. Moulton.

"I like your Truman Iron Harrow very well."—Milton Carpenter.

"I tried your Truman Iron Harrow the other day, and it beats them all. My manager says 'it is the boss.'"—D. Freeman.

"We like your Truman Iron Harrow very much."—Steele Bros.

JACKSON & TRUMAN, 625 Sixth St., S. F.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, AUGUST 19, 1882.

Number 8

The Curse of Drunkenness.

The daily record of events, as set forth in the morning and evening papers, is almost a continuous chain of evil deeds prompted and pursued by those who are maddened by alcoholism. Brutal assaults and cruel murders are almost nightly occurrences. Occasionally, however, there is an inhuman deed which sinks far below the average crime, and seems to open to the view and contemplation the very bottomless pit of human depravity and cruelty. Such was the murder of Mrs. Wilson by her husband, which occurred on Thursday of last week. The woman was found dead in her house. The police surgeon who made the examination made the following report:

The woman had received a terrible beating, and came to her death from inflammation of the brain following the violence. He discovered on the head a severe scalp wound in the shape of a horseshoe, such as might have been produced by the heel of a boot; another scalp wound on the right side of the head above the ear, and three inches in length; a wound a little to the left side of the middle line of the forehead, in the shape of a St. Andrew cross, and the frontal bone laid bare; a wound an inch long at the angle of the right eye, and affecting that organ; a wound an inch and a half long under the right eye, and running toward the upper part of the nose; a wound an inch and three-quarters in length under the right ear; a two-inch wound under the chin; a cut three and a half inches long on the outside of the right leg, between the knee and the ankle; an immense bruise on the left side of the abdomen; a severe bruise on the right side of the abdomen; another under the right nipple, and still another in the upper part of the right side of the chest. Besides these there were a number of contusions on the thighs and back. The surgeon also discovered that there were seven ribs broken, four on the right side and three on the left. The wounds have all the appearance of having been produced by kicks with a heavy boot. The deceased was a woman of medium height, and well proportioned. Her features show that she was a woman who was addicted to the use of intoxicating liquor.

It has been quite clearly shown that this unfortunate woman came to her death at the hands of her husband, who was also addicted to the use of intoxicating liquor. Their quarrels were a very ordinary sensation in the neighborhood, and the sounds of violence in their home were so common that neighbors did not think of interfering with them.

Here, then, were husband and wife, with a group of children, both of them accustomed to brutalize themselves with liquor, and become common brawlers—carrying on their evil way until finally the husband reduces his wife to a broken and lifeless body, bearing the print of his boot-heels—a helpless drunkard trampled to death by an infuriated drunkard, in the midst of their home and their children.

These are terrible things to think of. We would gladly avoid their contemplation and spare our readers the recital of them; but it is a common duty to bring them forward, that all may see again the demonizing power of strong drink, and shun it as they would a pestilence. Who can indulge with the thought of such events as the direct outcome of indulgence? Let the evil, then, be clearly recognized in all its hideousness, until the one who is disposed to trifle with the evil, or to court its consequences, shall turn from it in horror. There is only one way to be absolutely free from danger, and that is to avoid it; pass not by it; turn from it and flee away, as is the Scriptural injunction.

The Brook in the Meadow.

What more beautiful water than the brook threading its way through the meadow, its banks fringed with shrubs and flowers, or studded here and there with shade trees? The clear water, with the darting silversides, the cresses, the plunge of the startled frog, the splash of birds at their ablutions, the turtles roasting in the sun, the swift crossing of the musk-rat, if no dangerous sounds are heard—all these and a hundred other events fill up the day beside the brook. And then come the cows, with solemn, stately tread, daintily tasting the flowing water, then venturing farther, until the group stands knee-deep, with swaying tails and philosophic mood, enjoying the cooling shade and cooling water—a picture of rural quiet beyond compare.

Proposed Line of Steel Steamers.

The danger of complete monopolization of existing lines of transportation from this coast to the East and Europe is leading to renewed discussion of the establishment of lines of steamers owned and built in California. At the last meeting of the Board of Trade, C. T. Hopkins described the advantages of having a line of steamers, owned in San Francisco, to trade with the Atlantic and European ports. He pointed out that San Francisco merchants were threatened with a loss of trade in the North by the

manufacture steamers that can carry goods from New York to this coast and deliver them in 60 days, giving the advantages of competing with the railroads? Could enough money be obtained from loyal, faithful men to put this enterprise on its feet? He thought it could be done. On exports alone we pay \$16,000,000 per annum for freights, and nobody, so far, seems to think much about it. To carry out the suggestion, he offered the following, which was approved:

Resolved, That a committee of five be appointed by the chair to consider the feasibility of the construction of a line of large steel propellers, to be owned in San Francisco and employed in a direct trade between this city, Liverpool and New York, via the straits of Magellan and Panama or Nicaragua; also, to correspond with iron ship and

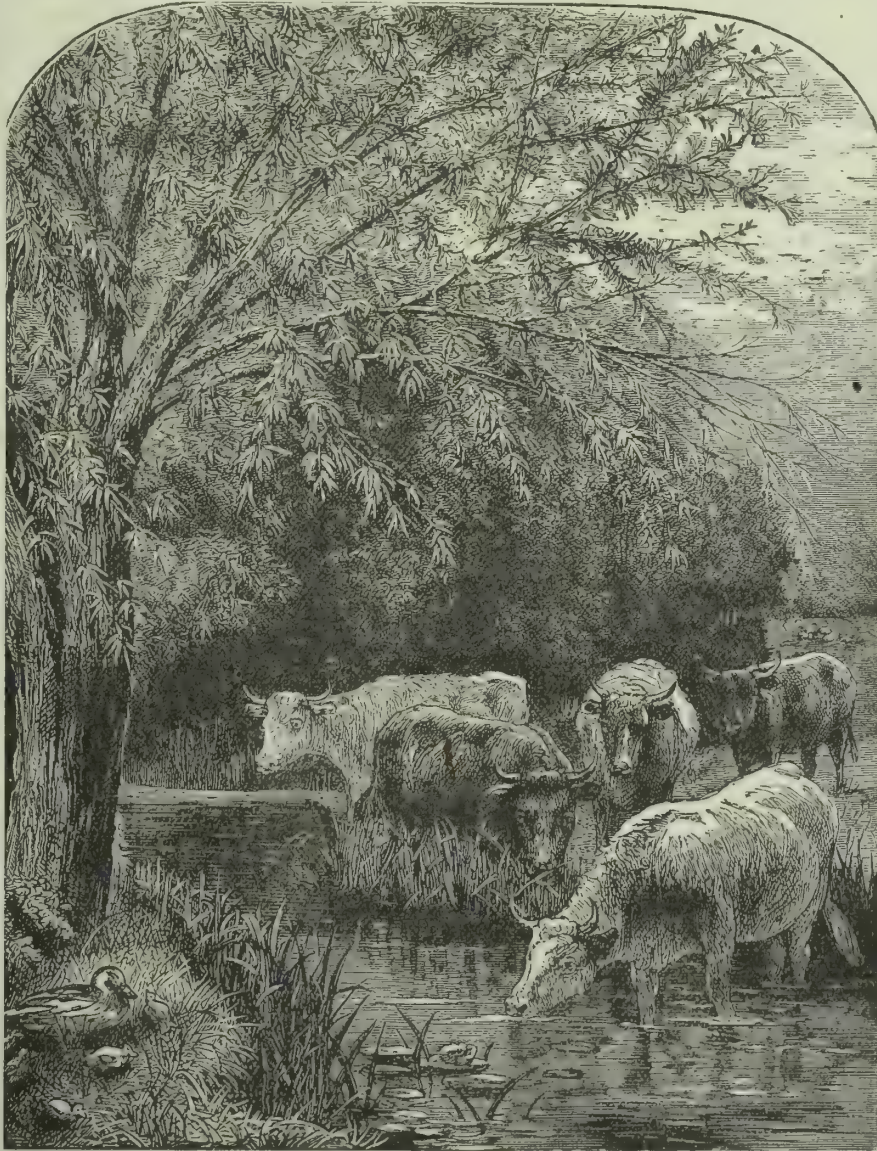
Japanese Seeds.

Mr. Zenpei, Ozawa, of the Sen Shu Yen nursery, at Tokio, Japan, has just arrived in California, to inform himself concerning California grape growing, and horticulture generally. Desiring to show his good will to the people whom he visits, he has brought with him a selection of choice Japanese garden and flower seeds, which he wishes to distribute to those who wish to test them in this State. He desires to make this gift to the readers of the RURAL PRESS, and we cheerfully aid him in his generous project by making this announcement to our subscribers, in order that they may send us their names, and receive by mail a selection of the seeds. Of course it is not known whether they will all succeed in this State, but it is more than probable that some of them will be found very valuable. Our readers will thus have the opportunity of trying the best Japanese vegetables without cost. The following is a list of the seeds offered for distribution to our subscribers:

1. Turnip—Cooked and eaten like the common turnip. The Japanese cut them up and pickle them with salt, pressing them down something like kroust.
2. Radish—Large white radish, growing sometimes three feet long. Highly esteemed by the Japanese. Grows to maturity in about three months.
3. Spinach—of which the Japanese make a salad.
4. Japanese cabbage.
5. Radish—Large, bottle-shaped.
6. Buckwheat—Very large grain.
7. Mustard—Cultivated for greens and for salad.
8. Meisna—A plant resembling celery in its manner of growth; used by the Japanese as "greens," or sometimes pickled with salt.
9. Turnip—Large, flat. After the plant has started the Japanese remove the earth around it, and the turnip enlarges, making a growth sometimes 10 inches in diameter and three or four inches high. It is said to be very sugary and delicious. This vegetable comes from about 400 miles west of Tokio.
10. Luffa—A vegetable resembling a large cucumber. They are eaten when green, the peel being removed and the flesh boiled. When ripe the juice is used in washing the person, the effect being cooling and pleasant.
11. Carrot.
12. Tohrua—A plant with edible leaves, used as "greens," and sometimes used in flavoring soup, and sometimes as a salad with vinegar.
13. Japanese Bush Beans—The plant sometimes growing three or four ft. high and bearing many pods. The beans are first soaked in cold water, and then cooked over a slow fire until they become quite soft, and they are then mashed.
14. Radish—Small, but very long and fine flavored. The Japanese dry them, afterward freshening them up by soaking in water.
15. Japanese Celery—Very delicate.
16. Japanese Onion—Growing very large and oblong in shape.
17. Gourd—Very large, sometimes growing large enough to hold a gallon and a half of water.
18. Small ornamental gourd.
19. Yungaw—A plant resembling a watermelon; the outer shell is dried and afterward soaked in water and cooked. The pulp, freed from the seed by pressing, is considered a delicacy by foreigners in Japan, but must not be indulged in to excess. There are two varieties, one round, the other long.
20. Japanese Running Bean—Color, black.
21. Japanese Bush Beans—Resembling our pink beans.
22. Japanese eggplant.
23. Japanese Watermelon—not large, but very sweet.
24. Japanese Parsnip—Growing very large in deep, rich soil, sometimes weighing 10 lbs.
25. Chineseycho—A plant with edible leaves, the leaves being cooked like cabbage. When the plant grows up large the leaves are eaten by stock.
26. Teinah—Another plant the leaves of which are cooked like cabbage.
27. Raeshi—A plant growing like a cucumber, the pulp of the fruit being eaten raw when ripe. The flesh is reddish, and sometimes has a slight bitter taste.
28. Japanese Muskmelon—Quite small, but very sweet.
29. Japanese Large Muskmelon—Oblong, not so sweet as the small kind.
30. Japanese Cucumber—Small, excellent for pickles.
31. Japanese Smooth Skin Cucumber—Large, good for slicing.
32. Seven kinds of Japanese beans, of different colors; all desirable for food.
33. Ten kinds of Japanese flower seeds.

We have a small amount of each of the above seeds, which we will send (until the supply is exhausted) to subscribers who desire to test them. Those wishing the seed will please send their names and postoffices, clearly written, with two three-cent stamps for cost of mailing. We shall expect those who grow plants from these seeds to inform us hereafter what kinds they find valuable.

BROOM CORN.—We learn from the correspondence of the Visalia Delta, that around Selma, in Fresno county, there is now being harvested a large crop of broom corn, which will pay well, as it is now worth about \$90 per ton. All have planted the golden seed, which largely outyields the old, or black variety.



THE TENANTRY OF THE MEADOW.

completion of the Northern Pacific. A gentleman engaged in the business of building steel and iron steamers, a member of a firm having £1,000,000 capital, has recently been on this coast examining our iron ore, and he has gone away with the impression that he could manufacture steel here and work that steel into ships and machinery as cheaply as he could do it in England. He had also been informed by a man whose word is beyond question, a capitalist who intends to take an interest in this venture, that if there is any encouragement to come here with a force of 200 men, with all the money and machinery necessary to go to work to start the construction of steel steamers on this coast, they will come here and do it. In view of these circumstances, he thought it would be wise to appoint an active committee to ascertain whether proper encouragement could be given. Could sufficient capital be raised here to induce such a venture to become established, and

steamer builders in the United States and Great Britain with a view to the establishment of their industry on this coast.

Capt. Merry and Mr. Williams also spoke in favor of the establishment of a line of steamers to ply between here and New York and Europe. It must be acknowledged that the realization of some such projects is of vital importance to the producing interests of the Pacific coast.

WATER IN FLESH.—Analyses have been made by Prof. C. Virchow of the amount of water and extract in the flesh of different animals, with the view of obtaining some general data for the introduction of a method whereby the value of meat might be determined. The differences were so slight, however, that no results of any value were secured. Veal contained more water than beef, lean beef had less than well-fed beef, and unhealthy meat a greater amount than sound meat. The same holds good for the extract.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

The Cannery's Combination.

EDITORS PRESS:—In the PRESS of August 5th, I read the article entitled "Marketing Fruit" with much interest, and I wish to offer some thoughts on the same subject for consideration by the fruit growers of California. The combinations of corporate greed and avarice will absorb all of the profits of the orchards of the State, unless some means are taken to thwart their designs. The fruit-canning corporation would make a "corner" in fruit, the same as men of the Friedlander class did in wheat. But the horticulturists of California have the power in their own hands to frustrate the cupidity of a soulless corporation, if they will only employ the methods at their disposal. If the orchardists of the State will start fruit-canning establishments at their own homesteads (which they can do at a small cost), they can put their canned fruit on the market, and undersell the fruit-canning combination, and then realize a fair profit. Another method would be to plant such kinds of fruit as would pay for drying, and have driers on every estate having an orchard thereon. The driers need not be complicated nor costly in their construction, but made upon such a plan as to be within the reach of persons of moderate means. This is an outlook of considerable importance to the fruit growers of this State. Any plans that will make the horticulturists independent of an insatiate fruit-canning monopoly will receive my hearty co-operation.

It is unjust to deprive the fruit raiser of the just rewards of his toil by a grinding monopoly, and just as the wheat raiser was beginning to turn his attention to the more remunerative prospects of fruit culture, up comes a combination of capital to dash his hopes to the ground in the form of a fruit-canning corporation. A damaging blow will be given to one of the best interests of our State by the fruit-canning combination, unless the fruit culturists of the State adopt some plan, as suggested, that will place them on an independent footing, and secure to themselves the just rewards of their labors. We hope to see this question widely discussed through the PRESS and other papers of the State.

O. F. SHAW, M. D.
Sebastopol, Sonoma Co., Cal.

The Compromise Clause in the Debris Decision.

EDITORS PRESS:—The true inwardness of the intentions of the hydraulic miners is becoming more apparent as the time for the convening of the Legislature draws near. There seems at present to be a lull in the storm of litigation which has been raging so incessantly for the last half year, and the residents of the Sacramento valley are beginning to feel easy in that false security denoted by a cessation of open hostilities. Our agriculturists are too easily deceived by appearances. They too readily jump at conclusions; and are prone to form their conclusions without due consideration of both sides of the matter in hand. As a general thing, they are too lethargic in their movements. The moment of vital importance passes, and the move which should have been made to checkmate their opponents is carried out too late, and does only the single duty of defense. I would not wish to be understood as advocating radical aggressiveness; yet it has been, I think, our misfortune, in this controversy, to be too slow, rather than too hasty. We have been too willing to let the attorneys do it all. Believing it to be simply a case of equity, we have erroneously concluded that public expediency was of no import in the consideration of the legal points at issue.

It is to our inaction that we owe the unsatisfactory "compromise clause" of Judge Temple's decision. The Hydraulic Miners' Association has not been backward or at all delicate in exaggerating the importance of their calling. A stranger, reading the evidence in the Gold Run case, would come to the conclusion that hydraulic mining was the one paying, and only system of gold extraction ever extensively practiced; that it was the paramount industry of the Pacific coast; and that the agricultural value of the Sacramento valley was unworthy of consideration when compared to the income from the hydraulic mines of a single county. It is not very strange that Judge Temple should forget himself, and overstep the strict bounds of duty in order to ameliorate the suffering about to be entailed upon such a "great industry" by a suggestion from him in his official capacity. Nor is it strange that the hydraulic miners immediately clutched at the straw left floating between them and perpetual injunction. They at once concluded to push their advantage to the furthest by nominally acting upon the suggestion.

The term "compromise" has been bandied back and forth between the Hydraulic Miners' Association and irresponsible residents of the valley. It has been attempted by the owners of hydraulic mines to form a stock company for the building of dams and "other protective

works." Efforts have been made to secure the support of all residents of the mining sections in this questionable undertaking; but it is gratifying to see that the quartz, placer, and drift miners do not eagerly clutch at the bait held out to them by their magnanimous brethren of the big nozzles. It is becoming too evident to them, that their share of the turkey will, in all probability, turn out to be crow.

They are awakening to the fact, that the aim of the valley residents is not the destruction of all mining operations, but simply the protection of property and the enforcement and upholding of the legal rights of every individual alike. They will soon realize that it is dangerous and inexpedient for them to cast their lot in with the hydraulic miners, and that the only secure course for them to pursue is to let justice be fully enforced by the proper officers of the law.

The hydraulic miners are now working up what they claim to be the "compromise measures" proposed by Judge Temple. They have sadly and unwittingly mistaken the term when they imagine that a legal decree can be a compromise. Equity is fixed and irrevocable, and no judge has it in his power to knowingly depart from the decreeing of full justice. As long as the courts hold it to be a nuisance to deposit tailings in the rivers, or where they will, by natural causes, be carried into the rivers, to the detriment of property below, just so long is the term "compromise" out of place. Even could a compromise be legally undertaken, there could be no compromise without a remedy, except the hydraulic companies buy up all the lands liable to injury from their operations; and even then the injury and outrage done to the community at large would be so evident and unremedial as to call for summary and effectual restraining action upon the part of the Federal or State Government.

No one fancies that our Government could sit still and see the destruction of the Sacramento valley completed on the scale that it has been begun; the bay of San Francisco converted into mud flats, and the Golden Gate only kept open by the action of the tides. No one can, when riding through our debris-cursed counties, refrain from asserting that hydraulic mining has been an unmitigated evil, and that it were far better that the few hundred millions of gold produced by them had never been brought to light, rather than that even one county should suffer such blighting evils.

Not only is "compromise" impossible, but it is impracticable, from the simple fact that the hydraulic miners do not hope to restrain any but the coarser of their debris from passing down into the valleys. They know that it is useless to attempt to hold the suspensory matter of fine sand and clay in the river canyons, and yet they are weak enough to fancy that we of the valley could submit to being compelled to use water "polluted with mud, and rendered less suitable for domestic and other uses." State Engineer Hall says that 60% of the hydraulic mining debris consists of suspensory matter which could not be held back by any restraining works in the canyons. Col. Mendel, in whom the hydraulicers should be satisfied, says that dams are not a complete remedy; that at some stages of water most of the debris will escape, while at no time can the finer material be retained. It is solely this suspensory matter that has done 75% of the damage to our cultivated lands; and since engineers can hold out no hopes of restraining this matter in the canyons of the rivers, and thus admit that hydraulic mining cannot be prosecuted, except the fine suspensory matter be allowed to pass off through the rivers, it is the duty of the valley residents to say that no hydraulic mining shall be practiced, except by those companies who secure settling reservoirs for their muddy water.

When the farmers of Wheatland objected to Judge Temple's decree, on the grounds that under the law there could be no compromise, and that since future hydraulic mining meant continued destruction of property, it was not policy to talk of such an impracticable scheme as compromise, they were pointed out by the hydraulic miners as a fair sample of the aggressive valley residents. Because they were discerning enough to see the real meaning of such schemes, and independent enough to express their firm convictions without waiting to see what others would do about it; because they saw that such action would only be an evasion of the law, and virtually a provisional license to hydraulic mining, they are to be commended rather than condemned. It is only by such prompt, energetic and determined action that we can secure our rights in this matter; and it is incumbent upon the residents of the whole Sacramento valley to act at once, and intelligently, in the matter of sending men to the Legislature who will not only not evade this issue, but who will bestir themselves to restrict, by legislative enactment, the unlawful use of our river beds as easements for hydraulic mining debris.

It is plainly evident at the present time, that the hydraulic miners will bring every influence to bear in order to secure official authority from the next Legislature to put restraining works in the rivers. Until they do get legislative sanction, it will be unlawful for them to place obstructions in the river channels. They hope, under the cover of undertaking remedial works, to be allowed to continue their practices for a while longer. The time is past when they might have secured sufferance in such proceedings. There can be no experimenting now at the expense of the property below, and no works

will be accepted which are not a complete remedy. Even were mines allowed to begin operations after building protective works, the injunctions issued by the courts would still remain operative, and as soon as the restraining works failed to completely restrain the debris, the legal decree would at once enjoin further operations. The one important thing for the residents of the valley to do is to enforce the legal decree of the courts by a bill from the Legislature, making it a misdemeanor or felony to allow the hydraulic mining debris to gut into the water-ways.

Although this may be called a radical measure, yet it is the only safe one. Hydraulic mining has already done incalculable damage to our agricultural lands, drainage system and our bays, and it is not politic to let any false humanitarian feelings stand in the way of the abatement of a public nuisance. This may entail loss upon private mine owners, and may seriously discommode a few laboring men, but are their sufferings to be compared with the amount of property destroyed and suffering entailed by the baneful effects of hydraulic mining debris? Have we not as much right to demand that the rights of citizenship and inviolability of property be respected by hydraulic miners, as well as by others?

It is not reasonable to expect that hydraulic miners will cease operations until they have "played their last card," and the only remedy for the farmers is eternal vigilance, prompt and united action, and a legislative bill providing for an equitable and permanent settlement of this question.

M. H. D.

Oakland, Aug. 15th, 1882.

SERICULTURE.

Silk and Silkworms.

EDITORS PRESS:—Spring came with its millions of blossoms and thousands of birds and myriads of insects, wakened up from their long winter sleep—brought to life again through the magic touch of this, the prettiest of our four seasons. Spring came, and the buds of the mulberry threw out their tender, delicate leaves, and the silkworm eggs, at the approach of the warm and balmy season, took the color of the slate, then a still lighter hue, and, finally, gave birth to a dark, hairy, little thing, known and admired for the silky envelope it wraps itself into before accomplishing its last metamorphosis and emerging as a perfect insect or moth. And now that spring has gone, and this little insect, after a short existence, has gone, too, I will entertain your readers about its doings and success, and tell them what we may yet expect from the rearing of the precious insect, which spins for us that fine and glossy thread so eagerly sought after by our belles, to make them still more charming and fascinating.

From 1877 to 1880, I had quit, temporarily, raising silkworms; but, having made up my mind last year to go at it again, I procured some grain from Utah, of a French annual race, which, however, turned out to be a rather poor one. So, this year, impressed with this very simple proposition, that if we are to make the silk business stick in California, we must, by all means, raise none but the very finest annual races to be found in France and Italy, I sent to the well-known firm of Sacconi, Natali & Co., of Ancone, Italy, for silkworm grain to start with, my intention being to propagate it throughout this or any other State where people are trying to found the silk industry for good. That grain was packed, indeed, with great care, and reached Nevada City in due time, on the 4th of April; but lo! and to my great dismay, when I opened the package, I found half the eggs hatched, and no leaves to be had, for not only was the season late, but a very hard frost the night before had killed almost all the swollen buds of the mulberry, so much so that the prospect was that no leaves whatever could be had before the 1st of May.

I have always been in favor of early hatching, and, for reasons that I have repeatedly stated in my letters to the PRESS on that subject, I regarded "an early hatching as the corner-stone of a successful education," though this time I certainly thought the hatching by far too early. But there were the eggs half hatched, and the hungry little things crawling around as much as their gauze prison would permit, and in search of their natural food. What was to be done? I soon made up my mind, for frost or no frost, leaves or no leaves, I was bound to save the worms from starving, and bring them to a successful end; and I fed the worms with lettuce and blackberry leaves—one day a meal of lettuce, the other day one of blackberry leaves. Poor little things, didn't they go after that scanty food! For 15 long days they got nothing else but one meal a day of such food. For another 10 days I fed them with swollen buds of the Rose-leaf mulberry, a late kind that had not been injured by the frost on that frosty night of the 3d of April, cutting the buds in two and rubbing them with the hands to loosen them up; and finally, on the 1st of May, I gave the worms their first meal of very small mulberry leaves. It took the worms all that time, 25 days, to accomplish their first moult, but they were saved, and entered on their second age before the lot of grain of my own raising, that I had put to hatch, even showed signs of hatching out.

Now about the balance of that grain from

Italy, which I had put in the cellar, in the hope that the low temperature of that place would stop the hatching till I could get leaves from my trees. It nevertheless kept on hatching, until the whole box got black with them; and here I made another experiment, for I kept the newly hatched worms in the cellar, and for two long weeks the poor insects had to do without food; and, by the way, if that does not beat Dr. Tanner, I do not know what will. At the end of the two weeks I concluded to remove the worms in the cocoonery, and for a week fed them with mulberry buds split in two, and on the 1st of May with leaves. From the moment I got leaves enough, I gave all the worms three meals a day down to spinning time, and during the last age I fed them exclusively with the wholesome and beautiful leaf of the grafted Rose, or Rose of Lombardy, so eminently adapted to our climate; and now what was the result? The samples of dried cocoons I send you with this letter will show. Indeed, I was perfectly astonished. I never had sickness of any kind with those worms, and though they didn't accomplish their moulting simultaneously, on account of having been hatched at different times and very irregularly, still they got along splendidly, and spun the nicest and heaviest cocoons I ever raised since 1871. You will notice that the samples I send you are cocoons of average size, peanut shaped, very firm all round, including both "ends," of a pale yellow color, and of that grain so desirable in cocoons, and which denotes a fine silk. It required 325 of those cocoons (fresh) to make a pound. This I really called quite a success.

Notes on Temperature.

Not so with my second lot of grain, which hatched out too late, so that I could not get the worms ready to spin before that hot spell from the 29th of June till after the 4th of July. The result was what I expected—very light cocoons, over 800 to a pound. It is well to give the cocoonery plenty of air, but whenever the thermometer runs above 78° and is allowed to go up to 92°, then no good results can be expected. Our "splendid climate" and "wholesome food" are certainly very good, but (what I have been contending for 15 years) they are not sufficient to raise silkworms successfully in California. In fact, this country is no exception to the rule, and here, as elsewhere, the temperature of the cocoonery must not be allowed to run above 80°, or else trouble will arise among the worms. As our cocooneries are not built in a way to permit us to lower or elevate the temperature of the room at will, the best way for us to bring the education to a successful close, and before the hot weather sets in, is to hatch the grain very early. This is what I will do again next spring, never minding whether the mulberry trees are showing signs of budding out or not, and I will give the worms one meal a day of lettuce or blackberry leaves, and no more, for fear of diarrhoea breaking out among them.

Thanks to my experience of this year, I believe that such a rough treatment in their early days renders the worms more stout and better able to stand diseases of any kind during the latter part of their life. At any rate, I regard my experiments of this season as quite important, and I intend to call the attention of French and Italian sericulturists to it, as it may prove a new departure in silkworm raising, considering the precarious condition of that industry, brought on by the terrible epidemic, *fackerie*, or blight, which is as bad now as it was 10 years ago. In a year or two, however, I will be better able to tell whether this new departure in raising silkworms has the importance which I expect and hope it has.

Still Another Experiment.

Once in a while, you may have read what some people who never raised any silkworms in their lives have to say in regard to raising silkworms in California right upon the trees; and, in support to their pet idea, they would dwell in glowing terms on our "exceptional, splendid climate"—always the same old tune. Many years ago, for curiosity's sake, I made such an experiment, and tried to raise silkworms on trees and bushes, but the birds did not leave a single worm to tell the story. This summer, when my second batch of worms—that one which did not do well on account of the intense heat—had reached their last age, I put 100 of them on a large mulberry tree, which I covered with a net, the kind I use to keep the birds from getting away with my cherry crop. My experiment consisted in this: As the heat in the cocoonery was between 88° and 92°, I was anxious to find out whether the worms would do better during such hot spells right outside upon the trees than inside in the cocoonery—as well ventilated as it was. But the yellow-jackets! I hadn't reckoned on them; and how quickly they found out what delicate food was in store for them under that net! They would keep on flying around and keeping a close watch on the worms, and woe to those that would drop off from the leaves they were eating, for as soon as they would get a footing on the side of the net, how quickly the yellow-jackets, through the meshes of the net, would hack to pieces and pack away for their little ones the poor defenseless worms. Finally, the yellow-jackets got inside the net and cleaned out what was left of the worms, with the exception of one that spun a very poor, light cocoon. Still I had a chance to find out that upon that tree the worms did not behave any better than in the cocoonery, showing conclusively that the "heat" in the cocoonery, and not the lack of air or ventila-

tion, was the direct and only cause of the worms doing so badly.

About Names.

In a paper on the silkworm published in the PRESS last spring, I took the pains of giving your readers a list, with definitions of the principal terms used in raising silkworms, such as "cocoonery," "education," "grain," etc., as those words are of general use wherever silk is grown. I insisted on using them in the same acceptance here in California; but I noticed recently the use of the word "green" cocoons, for "fresh" cocoons; let me tell you that it is all wrong, for there are three different colors of cocoons, viz., white, yellow and green. Cocoons, in fact, are classified as such. The green cocoons are the Japanese, which are of a greenish yellow; and in Europe, cocoons raised from that race are called green cocoons, to distinguish them from the French yellow. I have in my possession pamphlets on silk culture published at Melbourne, Australia, and I see that they use the same word as I do—fresh cocoons—when ever the chrysalis inside the cocoon is alive. Why should we not, all around, adopt the word fresh, instead of the wrong one, green? Let us have as little confusion in names as we can, and let us use names that have long been in use to express the very same thing. I hope that our friends in the silk business will agree with me on that point, and use the word fresh whenever referring to cocoons fresh spun.

Will Silk Growing Pay?

I have had many inquiries about this important part of the business, and as I had that question thoroughly ventilated in former letters to the PRESS, I will refer one and all to those letters. But I had no idea then that it would pay in the way it did me this summer; for at the time that my education was in full blast, and the worms from my second batch of grain had reached their third age, there came on my place a little girl.

"Sis, what do you want?" said I.

"A bit's worth of silkworms," replied the little girl, in as natural a tone as if she were buying peanuts.

"What!" I shouted, thinking I hadn't heard right.

"Silkworms," she said; "won't you sell me a bit's worth?"

"Oh, yes, I will," I rejoined, "come on." And taking the little girl to the cocoonery, I put into a box a big handful of silkworms, and handed it to her, giving her at the same time a few explanations about feeding, etc.

"Thank you, sir; here is your bit," said the girl, at the same time handing me a ten-cent piece.

"Never mind your bit," said I, "I don't want it."

"Oh, no, you must take it," quickly retorted the little girl; "more girls, too, are coming to get silkworms, and you are going to have quite a trade."

Well, thought I to myself, and a bland smile spread all over my countenance at the thought of getting a new source of revenue, retailing silkworms. Who ever had thought of it! And sure enough, more children called for a bit's worth of silkworms, and altogether I sold 50 cents' (five bits') worth of worms—just enough to buy me a new straw hat to go under the hot sun.

Now, to every person inquiring from me how much can be expected from the raising of silkworms, I will say: Anything from a straw hat up.

FELIX GILLET.

Nevada City, August 8, 1882.

FORESTRY.

Forest Trees of California—No. 9.*

Incense Cedar—(*Libocedrus Decurrens*)

"Down in a vale, where lucid waters played,
And mountain cedars stretched their downward shade."
—Sir Philip Sydney.

This great cedar of our coast and mountains is remarkable for its super-eminent use, beauty, precision and aspiring grandeur. Devoted to the conic plan, few diverted limbs ever spread afar to mar the general purpose. Elegant and upright in early life, it becomes at length grand and dignified with age. It is also eminently noted for great rapidity of growth, wonderful lightness, stiffness and extraordinary durability; in short, a thousand uses have sprung up and are multiplying around this interesting cedar as its most inestimable qualities become better known. Fortunately for us, it is one of the most extensively distributed trees of the Pacific—found from the Coast range north, south to San Diego, Sierra Nevada, southern Oregon, and most of the interior mountain region from 2,000 to 4,000 ft., and even thrives quite well at 6,600 ft. altitude; and, so far as we have observed, seems to give out at 7,000 ft., though said to extend to 8,500 (?). As usual with our sylvia, flora and fauna, this also is found lowest along the coast, where it finds the requisite temperature, etc., with combined moisture. The base and lower trunk somewhat resembles the Western juniper (*J. occidentalis*). It is to be noted in general, that trees of such broad, outwardly sweeping, or expanded bases seldom blow over, and to the perceptive and artistic eye their significant expression is one of firmness and stability. One hundred to 200 feet high, six to nine feet in diameter (rarely larger),

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

the shaft is often clear of limbs 80 to 100 feet, and although the lower limbs, or even dry branches, may encumber the middle portion, pin-knots do not damage the timber. As the massive body tapers more rapidly above than redwood, and is less eccentric than juniper, nevertheless its general port reminds one most of the best specimens of the latter. The light cinnamon bark is thick, of shreddy-fibered texture, but so concretely compacted as to render the surface evenly ridged by very long, big bars of bark. These sweep obliquely down on the long spiral twist of swift water lines, which gives it the expression of deep, determined currents, and adds to dignity decision and force of character. Top conic; the foliage, closely viewed, is in compressed, flattened sprays, aspiring and upright, thickened, and somewhat succulent, or luxuriously tender; if not a languid type, at least in no sense rigid; not thrillingly sensitive to the breeze, but concurrently moving in masses; bears some resemblance to the great Western arbutus (*Thuja gigantea*), but these tiny leaf-scales are opposite and quite awl-pointed; besides, the close-pressed adherent base runs far down along the twigs below the free tips. The general hue of the foliage is light yellowish green, warm tinted, beautifully golden, bead-tipped, with tiny, oblong male catkins, as the fruit ripens in October and November. The cones are pendulous from the tips of twigs—oblong, egg-form, of six very unequal scales; two principal ones, or large pair, swelled on the back gradually below, pointed on the back just below the tip; intermediate pair much narrowed; a few bract-like, spine-tipped, short scales under the base. The seeds are oblong, like a grain of rye, two winged—one wing developed to the size of the larger scales, the other at its side, below, and much smaller. The cone is seldom over three quarters of an inch long, little more than one-third as thick, and for the most part a trifle compressed. Wood, pale cream-tinted in color—a delicate salmon shade. This would hardly warrant the name "white cedar," sometimes applied to it, as well as to the giant arbutus. The extreme lightness of the lumber and its sweetness for packing-boxes will commend it for express and commercial purposes, for posts and fencing, and especially railway ties, for sleepers, stringers, and ground timbers of all varieties, and for unnumbered uses, a tithe of which cannot be told in this brief notice. Formerly these trees were cut away and burned up, to clear the track for redwood, tamarack, and ponderous pitch-pines, etc.; now all else is superseded by this incense cedar. Thus we see how hasty and ill-advised notions give place to genuine merit.

A fungus (*Dedalus*) attacks and honeycombs it; and riddled as it may occasionally be, still if spike or nail find substance enough to hold, or sufficient solidity to resist crushing, then, practically, for many purposes, even such lumber is as good as the soundest timber; because when the tree dies the fungus dies, and thenceforth will absorb no more moisture than the soundest part, and is alike imperishable, contrary to common experience in similar cases. This is another timber nearly as lasting as solid granite; hence we see how little reliance is to be placed upon ignorant assertions of transient visitors from abroad. For ship or boat lumber, the clear stuff from sound wood is so exceedingly light, stiff and durable, and practically so abundant as to be available, that few timbers on this or any other coast can excel it, unless we except the yellow cedar, or cypress (*Cupressus nutkaensis*), which is a little tougher, stronger, perhaps more elastic, and equally durable, if one may be allowed to judge apart from thorough tests and careful data, which the apathy or ignorance of some governments appear to deem unworthy their sublime attention. There are in California a thousand times more and better kinds of naval timbers on Government lands as important to preserve as the live oaks of the South Atlantic States. It would not in the least surprise me if, after due investigation, California would be found to possess a vast amount of the best naval timber in the world, and a hundred fold more lasting than the best now in use, if we except a few of which there is no adequate supply worth mentioning anywhere.

HAS THE MOON AN ATMOSPHERE?—The Providence Journal, in an article on the planetary attractions for the month of July, says in regard to the probability of the moon possessing an atmosphere: The moon just now is an important member of the solar family. Something new may be anticipated in her monotonous story. The observers of the recent solar eclipse detected imitations of an atmosphere on her apparently lifeless surface. This seems to confirm indications of movement that have never been accounted for, and scarcely credited in scientific quarters. Two days after the eclipse, an observer of 40 years' experience, while looking at the moon, saw a cloud 100 miles long and 40 or 50 miles broad, hovering over the "Mare Crisium," presenting a misty, feathery appearance, unmistakably different from other portions of the moon's disc. If this appearance was a reality and not an optical illusion, other observers will be sure to detect something similar. * * * The moon comes in for her share in the novel celestial problems that are the delight of the scientific mind. Indications of an atmosphere, observed by the French astronomers, and a misty, feathery cloud floating over one of her huge craters, revive the interest in her desolate face, and suggest the possibility that life may exist, in some form, in a world that seems to have played her part in the material economy of the universe.

THE STOCK YARD.

Livestock Notes.

The following items of interest to stock growers we glean from the August number of the *National Livestock Journal*, just received:

Prevention of Disease.

That the immense capital now invested in livestock needs protection, no one will deny. Statesmen and philanthropists are aware of the condition of affairs, and have already lent their influence in this direction. But the increase and sudden invasion of disease among domestic animals of late years should awaken new zeal in our Representatives in Congress, and admonish the whole people of the necessity of more vigilant measures for protection in time of need. Yet, the only effectual way to guard ourselves against the losses from disease, is to educate the farmers and livestock men in the general principles of veterinary sanitary science. This movement, therefore, should receive promotion at every hand, and thus be made a leading feature in agricultural education throughout the country.

Breeding From Young Bulls.

An error very commonly committed, is breeding from young, untried bulls. Where this is practiced upon females of high merit, the results may be anything but encouraging, the move being a step backward rather than forward. Of course, there are young bulls of such superlative individual excellence, backed up by such excellent descent, that they will not do otherwise than get superior progeny. But this is often not the case; hence the plan should only be entered upon when the inducements seem exceedingly favorable. Young bulls sometimes sire moderately good calves the first season, the quality increasing as they get age, though the females are alike each year.

It is a question worthy of consideration, whether any bull should be put to full use in a herd until he has made so favorable a mark upon a limited number of young things as to settle any doubt as to his value. An exception to this would occur in the case mentioned above, where both the breeding and the individual merit were so high as to pretty much preclude any chance of risk.

Selecting a Bull for the Herd.

The common saying, that the breeding and blood of the male forms one-half the herd is, in the main, true. It is remarkable, however, to what extent family peculiarities cling to the female line. Of course, very diverse crosses, followed up during a series of years, will affect the most skillful previous grafting upon any family known to the record. So, also, will the removal from a locality where the climate, soil, etc., are favorable, and where the feed is both abundant and good, to one where the opposite conditions prevail, cause variations in the highest degree disappointing. Under such influences, the greatest skill and tact will fall short of the mark aimed at, and no complete results will come of any plan of selection, no matter how wisely made.

Skin Parasites.

One of the chief causes of animals becoming infested with lice is neglect of proper sanitary arrangements. Uncleanliness and an impoverished state of the body are the causes which engender the propagation and development of those unwelcome little intruders; hence, in order to eradicate them, it is absolutely necessary to give special attention to the laws which govern health. The pens where the young pigs are kept should be kept scrupulously clean, and the bedding should be destroyed, so as to leave no traces of the disease. A very safe, and, at the same time, efficient remedy for the extermination of these filthy parasites is sulphur ointment; and in consideration of the youth of the patients, perhaps it may be well to give it a fair trial before using more potent drugs. Another very simple remedy is to give the pigs a thorough washing with soft soap and warm water, and when they become dry, to sprinkle their bodies with hard-wood ashes. Whatever treatment is adopted, the frequent use of soap and water, with cleanliness and proper diet, is absolutely necessary.

Overloading Cows' Stomachs.

When cows are changed from scanty to flush feed, it often happens that the benefit of the more liberal supply is neutralized for some time by allowing them to gorge themselves to the extent of uncomfortable fullness. An excessive distension of the stomach produces inflammatory action and impedes digestion, and tends to diminish the flow of milk, and to impair its quality. Overloading a cow's stomach invariably gives a strong and disagreeable animal odor to her milk, that injures it for butter or for cheese making, and also its healthfulness for food. Such an overloading is always indicative of a double loss—a loss from failing to utilize as fully as might be the flush feed, and a previous loss from a supply of food insufficient to enable the cows to give as much milk as they are capable of giving. When cows are fed with a liberality that develops a full flow of milk, they will not overload with a food so little concentrated as green grass. The fact that they do overload is an evidence that their previous food was too scanty for profit, and, consequently, that loss has been endured on account of it. But when such a course of feeding has existed, and a change is to be made to a better one, loss from over-eating may be prevented by admitting the herd gradually to the new feed, and supplying

them with all the salt and water they desire. The increase in the new ration should never be so great as to change the flavor of the milk.

THE SWINE YARD.

Feeding Young Pigs.

Col. F. D. Curtis, of Saratoga county, New York, gives the *Rural New Yorker* an entertaining disquisition on the care of young pigs, which may be suggestive to some of our small pig ranchers:

Few persons really know how to feed young pigs aright. They generally overdo the matter, and give them too much at a time. They muss and wallow in the feed left in the trough, so that it is unfit for them, and when hunger forces them to eat it, it makes them sick. The owner, seeing feed in the trough, either adds more to it, or waits till it is eaten. In either case he does wrong. Before feeding the second time, the trough should always be washed or swept out clean. Pigs should never be made to eat food in which they have tramped with their dirty feet. This leads to the remark that their feet should not be dirty. The pen should be so constructed that the feeding place—the trough—should be sufficiently elevated so that the juices in the pen will not "nasty up" this part, and there should be bedding enough in the pen to enable the pigs to keep their feet and their entire bodies clean; when this is done, the trough will not be so dirty, and the pigs will do better. We have often cautioned our readers against giving young pigs too hearty food, as it is injurious to them; so is dirty food. The former produces derangement of the stomach and bowels, leading to diarrhoea, and if continued, to inflammation of the bowels, and the latter to nausea, loss of appetite, and perhaps the same results. In either case, the pigs do not thrive. Another mistake which must be guarded against is feeding swill or milk too sour.

When wheat or rye bran is mixed with the swill, fermentation is very rapid, especially in hot weather, and the swill will reach a condition unfit for food before the owner is aware of it, unless he mixes only a sufficient quantity at a time for one or two feedings ahead. Fermentation in a swill barrel where sour milk is mixed with the contents is actively going on all of the time. As fermentation changes the character of food, the farmer often feeds his young pigs just exactly that which is almost if not absolutely poisonous, while he is supposing all of the time he is giving them the most healthful and nutritious kinds of food. For instance, he puts skim milk into his swill barrel, so much of it that it is not fed out as soon as it is simply sour and lopperd, and it remains there until it undergoes the other forms of fermentation, and becomes either acetous or putrefactive, either condition rendering it unfit for food. A swill barrel, to put it in plain language, so sour that its contents are either like vinegar or alcohol, or so stinking that putrefaction is evident, is not the proper medium for healthy pigs. The deleterious effects of bad food may be counteracted somewhat by feeding charcoal freely, which pigs, with a knowing instinct, will always devour greedily. "A little and often," is the rule of all successful pig raisers; "a little" means just what the pig will eat without leaving the trough, and when it is first taken from the sow, it could be measured in a gill cup; as it grows older and larger, the ration should grow with increased size and appetite. "Often" means, when the pig is young, not less than six times a day, and when older, not less than four, until the growing age is over and the fattening season begins, when a pig will eat three times in a day all the food it can digest.

To do just right, the milk skimmed in the morning should all be fed by night-time the same day, that is, skimmed or sour milk should all be fed within 12 hours after skimming, and bran mixed in it should also be fed within 12 hours. In hot weather six hours would be better. To manage this business properly, there should be two swill barrels, and mixtures be made accordingly, one being filled as the other is emptied.

If the pigs are confined in a pen, a little green grass twice a day is excellent, lots of weeds will also find a ready market in the sty if they are supplied green and fresh; they will promote rapid growth, and a shoat will do well on them alone without other food. When corn is fed in summer, the weeds and grass are cooling and excellent correctives. A pig shut in a pen should always have all of this kind of green feed it will eat; they do not like it after it is wilted. We never had pigs do so well as they have this year; our milk, set in a Moseley & Stoddard creamery, does not get sour, and is carried out to the pigs sweet enough in the morning to last till night, and sufficient at night to feed them early in the morning. This milk is kept during the day in an iron kettle in the pig house, and gets a little sour during the day on account of the germs of fermentation, or the sour milk on the sides and on the bottom, which start the work of fermentation actively when the sweet milk from the creamery is poured in; fed six times a day, the troughs are about empty in a few minutes after feeding; the pigs are always ready for a meal, and never have a yawn or occasion to sneeze. Once in a while on a rainy day they are dipped into a tub of soap-suds and washed. This is a job the pigs relish about as well as the hired men, but nevertheless it does the pigs a great deal of good.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 6.

[Written for RURAL PRESS by CLARA DRYING.]

California is not only a grain-producing State, but is fast taking eminence as one of the principal fruit-growing countries of the world. Within her boundary lines may be found fruits from all climates thriving side by side, where proper care has been given each. It is my opinion, that we can raise any fruit we may choose, if we water properly during the dry season. Many do not advocate watering, because they think it produces in the plant a set of surface roots; but a soaking once a month, and for some things not oftener than once or twice in a season, seems to me must be beneficial, and especially in the case of figs, oranges and similar fruits.

Those that are natural to the soil do not need to be fed upon moisture, but do splendidly upon the store hoarded in the earth from the downpour of the rainy season. This climate seems to be especially adapted to fruit culture, and the soil yields most bountiful rewards for the labors of the husbandman in the vineyard and orchard. Fruit, like all things else, cannot be had without earnest and hard work. The plants must be carefully selected and planted, the soil must be patiently cultivated, and pruning must be judiciously accomplished.

People who come here from other portions of the world must not expect too much at first, and by becoming Patrons may have the benefit of the experience and advice of brothers who have tried this branch of industry in that particular locality. Many trials have to be contended with, in the shape of insects, and how to overcome and eradicate these little orchard pests, which may have some mission of good unknown to us, is a perplexing question engrossing the attention of all.

While waiting for vines and trees to become of a bearing age, the cultivator should have some grain or something that will bring in a small income during the interim. Trees should make a proper growth before they are allowed to bear fruit. Three years will give good, healthy trees that may bear fruit for many years, insuring a large income to the owner.

Fruit becomes more valuable as the demand increases. Now that we are enabled, by quick transportation, to place pears, grapes, oranges, and such other fruits as make good travelers, in the Eastern markets in a fresh condition, it is well worth the trouble of cultivation, if the railroads will only charge reasonable rates for freighting, so that the producer can realize something on a year's fruitage.

Not only fresh fruits, but many in a dried state are commanding good prices in the marts of the world. California raisins are destined, at no distant time, to take the place of the famous Malaga raisin, and in some places are now sold for the foreign article.

One can scarcely conceive of anything more beautiful than a country covered with the luxuriant growth of the vine. To one who views for the first time the large vineyards of Napa and Sonoma valleys comes a feeling of wonder and admiration arising within him at this scene of verdant beauty stretching on all sides, uninterrupted save by the immense wine cellars and homes of the viniculturist.

Where wine making is the chief object, other industries seem neglected. When camping through Sonoma valley, hay could not be had for love or money, and, in some instances, camping privileges were flatly refused. Although wine is a moneyed interest and becoming one of the chief industries of the State and a source of revenue to the world in general, a man must be strongly fortified against its alluring vices, lest he yield to the temptation, and what was a fortune becomes a terrible misfortune, whirling him into the vortex of drunken insanity. Raisin making carries with its pursuit none of the dreadful vices of wine making, and for this reason I should like to see the drier take precedence over the wine press.

Olive oil will be one of the future industries of our most favored land, and he who plants an olive orchard leaves an inheritance to future generations. California olive oil may some day rival that expressed from the Italian fruit. Dried figs may also take the place of the imported article as soon as we learn the proper method of drying and packing. The fig seems to be a native of this climate, and deserves more attention than it has been having.

The fruit season makes busy days for the housekeeper who is prudent and desires to put up, for winter use, a portion of the bountiful supply of the present. Tin cans and glass jars rival each other upon the store-room shelf, and the contents of the sugar barrel mysteriously grows less as the array of preserves grows greater.

Pomona has given a bountiful harvest of her choice and juicy luxuries to her patrons, and what return can we make but to do homage at her majesty's court, the State Grange, which will be held in Stockton during the month of October, there to enjoy a feast of reason and good-fellowship, as well as her own feast of delicious fruits, delighting both the eye and the palate.

Wheatland Grange and the Debris Ruin.

EDITORS PRESS:—At the last meeting of Wheatland Grange, held August 5th, the following resolutions were unanimously adopted, and a copy ordered sent for publication in the *Pacific Rural Press*:

Resolved, That certain private companies, currently known as hydraulic mining companies, contemplate the use of the river canyons as receptacles for hydraulic tailings; and whereas, if such design is successfully consummated, hydraulic mining will be prosecuted with renewed vigor, rendering it reasonable to expect that in the course of 30 years fully one billion (1,000,000,000) cubic yards of material will be thus accumulated; and whereas, common sense and science indicate that these canyons will only be the temporary resting place of this vast mass of sand and gravel, and that its ultimate destination must be the fertile plains and the river beds of the great Sacramento valley, from Colusa county to the bay, since the annual floods, which have worn out their granite basins through the Sierra Nevada, will wear away these comparatively frail dams; and whereas, the alternatives presented to the State by such presumptuous use of the river canyons is their conversion into gigantic sluiceways, and the descent of the material, in the course of 20 or 50 years, into the valley, filling its rivers to the brim, desolating areas now supporting hundreds of thousands of population, and overwhelming the capital of the State, or the periodical expenditure of thousands of dollars to fortify these dams, and avert the impending avalanche; therefore, be it

Resolved, That such use by private companies, for private advantage, of the river canyons, entailing such constant peril upon the valley communities and such future expenditures upon the State, is an unwarranted one, inconsistent with the rights of the present and future citizens of the State, who should look to the rivers as a source of benefit, and not a dreaded source of peril; and

Resolved, That for the State to extend such proceedings and indulgence is of questionable propriety, since it manifests a disregard of the imminent danger to the welfare of the State, and of questionable favor, since in ten years the disastrous nature of the policy will become so apparent to the public that it will imperatively demand its discontinuance; meanwhile, relying upon that indulgence, these companies will have made extraordinary outlays, and now cut off from realizing their profits, they will, indeed, have suffered a great wrong at the hands of the State, in consequence of its short-sighted policy.

Resolved, That for the State to exercise public expediency, a wise public forethought, and justice, not merely to the present and future citizens of the State, but to the private companies themselves involved, demand that the next Legislature shall make it a misdemeanor to dump hydraulic tailings into the river canyons, or into any places where it will be subject to transportation into the areas and river channels of the valley.

Resolved, That the business of a large area is languishing, its property depreciating and its people becoming bankrupt, and dams will only occasion disastrous delay. The only effectual remedy, and the remedy which must ultimately be applied, is the restoration of the rivers to their normal uses, and the proscription of their employment as sand and gravel dumps. Such restoration alone will restore prosperity to both agriculture and mining districts.

Resolved, That stone dams, even were it possible to make them immovably permanent, as it is not, would not be an effectual remedy. Clay and fine sand constitute at least 50% of the material of the debris, and these elements do the major part of the injury to the valley, rivers, bays and lands. It is not pretended that the dams will arrest such elements in the slightest degree.

Resolved, That the people of the valley are entitled to water reasonably free from clay and sand, to such a degree that it will be reasonably fit for domestic consumption and irrigation, and will occasion no more than a reasonable disturbance in the channels of the rivers.

Resolved, That the appropriation by the national Congress was exclusively for the improvement of the Sacramento river, and its branches for purposes of commerce and drainage; and to that end it provided for the construction of dams for holding back the sand and gravel already in the canyons, and not for the detention of future debris for the hydraulic companies.

Resolved, That if any of such appropriation be applied for the retention of future debris for the hydraulic companies, it will have been culpably perverted from the purpose intended by Congress.

Resolved, That the agricultural classes especially, the custodians for the State of the ultimate sources of material wealth, should discharge that trust by taking active steps to cause all nominees for the State Legislature to be pledged to this legislation required for the preservation of the rivers from the threatened use.

Resolved, That we ask our sister Granges, as individuals of one great organization, to take steps, through resolutions and through active committee and individual efforts, to accomplish this one practical measure of transcendent importance in the coming Legislature, and to secure the employment of the national appropriation in that bona fide restoration of the rivers which will promote effectually the prosperity, not merely of the agricultural, but also of the commercial and industrial interests of the State.

L. W. HUFFAKER, Secretary.

DANVILLE HARVEST FEAST.—The Danville Grange meeting and harvest feast on Saturday last was a pleasant social affair, and the numerous visitors met with the hospitality that invariably characterizes the reunions at that place. Messrs. Webster and Flint, of the State Grange, were present, besides a considerable delegation from the Alhambra, Walnut Creek and other Granges in the county. Thirteen members were initiated into the fourth degree. Numerous short addresses were made, by Mr. Webster, Mr. Flint, Mr. D. N. Sherburne, Mr. Sturgis, Mr. Charles Howard, Mr. N. Jones, Mrs. Lander and others. The hall was tastefully decorated, a noticeable feature being the eight new and large pictures recently obtained from Philadelphia by Mrs. W. Z. Stone, of Green valley, and generously presented to the Grange by her.—*Contra Costa Gazette*.

A Superb Resort.

A more delightful summer and autumn resort can hardly be conceived of than that of the Blue lakes, in Lake county. The scenery is rare and picturesque as you approach the lakes by an easy and delightful drive of 12 miles from Lakeport, through Scott's valley, on the east, or of 18 miles from Ukiah, on the west. The water is deep and clear, and in the warm season, captivating and healthful for bathing. For fishing and deer hunting the place is superior during the proper seasons. Mr. Theodore Deming, proprietor of the hotel, is a farmer, and one of the oldest subscribers of the *PACIFIC RURAL PRESS*, and, with its publishers, believes in the true principle, that "whatever is worth doing, is worth doing well," and also practices his good faith in his farming, horticulture and hotel keeping. Mrs. Deming, in the matron's "pleasant home department," is not less thorough and successful. The place is naturally an admirable one for a popular resort, and we should be pleased to present our readers hereafter with engravings of some of the most beautiful of views surrounding these ever charming lakes. Visitors to Lake county miss much who fail to take in the Blue lakes.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

FIELD AND ORCHARD YIELDS.—Oakland Times, Aug. 15: W. H. Jessup gives us some idea of the productiveness of the orchard lands of this vicinity by his figures of shipments from a dozen acres. From the trees on that space he picked over 75,000 pounds of cherries, and from gooseberry bushes occupying only a small portion of the ground under the trees, he gathered over 7,000 pounds of fruit. The productiveness of grain land in Alameda county is ahead of any other section of the State, so far as heard from. Joe Bernard has between 13 and 14 acres of real estate situated near San Leandro, from which were thrashed last week 750 sacks of Chevalier barley that averaged upward of 130 pounds to the sack. Near the same place, on 18 acres owned by Leonard Stone, 767 sacks of common barley were thrashed, weighing 700 centials. It is calculated that the Mulford boys will harvest from the old Weeks farm, some 300 acres, over 10,000 sacks of barley.

BUTTE.

FIELD FIRE.—Record, Aug. 12: About nine o'clock last night a most destructive fire broke out in a grain field on the ranch of D. M. Reavis, a short distance west of town. Two men were sleeping in the field when the fire commenced, but they did not notice it until the flames were roaring about them. The fire is supposed to have been caused by sparks from a setting of the engine. Five hundred sacks of wheat were burned and a new Pitts separator, with all the apparatus connected with it. The separator was purchased last week, and had been in use only three days. The grain was partly insured. The whole loss by the fire is estimated at from \$2,000 to \$2,500, the last figures thought to be most correct. Farmers should employ men to constantly watch their grain fields and machinery. Mr. Reavis came to town this morning and ordered another new separator from Hubbard & Earl, which will cost something over \$1,000.

CONTRA COSTA.

IMPROVEMENTS.—Concord Sun, Aug. 12: Mr. Levi, of Clayton, will set out next fall 150 acres in vines. Seventy-five acres are already flourishing. He has a fine artesian well on his place, and will run a layer of pipes throughout the vineyard, for the purpose of producing the highest state of cultivation. There are numerous choice varieties of vines, which he grows for the purpose of manufacturing a superior article of wine. He is also planning an orchard, which will contain a very large number of special varieties of fruit. The extensive stone wine cellar, now building, will be of sufficient depth to keep in perfect condition the large quantities of brandies, claret and port he will be constantly placing there, which cellar will not be completed for several months. It will be the largest wine cellar in the county.

FRESNO.

A WILLOW INVASION.—Republican, Aug. 12: By Mrs. W. F. Caughell, of the Central colony, we have been shown a veritable pest, in the form of a white willow, which has spread very rapidly over her place, and also over several other lots in that colony. Starting from the canal bank, the willow has spread all through the vineyard, and, where it last year appeared as a single shoot and was cut down, it now appears in crowns of a dozen or more sprigs. From this it seems that cutting down the growth is anything but a successful way of treating the pest. Some means of destruction must be devised or the intruder will certainly prove a great detriment to growing vineyards. There may be some other effective means of destroying such growths, but we know of no other than thorough and systematic grubbing. If any of our readers can suggest a better way of getting rid of this willow pest, we hope they will inform us.

LAKE.

SUMMIT VALLEY.—EDITORS PRESS: Once again, as is usual at this time of year, our vision is obscured by the thick smoke arising from the numerous fires in the mountains. As the hunting season commences, forest fires mark its advent, and increase in frequency and destructiveness as the valiant city hunters search for the ferocious deer. Much damage is often caused by some of these fires spreading further than was intended or anticipated. Kindled often "just to see the brush burn," it spreads to standing timber or into good sheep range, and destroys much valuable property. It would be well for all to remember that the law provides a penalty for willfully or carelessly allowing a fire to get out to the injury of others. Harvest is about over. Thrashers are getting near their last runs. Grain is rather below the average; the heated term having shrunken the kernels. The price bids fair to be good this year, starting at one cent per pound at the spot and sacks furnished. This is a good thing for the farmers who depend solely on their wheat and barley to pay the interest on their mortgages. Corn and potatoes excite but little attention in this county. Potatoes are poor this year. Hops are grown in the upper end of the county. As they are commanding a good price now, the "hop fever" has attacked quite a number. Many of these have had no experience and have no knowledge of the business, and a poor price next year will ruin them—then for a stampede

"out of hops." Fruit in many parts is doing poorly. Frost killed it badly, excepting apples. But we have faith to believe the railroad is coming, when land will produce 200 fold, and the land will flow with oil and wine.—Vox, Summit Valley, August 14th.

LOS ANGELES.

EARLY ROSE.—Anaheim Gazette: A correspondent saw, at a Westminster store, a hill of Early Rose potatoes that weighed nine pounds. That is, just the one stalk, with the potatoes that grew on it.

HAY.—Times: Alfalfa hay brings as high a price in the markets of this city as does barley. This has not been the case heretofore, as the barley hay has always brought a much higher price. Both are now selling on the street at \$10 per ton for loose, and \$12 for baled. The explanation is in the fact that the dairying interests have grown to such proportions that but little alfalfa finds its way to the markets, but is pastured by the dairy stock.

CORN WITHOUT WATER.—Times: Mr. L. H. Hannas brought to this office yesterday three stalks, which composed one hill of corn grown on his ranch, in the Providencia district, San Fernando valley, and raised without irrigation. One of the stalks had five well-developed ears, another four and the remaining one three, making a total of 12 fine ears of corn from a single hill. Mr. Hannas' ranch is new and hardly reclaimed from the desert, but this shows what can be done there.

NAPA.

LONG-PRUNED VINES.—St. Helena Star, Aug. 11: Quite a number of persons accepted, on the 1st instant, W. A. Field's kind invitation to visit his vineyard and note its condition, with especial reference to the young vines and his methods of culture. The vines referred to are two and three years old, from Zinfandel cuttings, and are trained on stakes five and six feet high. The heads are of ordinary height—about 16 inches—canes 3 to 5 feet long, and 1 to 3 canes left on each vine, some vines being only large enough to support one cane, while others will support two or three. One to four spurs for wood are left for the following year, the spurs making as many grapes as the ordinary low heads, and the canes bearing very heavily, making a solid mass of grapes from the ground to the top of the cane. The canes are taken from each side of the vine and looped up to the stake, after being tied together to prevent slipping on the stake with the weight of grapes. For this purpose a notch is made in the stake, to prevent slipping, and the laterals are tied over the top of the stake, thus making a beautiful vine and protecting the grapes from sunburn.

SAN JOAQUIN.

RUINOUS HUNTERS.—Independent, August 10: A card from N. J. Drain, living near Farmington, states that a couple of Stockton gentlemen, while out gunning on his ranch yesterday, set fire to a stubble field of 300 acres, all of which was burned; also destroying about two miles of hog-tight fence. The loss foots up considerable, and may cost the sportsmen rather dearly.

HOGS AND WHEAT.—Lodi Sentinel, August 12: Some months ago the Villinger Bros. bought 1,300 head of hogs at a little over six cents a pound. The entire drove was turned into a wheat field, just ripening, of about 150 acres. The hogs were fattened on this feed, and the prospects are that with the decided advance in the pork market, these enterprising gentlemen will get the herd off of their hands at a great profit. This week 250 head were shipped to San Francisco, selling for seven and three-eighths cents. It is believed that the Villinger boys will get at least two cents for their wheat through the hogs, besides saving the expense of heading, thrashing and sacking.

SAN BENITO.

A BIG MACHINE.—Hollister Democrat, Aug. 11: Mr. Nash received a 25 horse power engine Monday, to be used in running his mammoth separator, the smaller engine not having power enough to drive the machine. The separator is a 50-inch cylinder, and is a giant machine. There is no over-feeding, the cylinder taking the straw faster than the self-feeders will feed. The straw passing twice through the machine, makes it impossible for the wheat to be carried over and ultimately wasted. It cleanses nicely, and those accustomed to that kind of work pronounce the separator a perfect and complete success.

SANTA BARBARA.

A NEGLECTED VINEYARD.—Los Angeles Commercial: The oldest vineyard in California is the San Jose vineyard, situated under the mountains in Santa Barbara county, between Goleta and the San Marcos pass. It was the property of the Catholic Church until 1853, when it was sold by the Archbishop of the Los Angeles diocese to an eccentric old pioneer named James McCaffrey, who, with his sons, now cultivate the old vines, producing annually about 8,000 gallons of the best vintage. One of the strangest things to be mentioned concerning this ancient vineyard is this: It has not been plowed or cultivated for 30 years. It produces a good crop of wild oats for hay, year after year, but no plow is permitted to disturb the soil. The old man declines to explain how he never fails to have a full crop while his neighbors have none. Here, upon the sides of an ancient adobe building, is a vine, which, starting near the door, divides and sends a

branch in opposite directions, and, after making a circuit of the building, more than 100 feet, both ends have been grafted together, forming a complete hoop around the building.

SANTA CLARA.

SUMMER FALLOW.—*Gilroy Record*: Last Monday we visited Henry Miller's place, farmed by William Safstom, near Gilroy. Mr. Safstom has about 170 acres of wheat, 140 acres of which are on summer-fallowed land, and the balance on land that had not been summer-fallowed, although most of it had been manured. The same quantity of grain to the acre was sown on the field, but the summer-fallowed had been sown three weeks earlier than the balance, and at the time of the frost in May the grain was shedding its bloom. The blue stubble in the low places all over the field showed that the frost had done considerable injury, which fact was substantiated by an examination of the heads, they being small and poorly filled. Just at the time this grain was filling there was no rain, very little moisture in the air, and no fogs. Had there been even nightly fogs, there would have been three or four meshes formed in the base of the grain heads. These meshes started, but there was not sufficient moisture to make them fill. Notwithstanding all this, the yield from this field was a fraction less than nine sacks to the acre. The 30-acre field, most of which was sown three weeks later, was not far enough advanced to be injured by the frost, and at the time the grain was filling there were heavy fogs. As a result, the heads were developed, filled at the ends, three grains in the mesh, and the grain plump. Yet with all this, the yield from this field of 30 acres was only 251 sacks. Had the season been as favorable for the other field, it would have produced 18 or 20 sacks to the acre. This fact is evident from the appearance of the stubble.

SONOMA.

NORMANDY HORSES.—*Petaluma Argus*: The first direct importation of these celebrated horses from France to this city was made by Fairbanks & Wiley, consisting of 10 stallions, that were landed here last week. Wm. Hood was the pioneer importer of English draft stock, and brought out the best big horse that ever left that country—"Old Glory." He also imported the thoroughbred "Lawyer" over 25 years ago; but "Lawyer," unlike "Old Glory," left nothing behind him to be proud of. Wm. Bibler followed with some English and Scotch draft stock that has done much to improve our large horses. Skillman & Wooden brought some splendid Norman and Percheron mares and horses from Illinois, and from this stock Mr. Skillman is now producing as fine specimens of this breed as can be found in any part of Europe. The Sonoma Horse Breeders' Association purchased from James A. Perry, a large importer, the most celebrated Norman—"The Duke"—that ever left France; also the "Crown Prince," that is regarded as a perfect specimen of the Percheron. J. P. Rodehaver also purchased his premium stallions from an Illinois importer. When Mr. Wiley arrived in France he found that the best of the aged horses had been picked up for other lands, and in order to compete with the fine horses already here, he was compelled to purchase three-year-old colts and give them a chance to grow in o' Dukes, and other large horses, which they will, as they are from the best strains of France.

STANISLAUS.

SUMMER-FALLOW.—*News*, August 11: Mr. Root's summer-fallowed lands, three miles from Modesto, situated between Dry creek and the Tuolumne river, this year produced between 28 and 29 bushels to the acre. His winter-sown grain on the same farm produced about nine bushels to the acre. His harvesting has this year all been done by the Houser combined header and thrasher. He closed up his work Tuesday, and is well pleased with its workings.

SUTTER.

SEPARATOR BURNED.—*Farmer*, Aug. 11: Last Thursday noon all the hands employed on Colton's thrashing machine quit work and went to the cook-house for dinner. The cook-house was from 200 to 300 yards distant from the rest of the apparatus, and while at dinner it was discovered that the stack was on fire. All hurried to the scene, and with the aid of several neighbors the flames were confined to a very small space, but the separator, derrick and forks and the stack were burned. How the fire started is a mystery. Mr. Colton's losses are in the neighborhood of \$2,000, and we are informed that he was not insured.

A THRASHING VISIT.—On Friday last we, in company with Robert Critchfield, paid a visit to S. R. Fortna's thrashing machine, then at work at George Ohleyer's ranch. We found Mr. Fortna with his 18 hands busy in the dust of the arena, and turning out the golden grain with great rapidity. They average between 1,000 and 1,100 sacks of wheat per day, thrashing and cleaning the same. Mr. Fortna has a Bronson Pitts separator and one of the Best and Althouse cleaners, run by a straw-burning engine. He has been running 47 days to date, and during that time his operations have extended over an area of eight miles, and in this time has thrashed 40,000 bushels of barley. The grain generally has been good, and much of it extra, and the yield of wheat comes fully up to the average.

TULARE.

ARABIAN GRASS.—*Los Angeles Times*, Aug. 14: Prof. F. D. Boyard, who has been up in Tulare and Kern counties for the past two weeks,

returned on Tuesday. He brought with him from the ranch of Messrs. Morton & Page, large ranchers of Tulare county, a bundle of Arabian grass, which may be seen at the *Times* business office. The seed came originally from Felix, Arabia, and was first cultivated in this country in Alabama, where it is extensively used as a forage plant. Messrs. Morton & Page have this year 16 acres of this grass, and find it so good an article of feed that they propose next season to plant 150 acres. It grows to a height of from six to eight feet, resembles the orchard grass in appearance, and is greatly liked by stock of all kinds. Cattle and horses eat the stalk greedily, and hogs thrive on the roots, which resemble in their manner of growth the Madeira roots in appearance and in its prolific growth, as each joint of the root will send forth a separate stalk. It may be cut three times a year, and is perennial in its growth. It is very tenacious of life, and requires little water. It is thought it will supersede the favorite alfalfa as a forage plant.

COUNTY FAIR.—*Delta*, Aug. 11: The race-track of the Tulare Valley Agricultural Association is nearing completion—expected to be finished some time next week. Mr. Robinson, the Superintendent, has made a good job of it. The managers of the association are now busily engaged in fixing out the list of premiums, and they will probably be ready for publication next week, or the week after, at the farthest. Tulare has received many additions during the last year to her already long list of fine stock, and we predict that the coming fair will far excel the creditable exhibition of last year. The probabilities are that the fair will be held some time between the 1st and 10th of October. Among other attractions at the fair this year will be a ladies' tournament; several of Tulare's lassies are already practicing, with the object of getting away with the prize.

NEVADA.

HAY.—*Reno Gazette*, Aug. 10: J. N. Durney, of Emigrant Gap, was in Reno to-day and closed a contract with Mrs. Blasdel for a lot of choice grass hay; much preferring the Truckee meadows hay to California hay for his logging teams. The price to be paid (hay delivered on the car) is \$14 per ton.

WHEAT GROWING.—L. B. Holcomb, who ranches down the Truckee canyon, near Clark's station, has been trying the experiment of raising wheat without irrigation. He sowed six acres in February on a bench away above any ditch. To-day he brought in two samples of the crop. One of the selected heads he gave to H. A. Clawson, the other is at the *Gazette* office. Both have heavy, full heads. The sample left here was not selected, but is about an average. The straws are about 36 inches long and the heads three and four. He says he will have 40 bushels to the acre. He says anyone who sows in October or November will be surer of a crop than the farmers of the San Joaquin. The importance of this matter is easily seen. If Washoe county can raise crops, it will take an immense step forward.

INJURIOUS INSECTS.—FARM AND GARDEN.—Mrs. Mary Treat has prepared a valuable hand book on injurious insects, which is published by Orange, Judd Co., of New York. While we have the excellent works of Harris and Packard, the farmer and gardener may consult them in vain for information about a recent comer. Indeed, most useful knowledge as to the insects now most injurious to crops in the Eastern States is contained in the reports of Prof. Riley, as the State Entomologist of Missouri, that of the Entomologist of Illinois, in the bulletins of the American Entomological Commission, and in the pages of the *American Entomologist*. Mrs. Treat has done a good work in gathering the most important of these scattered materials, and in presenting them in a condensed form in the present work. She has also given, in several cases, the results of her own observations. The present work is especially valuable for its abundant illustrations. With insects, a good engraving is far more useful than a detailed description, and in view of this fact, the publishers have introduced illustrations of the insects in their various stages wherever it could be done to advantage. The work gives a popular account of those insects most injurious to the cultivator, and suggests the best known agents for their extermination. Although the book is written chiefly with reference to Eastern insects, there are many points which make it valuable on this coast.

HIGHLAND SPRINGS.—W. H. Jessup and wife, of Haywards, returned lately from a visit to Highland Springs. Mr. Jessup writes us in glowing terms of their enjoyment of the accommodations and natural advantages of Highland, and of the pleasant friends they made during a short stay there.

LINCOLN AND SHROPSHIRE SHEEP.—Geary Bros., of London, Ontario, Canada, send us their catalogue of pure-bred Lincoln and Shropshire rams and ewes, with wool sample of each breed. We shall be pleased to show the catalogue and the wool to anyone who is interested.

The customs authorities of Canada have been tracing the destination of all the American flour imported from the Western States under bond for shipment to Great Britain and Newfoundland. The result has been the discovery of gigantic frauds upon the revenue.

J. R. Rose's Farm.

We had the pleasure of passing a night last week at the elegant home of J. R. Rose, about three miles from Donahue, in Sonoma county, and enjoyed an examination of some of his fine horses and Devon cattle. Mr. Rose is, we believe, the leading Devon breeder on this coast, and though purchasers keep his herd rather small, he retains the pure blood, and breeds them with great skill and care. We greatly admired the bull which now stands at the head of his herd—a beautiful animal, showing his breeding at every point. Mr. Rose finds the Devons very satisfactory in all points of milk and meat production, and for up-hill pastures he considers them the best animals that grow, as they thrive well on dry feed, and maintain themselves well during the summer pinch in the pastures. He will probably have a small herd on exhibition at the State fair and some of the district fairs, beside his home fair at Petaluma.

In horse breeding Mr. Rose is keeping up to his high standard. Young McClellan is showing as fine colts as old McClellan, who did so much to elevate the quality of the horse stock of southern Sonoma county. We saw one of his colts, four months old, which has many fine points, and considering the fact that his full brother has shown such speed at three years old, the youngster must be regarded as very promising. Mr. Rose's place is most beautifully located on high ground overlooking the arm of the bay which extends toward Sonoma county, and with a view of the surrounding hills, which is charming to lovers of the beautiful.

AMERICAN GAME BIRD SHOOTING.—The Orange Judd Co., of New York, have just published a book, by John Mortimer Murphy, with the above title. Mr. Murphy has devoted a large portion of his life to the pursuit of all game indigenous to Canada and the United States, whether fur, fin or feather. He spent seven years in wandering through the wilds of the West and Southwest, studying their flora and fauna, and seeking the stirring adventures which are so congenial to his nature. He has hunted and fished with some of the leading sportsmen of this country and British America, and frequently accompanied Indian tribes on their hunting and fishing expeditions, so that he is thoroughly acquainted with the various methods employed by the red men for capturing game. His work on game birds is written entirely from a sportsman's standpoint, being intended to not only describe their haunts and habits, but also the various methods employed in this country and Europe for bagging them, the best dogs for field and covert work, the proper charges for guns, the devices used for luring turkeys and wild fowl within range, camp cooking, life in the wilderness, the pains and pleasures of a sportsman's existence, the unique characters, half hunter and half stock raiser or farmer to be met with on the borders of civilization, and the majestic and wonderful scenery of the far West.

THE PETALUMA FAIR GROUNDS.—Having an hour to spare in Petaluma one day last week, Mr. H. L. Weston invited us to ride over the new fair grounds being fitted up by the Sonoma and Marin District Agricultural Society for their future fairs. We found the grounds most eligibly located to accommodate visitors who come to Petaluma by rail, and easily reached by those who come in their own vehicles. The improvement of the grounds has been undertaken in a most liberal manner, and the favorable notice of the arrangements, which we copied from a Petaluma paper, in last week's *PRESS*, we found quite accurate, and merited by what we saw. The grounds have been planted with trees in the central squares and around the fences, and a year or two of growth will locate the fairs in the midst of a handsome grove, which will be most grateful to all who attend. The pavilion and grand stand are excellent structures, and the array of stock sheds shows that the famous livestock interests of the Sonoma and Marin district will be well provided for. Everything promises an unusually prosperous and fine fair this year, and all fair exhibitors and visitors should make a note of it.

At the present time, the grain crop in eastern Oregon has so far grown that a tolerably correct estimate, compared with other years, can be made. In the valley of the Ochoco the crop is better than common, and there will probably be 6,000 or 7,000 bushels more raised than there was last year. On the McKay none of the grain is average, and the yield will fall several thousand bushels short of that of previous years. Crooked River valley will harvest about the same amount that it did last year. On Willow creek there will be but little grain harvested, the grasshoppers having taken nearly everything.

From a single grain of wheat sown on McKinney's ground, on the east side of the Powder river, near Baker City, grew 73 stalks, each nearly four feet in length and the whole containing 4,380 grains of wheat.

The Cheney (W. T.) *Sentinel* says: The first installment of the Great Western colony, under the presidency of Dr. Hoyt, of Orleans, Neb., has arrived in Cheney. The party numbers over 200.

News In Brief.

A TWO-POUND oyster is on exhibition at Marshfield, Coos county, Oregon.

WASHOE CITY, once one of the liveliest towns in Nevada, is now completely deserted.

The contract has been let for a bridge across Big river, Mendocino county, for \$4,949.

SOME banks of snow are still to be seen about the summits of the mountains west of Lake Tahoe, and up in the neighborhood of Rubicon springs.

CALIFORNIA'S Commissioner, Mr. Ewer, arrived at Denver Saturday evening. He expressed his unqualified admiration for the collection of ores on exhibition.

THE Northern Pacific Railway Co. has completed two additional sections of its road. One is in Idaho and the other in Montana. The two sections cover about 140 miles.

A DISPATCH from Jamaica says that Westgate, the self-confessed assassin of Lord Frederick Cavendish and Burke, has arrived there, and the evidence implicating him in the crime is strong.

WALLA WALLA is fast building up. There are now several large business blocks going up. Grain is pouring into the depot very lively, and busy times are confidently expected after harvest.

THE footings of the school census show the population of Chicago, not including sailors, to be 562,000; including sailors, who are a difficult class to enumerate, the population will be nearly 575,000.

A MERCHANT in Tallahassee, Fla., recently received an order for 100 lbs. of dried fig leaves of a bright color. As the order came from a large tobacco manufactory, the use to which the leaves will be put is easily surmised.

THE Virginia City *Enterprise* says: The Pacific Shingle Company has cut 4,000,000 shingles this season. Lonkey & Smith's box factory at Camp 16 is running night and day. The Boca Mill Company has cut 4,000,000 ft. of lumber this season.

THE tracklayers and section men on the Atchison road, from Contention to Calabasas, are dropping down like sheep in time of drought. There are now over 50 men down with the fever at Sanford station, and many more are threatened.

A NEW and strange disease now afflicts cattle in the eastern counties of Pennsylvania. It attacks the animals in the right eye, and, although they do not seem to be otherwise sick, it gradually spreads until both eyes are sore, and the animal goes blind.

THE 400-foot span of the Northern Pacific bridge over the Missouri river at Bismarck, D. T., was finished Saturday. The bridge, when completed in October next, will be over 1,300 ft. long, and 75 ft. above the river. It will cost about \$1,000,000.

HEAVY rains and several washouts on the Sonora railroad were reported at Tucson on Monday. A heavy thunder and rain storm passed over the southern portion of Arizona Monday night. Several washouts are reported, both east and west, on the Southern Pacific railroad.

PROF. FORBES, who looks after the bugs of Illinois, claims to have discovered a certain eradicator of the terrible *rhyparochromus devastator*, or chinch bug, which often desolates wheat and corn fields. His remedy is a mixture of water, kerosene and milk, which costs about half a cent a gallon. There must be precious little milk in it at that price.

THE *World's* London correspondent says: The arrest of Henry George caused but little remark here. I have reason to believe that the arrest was not a part of any settled plan to interfere with the dispatch of news from Ireland to your side of the Atlantic, but arose chiefly from the fact that the authorities had received repeated warnings concerning his errand.

THE Treasury Department has issued instructions relative to the landing in Baltimore of a party of Chinese laborers from Cuba. It is stated that there are between 400 and 500 Chinese on board. The captain will have to leave port. Two requests of the same nature as that made to Collector Webster have been decided adversely by the Treasury Department.

A LAS VEGAS, N. M., dispatch says: The New Mexico Central & Northern is the name of the latest railroad scheme. It has been organized under the laws of Michigan. The company is at present represented here by W. G. Corbin, who states that it is their intention to build a narrow-gauge road south from the southern terminus of the Denver & Rio Grande at El Moro to Trinidad, thence south through Long's canyon, Cimarron and Mora to Las Vegas, and thence to White Oaks.

PROGRESS IN MICROSCOPY.—Two microscopes, called the "Jumbo" and the "Midget," formed an interesting exhibit at a recent meeting of a London society. The former instrument, probably made about half a century ago, was 4½ ft. high and weighed 125 lbs., while the "Midget," fully equipped for work, had a total height of only four inches, and weighed but a few ounces. Six of such microscopes as the smaller one could be inclosed in the eye-piece of the larger.

GLASS FOR TABLE TOPS.—A new use for glass has recently been developed in its substitution for marble tops of tables and dressing cases. A Pittsburgh firm has turned out slabs of glass that are said to be a perfect imitation of the latter material, while they admit of decorations of various designs, both in form and color.



The Milk Maid.

(By J. O. C.)

"Come, let us call the cows," she said,
"I hear the tinkling bell,
In the meadow, by the winding brook
That runs through 'fairies' dell."

They looked up from the tender grass
And all the herd stood still,
To hear the milk maid calling them,
Up on the pasture hill.

The sunset clouds have frescoed now
The over-arching dome,
And, winding up the pasture path,
The full-fed cows come home.

They come, although she hides herself
Behind the apple tree;
They know the kindness of the voice
That sounds so sweet to me.

She pats them with her soft, white hand,
The old ox with the rest,
Who moves his ears, and chews his cud
With such a lazy zest.

She sings, and o'er the meadow land
It echoes sweet and clear;
The very birds upon the trees
Seem sitting still to hear.

And white and sweet and pure the milk
That mantles o'er with foam;
And pure in life and thought is she
Who takes the milking home.

And white the aged grand-sire's locks,
Who sits beside the door,
And waits for her to read the book
That he can read no more;

For her to sing the songs he loves,
And these he sits in tears,
To hear his mother's songs, whose voice
Sounds through the lapse of years.

Oh, full-ripe fruit, and bursting bud,
Thus twined in life together!
Alas, the bud is doomed to bloom,
And fall in wintry weather.

But while the summer sun is warm,
And life is yet to be,
Give me your hand and then walk down
The pasture path with me.

The daisies by the path we'll pick,
The daisies in the dew,
And I will carry the milking-pail
And call the cows for you.

"Wouldn't Marry a Farmer."

The old house at Stonecrest was the most ancient mansion in the county. Its walls of dark gray stone were almost entirely covered with ivy and climbing rosevines. Year after year Mr. Thornfeld threatened to out the creepers down, but he failed to do it, until the roses were over the second-story windows, and the ivy clear to the roof.

Perhaps they were spared because Mrs. Thornfeld loved them. And indeed they did give an air of beauty to the square, gray old house, which no one could fail to notice, and which resembled the pictures of ivy-grown English homesteads very strongly.

When Edith Thornfeld, the Squire's pretty niece, came down from the city for a long visit, she chose for her room the corner one in the second story, the coolest room in the house, wide, light and airy, where the windows were nearly covered with vines, and every breeze sifted a shower of rose leaves across her floor.

Pretty Edith! Proud as pretty was Mr. Thornfeld's niece. Her father was a rich business man in the city, who knew far more about stocks, bonds and mortgages than he did about his only daughter. Her mother died when Edith was a babe, but kind Aunt Rachel, Mrs. Thornfeld of Stonecrest, had supplied her place as far as she could, and much of the girl's lady-like bearing had been acquired from her. Edith often came down for a long visit, and the old house was the brighter while she remained.

Joining Stonecrest was another fine estate, belonging, at present, to young Robert Belton. A fine, wholesome specimen of a country squire was he, not without good mental cultivation and intelligence, and any girl might be proud of his favor. Even Edith admitted that he was a splendid-looking fellow and good company, and she knew very well, the sly witch, that no one was fairer in Robert Belton's eyes than she. But when they rallied her upon the devotion of her cavalier, she declared that nothing upon earth would induce her to marry a farmer and live in the country for good. To do her justice, she let Belton himself see the fact plain enough. That is, if he would have seen it. But he refused to take the evidence of her manner; perhaps laid it to the score of maiden modesty, and liked her all the better for it.

"Well, I'm sorry for the poor fellow—he is nice, and if it wasn't the way it is, I might—possibly—say yes," said Edith, when she saw, at last, that she could not keep him from speaking much longer. "I dare say he'll soon get over it, and forget all about me, when he marries some plump country girl who can take care of his pigs and chickens for him." And Edith laughed a gay little laugh, and then felt as if somehow things were not fixed up quite right in

this world, and she didn't know just how to straighten 'em. She tried no longer to keep him from speaking. "Just as well have it over and done with," she said.

He did speak one evening when she had been over to visit his sister, and he walked home with her. A few words, but right to the point.

"I wish you wouldn't," said Edith, more flurried than she had ever been in her life. "I'm very sorry, but indeed, Mr. Belton, I can't—"

"Do you mean you can't like me?" said Robert, turning a little white, but trying to smile.

"Oh, I do like you very much! But not—not in—"

"In the only way I wish to be liked. Is that it?"

"I'm afraid it is, Mr. Belton."

He was silent a moment. Then he said huskily: "If any amount of waiting would alter it, I could be patient, at least I'd try, if I might have a hope—" and here his voice failed.

"It wouldn't be of the least use, said Edith. "I'm sorry, but I'd have to say the same a year—ten years—from now."

"Then there's no use," said Belton, trying to be as brave as he could. "It's pretty hard on me—harder than I thought it would be. But if I can't bear it, I can go away and not trouble you any more."

"I wish you wouldn't talk so," said Edith.

"It isn't very manly, is it?" said the poor fellow. "Well, I won't. Forgive me, Miss Edith. And good-bye—I don't suppose I shall come to your uncle's any more." They were just at the gate now, and Edith gave him her hand, saying, "Oh, yes, of course; I know you will come. We would all be very sorry if you didn't. And I hope you don't blame me."

"Not in the least. There's no one to blame but myself. I'll come if I can. If I find I can't, why, I can't, that's all. Good-bye, Miss Edith; God bless you, my dear." He raised the small hand to his lips, pulled his hat down over his eyes, and was gone.

Edith ran straight upstairs to her room, and took a good, hearty cry—and then scolded herself for crying.

"But I did feel awful sorry for him," she said. "Though I'm sure he'll get over it, and be back here in a day or two."

But Robert Belton did not come again in a week or two. Uncle Thornfeld rallied Edith about sending him away, and though she declared she had not done so, they all understood very well how the case lay.

Edith met Belton in her rides sometimes, saw him at church and other places. He always bowed and spoke pleasantly, but that was all. He kept clear away from her. It was plain he did not mean "to trouble her again."

"I never saw such a fool," said Edith, to herself. "He doesn't give one the least chance to reconsider, if one wanted to, which I don't, I'm sure."

But some way it provoked her dreadfully every time she met him, and he kept so distant. Now and then she stole a glance at him in church, when he was sitting quite still, and his pale, sad face touched her heart, though she wouldn't have owned it for anything. "I never, never did see such a simpleton! If I were a man, I'd be one, I would!" said she. But the very next night, when she was talking to little Lyons, at Mrs. Wishwell's social, or rather listening to him talk, she looked at his little, neat figure and his little, nice moustache and his little white hands, and began to compare him with a big, strong, manly fellow like—like Rob Belton, for instance, and became so disgusted that she fairly ran away and left little Lyons terribly astonished and affronted at her rudeness.

One day, at the dinner table, Uncle Thornfeld gave them the news that Robert Belton was going to Australia. His sister felt dreadfully, he said, but Rob wouldn't give it up. Uncle said, also, that for his part he couldn't see any sense in a likely young fellow, with plenty of good land, and everything ready to his hand, rushing off with such haste to a wild country like Australia, "unless," said he, "unless there's a woman in the case. If there is, there's no knowing what a man will do. And it's my opinion she'll have something to answer for." This with a glance at Edith, who turned very red, and did not offer a single word. But she took to walking out often. If she did so in the hope of meeting Belton, she missed it. He was busy arranging his affairs indoors, and had no time for walking.

One morning Edith, sitting at her window, saw him coming up the road, with his long, free stride, straight to the gate. He opened it; he came inside; he came straight to the house, too. Edith, drawn back so she could not be seen, heard him pass under her window, and waited to be called. Waited half an hour, and then heard him going away, and never once was called at all! Her face was red, and her eyes flashed, but she was only pretty and sparkling when she went down to dinner.

"Belton called this morning," said Uncle Thornfeld.

"Did he?" observed Edith, indifferently.

"Yes. He goes away Monday. He wants me to attend to a small business matter concerning some land, while he is gone."

"Well, you'll do it, I suppose," said Aunt.

"Oh, yes. He'll call again to-morrow, to leave me some papers, and I'll help the boy all I can. He's a good fellow. And it strikes me he seems to be very unhappy."

"That's a pity, isn't it," remarked Miss Edith, coolly.

"I think it is. I don't know a man who deserves better than Belton. I dare say he'll get killed out there among the natives, and never get back any more." Which philosophical observation on uncle's part Miss Edith did not answer at all, and nobody knew her thoughts.

"To-morrow" was Saturday. Belton was going away Monday. If anybody meant to do anything for him, it must be done promptly; that was all; and no shirking.

The next morning Edith took pains to sit at her window again. By and by she saw Belton coming. But he wouldn't ask for her; not even to say good-bye. It couldn't hurt him to do that much, anyhow.

He came in, turned at the corner of the house, and was passing on to the door, when a fresh voice above him said "Good morning!"

He looked up. Edith, sweet and blooming as the roses which were all around her, was leaning out of the window, toward him. But he couldn't know she was thinking what a fine, noble, handsome face he was turning up to her. Instantly his hat was lifted. "Good morning, Miss Thornfeld! I hope you are well."

"Quite well, thanks. I hear you are going away, Mr. Belton."

"Yes. I go Monday."

"Without a good-bye to your friends?"

"I don't suppose anyone cares much about saying good-bye to me."

"Perhaps not. You don't deserve it, running off so wildly."

"I dare say I don't, Miss Thornfeld."

"Of course you don't! However, some of them might have a word to say to you."

"I'd be very glad to hear it then, I know."

"Well, I shall be down at the three oaks at four this afternoon. If you choose to come, I have something to say. If you don't choose, go to Australia or any other place, for all I care, Rob Belton!"

The pretty head disappeared in an instant, the window went down among the roses with a bang, and Robert Belton walked into the house to see Mr. Thornfeld, feeling very queer.

At four that afternoon, a slim figure in buff cambric, with a white lawn hat on its pretty braids, tripped through the bit of meadow woodland down to the three oaks. A taller figure rose to meet her as she appeared.

"Ah, you did come, then?" said Edith.

"Certainly. Sit down, Miss Thornfeld," making room on the rustic seat for her.

Edith sat down, and sat silent. Her usual flow of words seemed to have deserted her.

"Did you wish to tell me something?" said Belton, at last, very gently.

"Yes—no—perhaps. Tell me something, Mr. Belton! Why do you rush off so, and make everybody miserable?"

"I must go. And I don't know of anyone who is miserable."

"Not your sister?"

"Well, yes. But there are times in a man's life when even a sister, though a good, kind one, can't quite satisfy him."

A little silence. Edith broke it, desperately: "Mr. Belton, would you go if—I am sorry I once pained you. I am very sorry, indeed."

"You were kind enough to say so. I don't blame you. And I believe you. But, you see, it don't cure—it don't help much. I don't want to seem ungrateful, but it's quite true that pity won't mend matters."

"My goodness, what would then?" cried Edith, losing all patience. "Can't you see anything, Rob Belton? Don't you know I don't want you to go! Her face was red, her eyes full of tears, her mouth fluttering like a rose-leaf as she spoke.

Belton was amazed. "Miss Edith! You don't—do you? What is it you mean? Do you ask me to stay?"

"Of course I do. You might see that much!"

"What for, then?" he asked, quickly.

"Oh, nothing. You needn't stay! Go if you like, I don't care. I can live without you!" she sprang up to fly, but Belton just gathered her into his arms. "But I can't live without you!" he cried. "I'll stay if you'll come and live with me! Say quick, Edith, yes, or no?"

"Yes—no—I don't care!" panted Edith, very red and embarrassed. But Belton gathered her meaning, and, instead of being the miserable fellow he came there, was as happy as a king. So was Edith, though she wouldn't have owned it for the world. She is happy yet, though she did marry a farmer, and lives in the country over half of each year.

And that trip to Australia has never been made, nor do I suppose it ever will be.—*Indiana Farmer.*

DUST AND DUSTING.—Do not dust, but wipe! The duster, that peaceful emblem of domestic labor, may, says Le Voltaire, under certain circumstances, become more dangerous to handle than a six-shooter. We are in dead earnest. An eminent scientist declares it to be a fact. Do you know just what you are doing when you brush away dust? You disseminate in the air, and consequently introduce into your own interior, into your tissues and respiratory organs, all sorts of eggs, spores, epidemic germs and murderous vibiones which dust contains. One movement with a feather duster may be enough to poison both you and your neighbors—to inoculate you all with typhus, varioloid or cholera—strange as it may appear. Instead of a feather duster take a cloth; wipe away the dust instead of stirring it up. In short, wipe—never dust.

SHORTNESS OF TIME IN DREAMS.—One of the most remarkable phenomena connected with dreams is the shortness of time needed for their consummation. Lord Brougham says that, in dictating, a man may frequently fall asleep after uttering a few words, and be awakened by the amanuensis repeating the last word to show he has written the whole; but though five or six seconds only have elapsed between the delivery of the sentence and its transfer to paper, the sleeper may have passed through a dream extending through half a lifetime. Lord Holland and Mr. Babbage both confirm this theory. The one was listening to a friend reading aloud, and slept from the beginning of one sentence to the latter part of the sentence immediately succeeding; yet, during this time he had a dream, the particulars of which would have taken more than a quarter of an hour to write. Mr. Babbage dreamt a succession of events, and woke in time to hear the concluding words of a friend's answer to a question he had just put him. One man was liable to a feeling of suffocation, accompanied by a dream of a skeleton grasping his throat, whenever he slept in a lying posture, and had an attendant to wake him the moment he sank down. But though awakened the moment he began to sink, that time sufficed for a long struggle with the skeleton. Another man dreamt that he crossed the Atlantic, spent a fortnight in America, and fell overboard when embarking to return; yet his sleep had not lasted more than 10 minutes.

MRS. ARTHUR'S ROOM.—It is said that Mrs. Arthur's room in her beautiful New York mansion, in which she died, has never been disturbed; that even the needle is still threaded and sticking in a bit of delicate embroidery in her work-basket undisturbed, nor will her husband allow anyone to change the room in its furniture arrangements. There is the little rocker beside the standard work-basket, and the little negligee crochet slippers. There stands her desk, with the ink dried on her pearl-handled pen, which she had hastily put aside from some interruption, never to use again on earth. Her favorite books are placed in a tiny case, with a marker in one of them, just as she left it. On the table are placed each morning, by orders from the President, a bunch of her favorite flowers. Even her favorite perfumes are in her toilet bottles at the dressing case, and in the wardrobe hang her dresses. This room is bright and sunny, her former maid keeping it neat, and arranging the flowers in the vase, and attending the canaries in the window, but never altering the place of the furniture, the books, etc. This room is a place where the President takes much comfort in reading and meditation, and they who know say that the bit of needlework has been many times wet with tears by the husband. In this world of forgetfulness and selfishness it is more than pleasant to read of such an evidence of love for a wife. May such increase an hundred fold!

FOUR PROFESSIONAL GIRLS.—The Misses Kollock are four typical Western girls. The family of W. E. and A. M. Kollock, of Madison, Wis., consists of seven members, four of whom are sisters. Of these, Dr. Mary Kollock Bennett, the eldest, graduated at the Woman's Medical College of Chicago, and for many years has been practicing successfully in that city. The next, Dr. Harriet Kollock, graduated in the medical department at Ann Arbor, Mich., nine years ago, since which time she has been eminently successful in her professional work. The third, the Rev. Florence Kollock, graduated at Canton Theological College some years since, and is now doing a good work as pastor in a beautiful church, built for her by her parish during the last two years, at Englewood, a fine suburban town of Chicago. Dr. Jennie C. Kollock, the youngest sister, graduated in the dental department of Ann Arbor, Mich., last March, together with a class of 36 gentlemen, she being the only lady, and passing the highest examination of any in the class. She is now establishing herself successfully as a dental practitioner in Chicago.

DOMESTIC MISERY.—No unhappiness in life is equal to unhappiness at home. All other personal miseries can be better borne than the terrible misfortune of domestic disunion, and none so completely demoralizes the nature. The anguish of disease itself is modified, ameliorated, even rendered blessed, by the tender touch, the dear presence of the sympathetic beloved; and loss of fortune is not loss of happiness where family love is left. But the want of that love is not to be supplied by anything else on earth. Health, fortune, success, nothing has its full savor when the home is unhappy; and the greatest triumphs out of doors are of no avail to cheer the sinking heart when the misery within has to be encountered.

CONTAGION OF GOODNESS.—We hear a great deal about contagious diseases and the necessity of avoiding exposure to them, which is entirely reasonable; but we hear little of the contagion of health and the importance of securing it. Yet, although not so immediately apparent, the eventual effect of the one is, perhaps, nearly as powerful as that of the other. If there are poisonous emanations from the sick bed of the fever patient which we cannot inhale without peril, so there are wholesome influences from the vigorous and healthy which we cannot receive without increasing the vitality of our own system. Perhaps it may some day be regarded as essential a part of physical culture to court the one as to avoid the other.

DISCOVERY OF MONT BLANC.—Mont. Blanc, the highest of the Alps, is, strange to say, a modern discovery. At least, no mention is made of this colossus of European peaks in any itinerary, or in any literary work whatever till recent times. M. Charles Durier, in his work "Le Mont Blanc," says: "This mountain rises in the center of the most populous and civilized states of Europe; it is, in fact, the axis around which European civilization has revolved and still does revolve; its height is considerable; it dominates everything in its vicinity, and, to make its appearance more striking on the background of the blue sky, its summit, though placed in a favored, temperate latitude, is ever covered with a mantle of snow. And yet, during 20 centuries, no historian, no traveler, no *savant*, no poet names it, or so much as alludes to it. As the sun describes his daily track, that peak throws its shadow upon at least three countries possessing different languages, but still it was profoundly ignored." The same author informs us of a map of the region round about Mont Blanc, published in the second half of the 16th century, but which gives no hint as to the existence of the mountain, which, nevertheless, is visible from all sides at distances of 60 leagues. —*Popular Science Monthly*.

SAY WHAT YOU MEAN.—Let your friends know that you love them. Do not keep the alabaster boxes of your love and tenderness sealed up until your friends are dead. Fill their lives with sweetness. Speak approving, cheering words while their hearts can be thrilled by them. The things you mean to say when they are gone, say before they go. The flowers you mean to send for the coffins, send to brighten and sweeten their homes before they leave them. If my friends have alabaster boxes laid away, full of perfumes of sympathy and affection, which they intend to break over my dead body, I would rather they would bring them out in my weary hours and open them, that I may be refreshed and cheered by them while I need them. I would rather have a bare coffin, without a flower, and a funeral without a eulogy, than a life without the sweetness of love and sympathy. Let us learn to anoint our friends beforehand for their burial. Post-mortem kindness does not cheer the burdened. Flowers on the coffin cast no fragrance backward over the weary days of our lives.

UNFORTUNATE LIVES.—An unfortunate life is one of the leading causes of both physical and moral disease. One might write an entire volume upon this subject. Numerous examples of the effects of an unhappy life may be observed every day. Every child knows of them. An unhappy life is like dust in the machinery of a clock. It makes it go badly—even prevents it from going at all. But, when the dust has been removed, it goes once more as well as ever. When we are fortunate and happy, we are as sound as a fish in the water. An unhappy, unfortunate life prevents those changes from going on in the system which health requires—prevents good digestion, good circulation and a comfortable action of the nervous system. If we wish to be healthy, we should endeavor to make our lives successful and happy.

Chaff.

A DOCTOR went out for a day's hunting, and on coming home complained that he hadn't killed anything. "That's because you did not attend to your legitimate business," said his wife.

SHE laid her cheek on the easy chair against his head and murmured, "How I do love to rest my head against your head, Augustus!" "Do you?" said he. "Is it because you love me?" "No; because it is so nice and soft."

IT is nice to read of the "merry whistle of the plow-boy," but, in the first place, boys don't plow; and in the next, the strapping young men who do are so mad about it that they can't get the right pucker for a whistle.

A MERCENARY little boy overheard a conversation by his parents concerning a wedding that was soon to come off, and recalled the subject at the breakfast table the next morning by asking the following question: "Papa, what do they want to give the bride away for? Can't they sell her?"

A YOUNG lady who has distinguished herself at the Cambridge local examination had just been relating some astounding astronomical facts and figures. Said her cousin, who "never went in for that sort of thing, you know," "I see how one can find out how large and how far away the stars are; but, by Jove, I don't quite see how they ever found out their names!"

JUDGE, severely, "How do you know the defendant is a married man? Were you ever at his house?" "No, sir." "Do you know him personally?" "No, sir." "Did anybody ever tell you they were married?" "No, sir; but, when I see a man and woman come to the same church regularly for three years, occupy the same pew, and have a hymn book apiece to sing out of, I don't want to see no marriage certificate. I can swear to their relation all the time."

THE tensile strength of glass has been shown to be between 2,000 and 9,000 lbs. per square inch, and the crushing strength between 6,000 and 10,000 lbs. per square inch. By trials a short time ago, M. Traulson found that flooring glass one inch square and one foot between the end supports breaks under a load of 170 lbs.

AN Antarctic expedition to Cape Horn is being fitted out by the French government. It will be furnished supplies for 18 months.

Young Folks' Column.

Our Puzzle Box.

Numerical Enigma.

I am composed of 22 letters, and am a fact:
My 9, 6, 22 is a kitchen vessel;
My 7, 17, 8 is a familiar salutation;
My 19, 3, 15, 21, 2 is a term applied to counterfeit money;
My 11, 5, 20, 12 is to close;
My 11, 13, 18 is a transgression of divine law;
My 10, 10, 4 is to sever;
My 14, 17, 7 is to reflect or ponder upon carefully;
My 1 is first in truth and trust, but last in their fruit.
UNCLE CLAUDE.

Syllable Puzzles.

1. An interjection; lofty; a vowel; whole, one of the United States.
2. A vowel; a beam of light; an insect; an article; whole, a country of Asia.
AUNT SARAH.

Double Acrostic.

1. A Swiss lake.
2. A Chinese river.
3. Minute particles of mineral matter.
4. A memorandum.
5. An aquatic animal.
The initials spell downward form the name of a mythological king; the finals, spelled upward, his kingdom.
OLD JOE.

Hidden American Names.

1. My plan exists no longer.
2. I will ride on the Pacific railway until Dennis meets me.
3. Ere long, fellows, we must part.

Synecopations.

1. Syncope a small particle and leave intellect.
2. Syncope a part of a fowl and leave a covering.
3. Syncope a tool and leave to contend.
4. Syncope to think and leave to draw.
5. Syncope mirth and leave species.
JERRY.

Answers to Last Puzzles.

ENIGMA.—Tie a knot in the end of your thread.
BLANKS.—1. Rite, right, write. 2. Rode, road. 3. Veil, vale.
CHARADE.—Boot-black.
DECAPITATIONS.—1. Keel, eel. 2. Stun, tun. 3. Slake, lake. 4. Stray, tray.
SQUARE REMAINDER.— C L E A R
B E A R D
P A R C H

Going to the Fair.

The birds are singing,
The bells are ringing,
There's music in all the air, neigh-ho!
As all together,
In golden weather,
We merrily go to the fair, heigh-ho!

We have no money
For ribbons bonny,
Our clothes are the worse for wear, heigh ho!
But little it matters,
In silk or in tatters,
We merrily go to the fair, heigh-ho!

Come, lads and lasses,
The time it passes,
Step out with royal air, heigh-ho!
As all together,
In golden weather,
We merrily go to the fair, heigh-ho!
—St. Nicholas.

Something Curious Happened.

A boy 10 years old, pulling a heavy cart loaded with pieces of boards and lath taken from some demolished structure—an every-day sight in all our cities. Tired and exhausted he halted under a shade tree. His feet were bruised and sore, his clothes in rags, his face pinched and looking years older than it should. What must be the thoughts of such a child as he looks out upon the world—the fine houses, the rich dresses, the rolling carriages, the happy faces of those who have never known what it was to be poor? Does it harden the heart and make it wicked, or does it bring a feeling of loneliness and wretchedness—a wondering if the rich man's heaven is not so far from the poor man's heaven that he will never catch sight of their pinched faces?

The boy lay down on the grass, and in five minutes was sound asleep. His bare feet just touched the curbstone, and the old hat fell from his head and rolled to the walk. In the shadow of the tree his face told a story that every passer-by could read. It told of scanty food, of nights when the body shivered with cold, of a home without sunshine, of a young life confronted by mocking shadow.

Then something curious happened. A laboring man—a queer, old man with a wood-saw on his arm, crossed the street to rest for a moment beneath the same shade. He glanced at the boy and turned away, but his look was drawn again, and now he saw the picture and read the story. He, too, was poor. He, too, knew what it was to shiver and hunger. He tip-toed along until he could bend over the boy, and then he took from his pocket a piece of bread and meat, the dinner he was to eat if he found work, and laid it down beside the lad. Then he walked carefully away, looking back every moment, but hastening out of sight, as if he wanted to escape thanks. Men, women and children had seen it all, and what a lever it was! The human heart is ever kind and generous, but sometimes there is need of a key to open it. A man walked down from his steps and left a half-dollar beside the poor man's bread. A woman walked down and left a good hat in place of the old one. A child came with a pair of shoes, and a boy brought a coat and vest. Pedestrians halted and whispered, and dropped dimes and quarters beside the first silver piece.

Something curious had happened. The charity of a poor old man had unlocked the hearts of a score of people. Then something

strange occurred. The pinched-faced boy suddenly awoke, and sprang up as if it were a crime to sleep there. He saw the bread—the clothing—the money—the score of people waiting around to see what he would do. He knew that he had slept, and he realized that all those things had come to him as he dreamed. Then what did he do? Why, he sat down and covered his face with his hands, and sobbed like a grieved child. They had read him a sermon greater than all the sermons of the churches. They had set his heart to swelling and jumping until it choked him. Poor, ragged and wretched, and feeling that he was no more to the world than a stick or a stone, he had awakened to find that the world regarded him as a human being, worthy of aid and entitled to pity. —*Detroit Free Press*.

GOOD HEALTH.

Egypt in August.

"Egypt is as deadly in August as India in June," say old travelers; and this sinister reputation is only too well deserved. The same distempers which almost destroyed the army of Louis IX of France, at Damietta, in the 13th century, decimated the troops of Bonaparte and those of his successors, Kleber and Menou, at Alexandria, in the end of the 18th. Indeed, those who have been in lower Egypt during the unhealthy season may well wonder, not that so many should succumb to the climate, but that any one should escape. The dreadful "khamzin," or hot wind, which the strongest man cannot face without instantly feeling his muscles unstrung, his skin parched and feverish, and his whole body limp and nerveless as a wet rag, is of itself a sufficient agent of evil. The fevers engendered by the malaria of the Nile delta are as virulent as even those of European Turkey, while the devastating visits of the plague itself are neither few nor far between. A less fatal, but equally formidable enemy to an invading army is the terrible "Egyptian ophthalmia," which, although often brought on by the unclean habits of the natives, is at times generated in another and a very singular fashion. A small green fly persistently settles upon the sores of the diseased eyelid, and, when driven off, carries the infection along with it wherever it alights. So common is this disease among the Arabs, that Mehemet Ali is said to have formed two battalions of one-eyed men, the one wanting the right eye and the other the left. In 1798 this complaint made great ravages in the army of Bonaparte, one of whose best officers, becoming blind in the desert, was forced to cling to the tail of a comrade's horse in order to make his way back to the camp. It is a common saying in Alexandria that "an Egyptian Arab with two eyes is as rare as a snowball in June." —*New York Times*.

Malarial Foundations.

The San Francisco *Bulletin*, some time since, commenting upon some of the foundations in existence in this city, makes the following statements: Many of our business houses, and nearly the entire residence portion of our city, are composed of wooden structures built on foundations of similar material. In a few years, floors begin to settle, cracks appear in walls, and owners, becoming alarmed, consult their architects, who, upon examination, pronounce the foundations as rotting, and entirely unsafe in upholding the superstructure. Then trouble begins. The underpinnings have to be taken out and brick supports placed in proper position. A correspondent who has given some attention to the subject informs us that recent scientific investigation developed the fact that the wood used for foundation purposes becomes decayed by contact with the sand, which destroys its fiber, leaving it porous, brittle and of no value. A fungus growth starts from the edge of the decaying wood, and is composed of myriads of infinitesimal insect life, which burrows and honeycombs the remaining wood until its vitality is gone, and the insect itself yields up its life in the wreck of matter. This decaying mass creates a vast deal of malaria, and physicians trace many of the noxious odors and fever-breeding troubles to the festering condition of the underground portion of residences. It has been proved beyond question that when proper foundations are placed beneath such structures, the malarial atmosphere largely ceases to exist, while the occupants are relieved of certain feverish attacks, previously frequent. To parties intending building, this matter is of much importance, and it is suggested that true economy would warrant the increased expense of a brick foundation over that of a wooden one. Nearly all buildings of any value are now being erected on brick foundations, and it is presumable that only the cheapest kind of dwellings will be placed on any other basis.

LEMON JUICE.—Prof. Schmale, an eminent pathologist in Bonn, Germany, recommends persons who wish to live to old age to swallow the juice of from six to eight lemons daily. The citric acid, he thinks, will dissolve and carry off the surplus of food and decaying matter quickly, and preserve health almost indefinitely. One man who tried it lived to be 110 years old. Who will follow his example?

DOMESTIC ECONOMY.

BANBURY CAKE.—Take an equal quantity of clean, well-picked currants, granulated sugar and finely chopped lemon peel, and mix it all together, and then add a nice flavoring of ginger and cinnamon; now add good fresh butter enough to form the whole into a nice paste. Take the best puff paste, roll it out in a sheet one-fourth of an inch thick; cut this in pieces two inches square, and place a piece of the prepared butter, currants, etc., in the center of each; now take the two corners, the one nearest to you and the one opposite to you; bring them up, press them together, and then, with the palm of the hand, press them down flat. This makes the piece oval in shape, and leaves two ends, which are folded together with liberty to rise; wash the part that is not folded with water, and add as much powdered sugar as you can get to remain on. Bake these in a slow heat. These are a little expensive, but are very good, and are the real English Banbury cakes.

BUTTERMILK AS SUMMER FOOD, DRINK AND MEDICINE.—A recent writer asserts that for a hot weather drink, nothing equals buttermilk. It is, he says, "both drink and food, and for the laborer is the best known. It supports the system, and even in fever will cool the stomach admirably. It is also a most valuable domestic remedy. It will cure dysentery as well as and more quickly than any other remedy known. Dysentery is really a constipation, and is the opposite of diarrhea. It is inflammation of the bowels, with congestion of the 'portal circulation'—the circulation of blood through the bowels and liver. It is a disease always prevalent in the summer and autumn. From considerable observation, I feel warranted in saying that buttermilk, drunk moderately, will cure every case of it; certainly when taken in the early stages."

SEALING FOR CORKS.—M. Potel has lately introduced a new compound for sealing over corks, and for molding various ornaments, etc. It is made by soaking gelatine in water for a short time, and then dissolving it in glycerine, the former being in excess; to half the amount of glycerine thus used some tannic acid is added, and solutions aided by the heat of a water bath; these solution are then mixed, when the compound is ready for use. Any desired coloring matter may be added, and if required for the fabrication of any small article, sulphate of barium. Pittinson's white (chiefly a hydrated oxychloride of lead) or white lead, may be worked in it until the correct color and texture is arrived at.

SCALLOPED CAULIFLOWER.—Choose a cauliflower of medium size, boil it twenty minutes. Put into a saucepan one ounce of butter, half a gill of milk, and one ounce of bread crumbs. Add cayenne and salt to taste, and stir till the bread has absorbed the milk and butter. Beat an egg, and add this to the sauce, but be sure that it does not simmer after the egg has been added. Butter a flat tin dish, take off the fine leaves of the cauliflower, and place them all around it; break up the flower carefully and lay in the center, making it as high as possible; pour the sauce over this, sprinkle a few bread crumbs on the top, and bake ten minutes.

RASPBERRY CREAM.—Dissolve three-quarters of an ounce of the best isinglass and five ounces of loaf sugar in three-quarters of a pint of new milk, by boiling it slowly for ten minutes; strain it into a basin and add a pint of rich cream, with the juice of three-quarters of a pint of fresh raspberries, which have been cooked with three ounces of sugar for a quarter of an hour. Strain into the mixture, and turn rapidly with an egg-beater until it begins to thicken. Dip a mold in cold water, put in the cream, and place on ice until firmly set. Turn out carefully.

CREAM CANDY.—Boil one pint of granulated sugar and a pint of water, without stirring, until stiff enough to harden when dropped into cold water. Have prepared four teaspoonfuls of corn starch, rubbed smooth in a very little cold water, and add just at this time. Stir constantly while boiling, for a few minutes longer. Pour into a buttered dish, and when cool enough to handle, work rapidly. Flavor as you pull it.

STUFFED PEPPERS.—The large bell peppers are best for this purpose. Cut around the stem, remove and take out seeds. For the stuffing use finely chopped cabbage, adding grated horse-radish, white mustard seed, celery seed, and salt to suit the taste. Fill the peppers with this mixture, putting in each a small onion and a little cucumber. Tie the stem on and put into cold vinegar.

GREEN PEA SOUP.—Boil one quart of shelled peas and an onion until the peas are very tender. Mash and add a pint of stock, two tablespoonfuls of butter and one of flour rubbed together. Boil up and add two cupfuls of rich milk. Season, strain and serve. Small pieces of fried bread are nice served with the soup.

HARICOT BEANS.—Soak half a pint of the small white beans over night, in just enough cold water to cover them; the next day boil two hours, strain and put in a pie dish with one-half ounce of butter and a teaspoonful of finely chopped parsley, previously fried; cover with slices of raw bacon, and bake a quarter of an hour.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.

Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$6.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, August 19, 1882.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Curse of Drunkenness; The Brook in the Meadow; Proposed Line of Steel Steamers; Japanese Seeds, 117. J. T. Rose's Farm; Patents and Inventions, 128. The Week; Proverbial Wisdom on the Weather, 124. Opening of the Mechanics' Fair; Mechanics' Institute Pavilion, 125. ILLUSTRATIONS.—The Tenantry of the Meadow, 117. The New Pavilion for the Mechanics' Institute Industrial Exhibition, San Francisco, 125.

CORRESPONDENCE.—The Cannery's Combination; The Compromise Clause in the Debris Decision, 118. SERICULTURE.—Silk and Silkworms, 118.

FORESTRY.—Forest Trees of California—No. 9, 119.

THE STOCK YARD.—Livestock Notes, 119.

THE SWINE YARD.—Feeding Young Pigs, 119.

PATRONS OF HUSBANDRY.—Grange Leaflets—No. 6; Wheatland Grange and the Debris Run; Danville Harvest Feast, 120.

AGRICULTURAL NOTES, from the various counties of California, 120-21.

NEWS IN BRIEF.—On Page 121 and other pages.

HOME CIRCLE.—The Muk Maid (Poetry); "Wouldn't Marry a Farmer"; Dust and Dusting; Shortness of Time in Dreams; Mrs. Arthur's Room; Four Professional Girls; Domestic Misery; Contagion of Goodness, 122. Discovery of Mont Blanc; Say What You Mean; Unfortunate Lives; Chaff, 123.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Going to the Fair (poetry); Something Curious Happened, 123.

GOOD HEALTH.—Egypt in August; Malarial Foundations; Lemon Juice, 123.

DOMESTIC ECONOMY.—Banbury Cake; Butter-milk as Summer Food, Drink and Medicine; Sealing for Corks; Scalloped Cauliflower; Raspberry Cream; Cream Candy; Stuffed Peppers; Green Pea Soup; Haricot Beans, 123.

QUERIES AND REPLIES.—Drying Fruit to Escape Loss; Pits and Dormant Buds; Silver-Hulled Buckwheat; Resisting Vines, 124.

ENTOMOLOGICAL.—The Cherry Slug; Blue Gum and Codlin Moth; A Black Potato Bug, 124.

Business Announcements.

Improved Threshing Machinery, Baker & Hamilton, S. F. Bloomington Nursery, Bloomington, Illinois. The Davis Gun, E. T. Allen, Sole Agent, S. F. Pepper's Nurseries, Petaluma, Cal., W. H. Pepper, Prop'r Manchester Strawberry Plants, I. A. Sage & Son.

The Week.

The thrashers are putting in long days, and are nearing the last quarter of their run. Grain is turning out a little better than was expected before cutting, but the surplus will, of course, be moderate. Summer-fallow is showing its superiority, as usual. It is the surety of something in a dry year, for it conserves moisture and fills the heads at least partially, while the every-year land is dried out and unproductive. The area of summer-fallow is constantly increasing.

The valley farmers are wisely pursuing the advantages they have gained on the debris litigation. Injunctions are being served on the mines, and the water is being shut off. Our columns this week contain forcible utterances on the equities in the issue. It certainly seems that nothing remains now but to follow up the recent victories to gain the settlement of the case on the side of the injured and the public generally.

Abroad, matters are quiet, except in Egypt, and nothing decisive has yet been accomplished there. The Sultan has ordered Arabi to lay down his arms, and if he refuses, he is to be left to the mercy of the English.

Proverbial Wisdom on the Weather.

Much wisdom on all subjects pertaining to human life, and to the conditions and phenomena of nature, are concentrated into proverbs. Popular errors of experience and observation also find their way into apothegms, and yet it cannot be doubted that the majority of proverbial sayings contain an element of living truth, as gained by the eye or the mind. They are the concentrated wisdom of the ages, and are found in all languages, and have descended from the earliest times.

The aggregation of conditions and phenomena known as "the weather" has occupied the minds and tongues of men, probably, since the very wet year which floated Noah to the top of Ararat, and the centuries of observation have given a host of weather proverbs and proverbial data for prognostication. It has occurred to Gen. Hazen, Chief Officer U. S. Signal Service, to collect as many as possible of these proverbs and wise sayings, that they may be classified and compared, and the weight of testimony in them compared with the facts of modern meteorological observation. It is a happy idea to collect this concentrated wisdom from a world of observers, and it seems likely that much interesting and valuable testimony on weather behavior may be gained. In order to secure this information, Gen. Hazen has issued a circular, arranged so that proverbs of different kinds may be stated by his correspondents under proper heads. We trust his effort to collect them may receive the co-operation of the weather-wise. On this coast, where conditions are so different from those which prevail in the older proverb-making countries, it is found that much of the old wisdom is folly; but if one is disposed to research, and has the opportunity to pierce the darkness of the aborigines, or to glean the wisdom of the early white settlers, perhaps something true to our conditions may be drawn out.

That our readers may perceive the nature of the inquiry to be made and the scope thereof, we shall quote the headings under which Gen. Hazen asks responses. If any reader will favor us with his proverbial treasures, we will see that they are duly forwarded to Gen. Hazen at Washington. It is desired that the origin of any proverb may be given with it when possible:

1. Proverbs relating to the sun.
2. Proverbs relating to the moon. (New moon, change of moon, halo around the moon, influence of moon on agricultural operations, change of moon on days of week, etc.)
3. Proverbs relating to stars and meteors.
4. Proverbs relating to rainbows.
5. Proverbs relating to mist and fog.
6. Proverbs relating to dew.
7. Proverbs relating to clouds.
8. Proverbs relating to frost.
9. Proverbs relating to snow.
10. Proverbs relating to rain. (Morning, midnight, rain from particular quarter, rain during squalls.)
11. Proverbs relating to thunder and lightning. (First thunder in the year, thunder from the west, north, east, south; lightning, west, north, northwest, south, southwest and east.)
12. Proverbs relating to winds. (Day, night, morning, evening, wind and rain, wind preceding fair weather, cold winds, direction of winds, north wind, northeast wind, northwest wind, south wind, east wind, west winds, wet wind, veering winds, backing winds.)
13. Prognostics from the actions of animals. (Bats, oxen, cats, dogs, goats, hares, rabbits, horses, mice, moles, pigs, rats, sheep, weasels, wolves, frogs.)
14. Prognostics from birds. (Blackbirds, cranes, cuckoos, ducks, finches, fowls, chickens, geese, guinea-fowl, gulls, kingfishers, kites, larks, migratory birds, owls, peacocks, pigeons, quails, robins, rooks, snipe, sparrows, swallows, swans, thrushes, wild geese, woodpeckers, wrens.)
15. Prognostics from fish. (Carp, dolphin, pike, porpoise, trout, shad, herring, mackerel, cod, blue-fish, lobsters, crabs.)
16. Prognostics from reptiles. (Frogs, glow-worms, leeches, scalls, snakes, toads, worms.)
17. Prognostics from insects. (Ants, bees, beetles, crickets, flies, gnats, lady-birds, spiders, wasps.)
18. Prognostics from trees, plants, etc. (Brambles, brooms, chickweed, clover, colt's-foot, dandelions, ferns, fir cones, hawthorn, marigolds, mushrooms, oaks, onions, pear, apple, roses, seaweed, sensitive plants, thistles, walnuts, wood sorrel, chaff, leaves, etc.)
19. Prognostics of the weather, drawn from various objects. (Chairs, tables cracked before rain, etc., coals burning brightly, corns, ditches, doors, dust, lamps, rheumatism, sail, seed, sign-boards, smoke, soup, sound, strings, toothache, walls.)
20. Proverbs relating to days of the week. (Weather and agricultural rules.)
21. Proverbs relating to each month of the year. (January, February, March, etc.)
22. Proverbs relating to the seasons of the year. (Spring, autumn, etc.)
23. Proverbs of weather relating to the year.
24. Proverbs of weather and popular sayings relating thereto, not included in the answers to the above questions.

THE ODOR OF CEDAR.—The pleasant odor of cedar, according to Mr. E. Lewis, appears to be as persistent as the wood itself. Shivers taken from white cedar stumps found 12 ft. under water at low tide, near the Narrows entrance to New York harbor, had the odor of the newly grown wood, and a piece not more than twice the size of one's finger perceptibly scented a drawer for more than a year. "It is certain," says Mr. Lewis, "that the coast, where the trees of which these are the stumps grew, has since undergone a depression of 15 to 20 ft.—an event which may have occupied as many centuries."

ACTING Secretary of the Treasury French yesterday addressed a letter to the collectors at New York, Baltimore, Philadelphia, Boston and Portland, calling their attention to the act of Congress making provision for the establishment of cattle quarantine stations. The collectors were instructed to consider the best method of doing so and where such quarantine stations should be established.

QUERIES AND REPLIES.

Drying Fruit to Escape Loss.

EDITORS PRESS:—We would be pleased to have you take a walk along the streets where the fruit is handled, and see the different kinds of fruit rotting, which might have been utilized and made to pay something, had it been dried. We have no doubt an article from you would have a good effect in arousing the producers to the importance of preparing themselves with the means of drying their surplus fruit, when the market becomes overstocked and prices run down so low it does not pay to ship it green.

We have talked and written a great deal on the subject, and we hope it has had some effect. As your paper is being read by most of the fruit growers throughout the State, an article from you at this time might do much good.

There is enough fruit, that was good when it was on the ranch, now rotting in this market to have brought thousands of dollars, had it been dried. We have an order from one house East for a carload of evaporated apricots, a carload of evaporated peaches and a carload of sun-dried plums, at good prices, besides numerous inquiries from other houses, in different cities, as to what we can furnish the various kinds of dried fruits for, both evaporated and sun-dried. It is clear enough that good dried fruit will do well in the market.

We would suggest that, in your article, you call attention to the importance of putting up dried fruit in uniform packages; then the shipper can get a carload together, made up of small lots. For prunes and evaporated fruits, we would recommend boxes. For sun-dried apples, peaches and plums, clean, good sacks will answer. White cotton sacks for plums are preferred in the East. The box most used now is 19x10x10 inches in the clear, and 19x10x14 inches in the clear for one-half box. The lumber should be as light as possible to stand the pressure necessary in packing. I hope you will take an interest in this matter and give us an article on the subject.—J. M. HIXSON, of Hixson, Justi & Co., San Francisco.

The foregoing letter, asking us to describe the present situation in the fruit market, contains in itself so much that is forcible and true on the subject that it comes well nigh answering itself. The facts set forth must be apparent to anyone who has given any attention to the fruit trade of the city during the last two weeks. Our tardy season this year has brought our fruit so late that we have lost the main chance to ship eastward, and the result is that a mass of Bartlett pears has been thrown upon this market, and has to be sold for ruinous prices. Plums that would have paid fairly if dried, have been corded up in the fruit stores until they rotted and had to be carted to the dumps. Peaches have come in excess of canners' requirements, and have had to be sacrificed.

The fact of the business is, the fruit grower must have some safety-valve on his enterprise. He must be prepared to care for his fruit himself when this market is filled up. It is an absolute waste to keep on shipping in fruit when the quotation shows that there is too much already. If the growers were prepared to dry the fruit, they would be saved this loss. If the driers were set at work last week for a couple of days on plums, and shipments withheld, the city market would have had a chance to clear itself, and then a profitable price could have been quoted again. We have had so much on this subject of late, in the reports of the Horticultural Society meetings, that it seems idle repetition to call attention to it again. But the emergency remains. And if it is an emergency now, what will it be a few years from now when the hundreds of thousands of trees lately planted come into full bearing? There is only one safeguard which can now be seen, and that lies in preparation to put the fruit in preservable form at home whenever the city markets sink to a certain point. Fortunately there remains the good outlook for dried fruit, it well prepared and packed. We should no more think of starting a large orchard enterprise without determining to provide a good drier when the fruit comes, than we would of going to sea without an anchor. There is now much experimenting being done with different driers, and there is good reason to expect that, by the time the great increase in our fruit crop comes, there will be perfectly successful means for preserving the surplus. The problem is one to which everyone who has an orchard interest, present or prospective, should address himself.

Pits and Dormant Buds.

EDITORS PRESS:—A subscriber of the PRESS, in your issue of July 22d, wants to know how to preserve apricot and peach pits until the planting season, and also what percentage of trees die when planted in dormant bud.

First, about the pits: Peach, apricot, and plum pits can very well be preserved in sand—just damp sand—in a cellar till the fall, to be either planted at that time in the open ground, or, if to be kept in the cellar the whole winter, the sand into which the pits have been mixed to be kept quite damp.

Almonds, walnuts and chestnuts to be used for seed are also put in damp sand after gathering. Pits and nuts have to be examined during the winter, and their germination either accelerated or checked by wetting more or not wetting the sand they are kept in.

Apple, pear and grape pits are kept in dry sand till the middle of January, and in damp sand the balance of the winter. Apple and pear pits, particularly, have to be examined well before wetting the sand any more, for they germinate very fast.

Cherry and hawthorn pits have to be planted as soon as gathered.

As to what percentage of trees die when planted in dormant bud: If the budded stock is stout enough, well rooted and healthy, there is no reason why there would be even 5% loss in buds, provided when the trees are set out the buds are "all right." The only difference is in the growth of the bud the first year. I have reference to all kinds of fruit like apple,

pear, peaches, chestnuts, walnuts, etc., but if your correspondent means more particularly the apricot, as I am not posted enough on that tree, I cannot give him a positive answer.—FELIX GILLET, Nevada City, Cal.

Silver-Hulled Buckwheat.

EDITORS PRESS:—I have this day mailed you some plants—"silver-hulled buckwheat"—received from State Agricultural Society. The seed was sown in my vineyard about May 6th, on loose, black, loamy soil. Would not this be a good crop to raise on worn-out wheat fields? In New Jersey it is a paying crop on poor land and poorer hillsides. When farmers begin to recognize the necessity of rotation of crops, perhaps they will find this a place in their list, but, till then, I would advise all raising poultry to sow a little buckwheat near their chicken house, as it is good chicken feed, and poultry do better on a change of feed, just as land does better with rotation of crops.—SIDNEY A. CARTER, Yountville, Cal.

The sample is a handsome buckwheat, being of lighter hue than the ordinary grain, whence, we suppose, the name "silver." It promises to be a valuable grain. Buckwheat is worth the attention of farmers, although the product has increased a good deal of late, and the price is not what it used to be.

Resisting Vines.

EDITORS PRESS:—In an article in last week's RURAL on "Resisting Vines," the meeting referred to was the St. Helena Viticultural Club, when it should have been the Napa Grape Growers' Association. These are two distinct organizations, one at each end of Napa valley; both, however, having the same end in view. A printer's error also occurs in the same article. In the sentence, "He had a quantity rooting which were doing remarkably well without injection," the last word should have been irrigation, not injection.

ENTOMOLOGICAL.

The Cherry Slug.

EDITORS PRESS:—In the issue of the PRESS for July 29th is a paragraph headed "Slug on the Cherry Tree." From the description of the work done to the leaf, I am inclined to the opinion that the slug spoken of is not a snail, as are our garden slugs, but is the larva or young of a saw fly, known as the cherry slug (*Selandria Cerasi*). However, a brief description of this insect and its work may not be amiss, as the correspondent can then tell whether this is the insect or not: The cherry slug is a brownish-green, slimy slug, tapering from before backwards, and having 20 very short legs. They feed on the upper surface of the leaves, eating all but the veins and the under skin. These larvae are produced from eggs deposited singly in June in incisions in the leaf made by the sharp ovipositor of the female. When fully grown they change to pupae in the ground, and in 15 days after changing to this state produce the perfect insects or flies. These are small, four-winged insects belonging to the order *Hymenoptera*, to which the bees and wasps belong, of a glossy, black color, all but the front pair of legs, which are dirty yellow, the hind legs having pale articulations. The flies come out in August to deposit eggs for a second brood, which are to be found as slugs on the leaves in the following month. The last of September or the fore part October these enter the ground, change to pupae and remain in that condition till the following spring.

From a recent article in the *Prairie Farmer* I learn that this insect is doing considerable damage in the northern part of this State.

The following remedies have been recommended: Prof. Forbes says that horticulturalists find thoroughly sprinkling the tree with fine dust, such as may be made from beating up soil or may be found in a dry road, is effectual. Townsend Glover said this was of but little value. Mr. Wm. Sanders, of Canada, says air-slacked lime dusted over the tree is an effectual remedy. The dust or lime are harmless to the tree, and for that reason are preferable to Paris green, or any other poison that would render the fruit unfit for use.—G. H. FRENCH, Carbondale, Ill.

Blue Gum and the Codlin Moth.

EDITORS PRESS:—Having a few spare moments I thought I would sit down and drop a few lines to the RURAL PRESS, and give you numerous readers my experience with the codlin moth. I have a pear tree—the only one in my young, little orchard that has borne any fruit, as yet. For the last three years the codlin moth has made sad havoc with my fruit. This year he slipped up on it; there is no trace of him that I can see. Unless I am badly mistaken, Matthew Cook can put away his spraying pump for a more simple and surer remedy. Last spring I found the moth, as usual, in full force, so I thought I would try what virtue there was in the blue gum. I broke off a limb about four feet long and put it in the fork of the tree about the first of April. All at once the pest has disappeared, and my tree is as free of the moth as if there never was one. The fruit will show for itself, as anyone can see who will take the trouble to come here. The fruit is still on the tree, and will hang until October, as it is a late seedling. The remedy is a cheap one, and worth trying.—PATRICK CARROLL, Nicolaus, Sutter Co.

A Black Potato Bug.

The Lakeville (Nevada) *Examiner* says: A black potato bug has made its appearance in the gardens in this vicinity, and shows an officious and disgusting willingness to help harvest the potato crop.

Opening of the Mechanics' Fair.

The 17th annual fair of the Mechanics' Institute was formally inaugurated on Tuesday at the commodious new pavilion on Larkin street. There was a large attendance, and all things considered, the exhibition was very creditable. The manufacturing interests and other industries are well represented, and very little space remains unoccupied. After the opening overture by the band, a prayer was offered by Rev. F. L. Nash, followed by a recitation by Mrs. L. H. Smith. The address of the day was then delivered by Chancellor Hartson, who reviewed the progress of science and mechanics' arts ably and at length. We present below extracts from Mr. Hartson's address:

Science and Art.

The relations between science and the mechanic arts may be compared to the relations between the mind and the body, between steam and the steam engine, or between electricity and the electrical apparatus—both being indispensable for the accomplishment of any useful purpose.

Science and the mechanic arts are so intimately connected and so mutually dependent that they will be treated as identical in purpose and results, and as mutually contributing to the world's development and progress from the earliest ages of recorded time down to the present period.

The great and important discoveries and inventions are not the work of a single day, or of one individual alone, but are the products of time and of progressive development. Each generation is indebted, to a large extent, to its predecessor for the facts and principles which ultimately in useful and brilliant discoveries.

The great discoverers and inventors in one age have built upon the foundations laid by others, and have crowned their work. Newton, "whose discoveries pour in day upon the works of God, as if a second fiat for light had gone forth out of His own mouth," founded the theory of universal gravitation upon principles before established by Kepler; yet much of Kepler's knowledge was derived from the study of the Copernican and Ptolemaic systems.

Herschel is entitled to great honor for the invention of his telescope of wondrous magnifying power; yet, without derogating from his just fame, history traces the discovery of the telescope, though in an imperfect condition, to Galileo, and from him traces the principles of its construction still further back to three almost unknown competitors for the distinguished honor of original discovery, to Metius, Jansen and Lippersheim.

The discovery of America is due to the enterprise, skill, patience and implicit faith, and even to the temerity of Christopher Columbus, and he is entitled to that honor without abatement or diminution. Yet Paulo Loscanelli, a learned cosmographer of Florence, prepared the map which guided Columbus in his first voyage of discovery. The Northmen visited the northeast coast of America in the tenth century and planted a colony in Greenland, with which they afterwards maintained intercourse.

All honor to Robert Fulton, whose steamboat was pronounced a failure in 1803, and in 1807 a success, because its speed was then five miles an hour on the glassy Hudson. Yet James Watt had brought the steam engine to a high state of perfection in England as early as 1775. The power of steam had been known for centuries, and unsuccessful experiments had been made to harness it to machinery, both on land and on water, in regions most remote, but its useful application to lighten labor and facilitate business is of recent date.

The present century has been most

Fruitful in Useful Inventions,

Improvements and discoveries, and the production of mechanical industries is fabulous.

There are those living that saw the first steamer that skipped over the laughing Hudson, now renowned for its floating palaces. In 1819,

the first transatlantic steam line was established between Savannah, Georgia, and England. This line had one small steamer, named *Savannah*, that made its first trip from Savannah in 1819. Now all of the wharves of our great cities are lined, and all of our bays, lakes, rivers and oceans are dotted with steam crafts bearing the commodities and commerce of all zones.

Steam wagons preceded the railway locomotive. In 1770, Cugnot, a Frenchman, constructed a steam wagon for use on common roads. Robert Watt, of England, patented a road engine in 1784. In 1787, Oliver Evans obtained from Maryland the exclusive right to propel wagons by steam in that State.

The first high pressure locomotive was built in England in 1802, and the second in 1804. George Stephenson, of England, in 1814, constructed the first locomotive that attained a speed of six miles per hour.

The first section of the great commercial highway now known as the Baltimore and Ohio railroad was begun July 4, 1828, and was at first operated by horses.

The first locomotive constructed in the United States was built by the well-known Peter Cooper, in Baltimore, in 1830. Two years previously there had been a shipment of a limited number of locomotives from England. When we survey the map of the United States, with its network of railroads, stocked with cars and engines, and bearing the inhabitants and commodities of all climes onward swiftly to their destination, and consider that all of these mechanical energies are the production of the last half century, we are not only amazed, but distrust both our eyes and history.

capital for other and greater and grander achievements and triumphs.

The men of this age are fortunate indeed in holding this advanced position, fortunate indeed in the possession of the vast patrimony of others' experience, knowledge and wealth; in the possession of all of the inventions, and of all of the discoveries, and of all of the achievements in labor, learning and thought of all preceding ages.

The working capital of this age is not limited to gold, silver, stocks, houses, land, books and machinery, nor to any material work of convenience, necessity or luxury, though valued at countless billions; but it includes all systems of ethics, religion, government and philosophy, all generous and patriotic sentiments, all philanthropic and charitable endeavors, all of the strength and sweetness of friendship and affection, all love of right and justice, all veneration for parents and adoration for God, and all of the skill, talent, high purpose and knowledge, ambition and genius of the human race.

The Zeal and Works of the Members of the Mechanics' Institute.

It is most gratifying to know that the members of this Institute have contributed their share to this working capital, and that they have co-operated with the earnest workers, the wise and illustrious, in the progressive movements of the age.

They have constructed this palatial temple—so spacious, fitting and fascinating; so well adapted to the purposes for which it was designed; so honorable to those who originated and erected it, and dedicated it to the arts and sciences, and it is now replete with models of taste, skill, thought and genius.

steam, electricity, sound and motion, make this an attractive spot for students of taste and genius.

The youth will annually come here to witness the marvelous displays of mechanical ingenuity and of the fine arts; manhood for instruction; and decrepit old age to take note of the changes, the new fields explored, the work accomplished, and will rejoice in the ever-accumulating evidences, here exhibited, of the ingenuity, wisdom and creative power of man.

Beneath the light of this institution, and under the stimulus of its influence, new modes of the use and application of nature's powers have been discovered, that have contributed largely to the wealth, power and renown of the "Queen City" of the Pacific.

Mechanics' Institute Pavilion.

We give on this page an engraving of the new building in which the Mechanics' Institute Industrial exhibitions will hereafter be held. The building will be formally opened on Tuesday, the 15th inst., when the opening exercises of the Seventeenth Industrial Exhibition will be held.

The new building fronts on Larkin street, and extends along the block fronting on Grove St. The doors are only a few steps from Market street, near the new City Hall.

There has been no attempt made at architectural display in the construction of this building, though it is neat and plain in design, and very strongly built. It is not quite so large as the building in which so many fairs have been

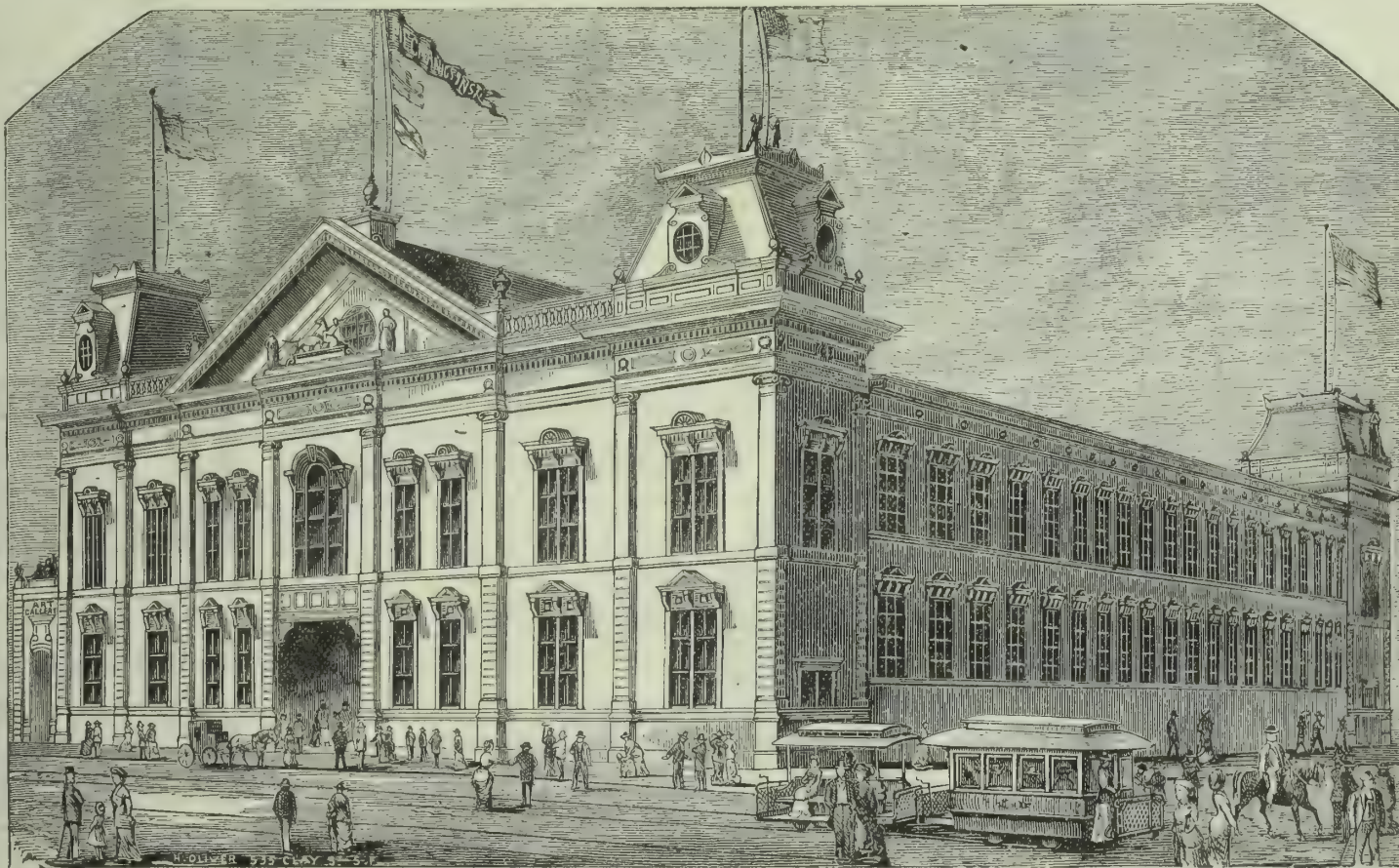
held, being somewhat shorter. It is 412½ ft. long and 200 ft. wide, with a garden 45 ft. wide by 300. There is also in the rear, and separated from the main building by a partition, a machinery department 200x66 ft. and 21 ft. high.

The garden is open to view from the main floor, which is a great improvement. The top of the horticultural department is covered with glass, giving plenty of light and making it warm. The main floor is planked with smooth narrow planking, so that walking will be much easier. The main features of the old building have been preserved, as all the material has been utilized in the new one. A very great improvement, indeed, has been made in white-washing the rafters, arches, etc., so that the building is much lighter than the old

one. The galleries are the same as we have been accustomed to see them. The art gallery is divided into four rooms, separated by folding doors, so that one or more rooms can be leased to parties, clubs, etc., when the fair is not open. These rooms are hard finished, and look very well. There is a separate entrance to these rooms.

The whole building is light and airy. There are two good staircases at each end of the building, and the toilet arrangements are a great improvement. There is no shafting under the main gallery, machinery in motion being confined to the machinery room.

Mrs. GARFIELD'S SILK DRESS.—A few days ago the U. S. Women's Silk Culture Association presented Mrs. Garfield with the first fruits of their labors in establishing the new industry. The token of their esteem and sympathy was an elegant black brocade silk, inclosed in an ebony box lined with lavender satin. Accompanying the gift was a letter of presentation on lavender satin, stitched with old-gold sewing silk. The silk, which had been reeled, spun, dyed and woven into the brocade fabric, is an entirely American product in material, design and finish, as well as in the spirit of the gift. The association begged the acceptance of it as an offering from women, with the sincere hope for the personal encouragement of the work, in which President Garfield had been so much interested. The cocoons were raised by silk growers in the following States: Pennsylvania, Delaware, New Jersey, South Carolina, North Carolina, Tennessee, Missouri, Alabama, Kansas, Georgia and Nebraska. Mrs. Garfield acknowledged the receipt of the silk in a grateful letter to the president of the association,



THE NEW PAVILION FOR THE MECHANICS' INSTITUTE INDUSTRIAL EXHIBITION, SAN FRANCISCO.

The telegraph has become one of the most useful and

Important Factors in Business.

The almost instantaneous transmission of intelligence from continent to continent, and from pole to pole, has contributed greatly to equalize, harmonize and civilize mankind.

The telephone is an instrument of recent invention. Prof. Reuss, of Germany, has the honor of first discovering this new agency, in the year 1865. Afterwards, Prof. Gray devised the harmonic telephone. The speaking telephone was subsequently produced by Mr. Bell, of Massachusetts. Mr. Edison has devised a telephone that transmits vocal sounds over long distances with great distinctness. This system of transmitting sound is now in its infancy, and no one may anticipate the rich results of full development.

Electricity appears to be the great reserved force of nature to supply mankind with light, heat and power, when nature's other sources of supply are exhausted, and thus to continue the present system in the world's economy.

We have no criterion or rule by which to measure or calculate the

Possibilities of the Future.

It is certain that the elements, powers and forces of nature are not fully, yea, only partially revealed. There may be some powers, like electricity (whose discovery and application to material uses are recent), now lying dormant and unknown, the discovery of which, hereafter, may revolutionize the business and change the current of human affairs.

Every new principle developed, every invention and improvement in art, all advancement in science and philosophy, form the basis, the

They have, with great care and judgment, selected and purchased more than 30,000 books for public instruction, entertainment, culture and refinement.

"All that mankind has done, thought, gained or been, is lying, as in magic preservation, in the pages of these books."

"Golden volumes, richest treasures,
Object of delicious pleasures,
You, my eyes rejoicing, please,
You, my hands in rapture seize.
Brilliant wits and musing sages,
Lights who beamed through many ages,
Left to your conscious leaves their story,
And dared to trust: with you their glory."

All are invited to come and drink deep from these fountains of knowledge.

All should patronize this library for their own pleasure and improvement, and in recognition of the eminent services of its founders—

"Come take choice of all my library,
And so beguile thy sorrow."

The managers of this institute have, with great and unrequited labor, bought this costly and valuable block and constructed this enchanting pavilion for the glory and advancement of this metropolis, and to promote the highest interests of all the people of this coast. How difficult, if not impossible, to estimate the advantages and

Benefits Derived from this Enterprise.

In this hall are collected rare, beautiful and useful models of painting, sculpture and mechanism, attracting and exciting the curious, stimulating the ingenious and enterprising, and diffusing useful knowledge to all.

The glittering display of associated mental and material wealth in machinery, in speaking statues, in resplendent paintings laughing with life, in combination with the exhibition of light,

Lands for Sale and to Let.

Fruit and Homestead Lands FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Yaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER,
Vacaville, Solano, Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$60 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,
410 Montgomery St.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

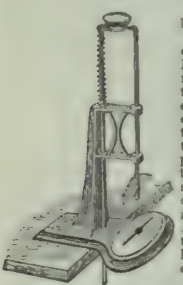
EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place,
WM. C. PRINCE.

Excelsior Fruit Pitter.

Invented by A. Donatella.



This machine recommends itself by the following good qualities:
Rapidity of work, one operator doing the work of four with knives. It cleans the pit perfectly, wastes no fruit, and leaves the plum in two equal parts. It is easily operated. Makes no litter, the pits dropping in a vessel under the table. The plum remaining between thumb and finger can be placed directly on the ridicle for the Dryer. Simplicity of construction. Cannot get out of order. Will work equally well on green or very ripe Plums, Prunes, Apricots or Nectarines pitted with this machine dry more evenly and look nicer than when chipped off with a knife.

The low price comes within reach of all, and will pay for itself with two day's work. It is invaluable to the housewife for preparing fruit for canning and other purposes. Ask your hardware dealer for it. Try it and be convinced. For particulars address,
A. DONATELLA, Heidelberg, Cal.

WIESTER & CO., General Agents, 17 New Montgomery Street, San Francisco

To Farmers Miners, Wine-Makers AND OTHERS.

PUMPS

For Wine, Mines, Ditches, Ships, Irrigation, Wells, Tanks, Etc. Hand, Horse, Steam or Wind Power. Best Pump in use.

A SMALL INVOICE FOR SALE CHEAP TO CLOSE A CONSIGNMENT,

By W. S. RAYNOR,
At Linforth, Rice & Co.'s, Hardware Dealers,
323 Market St., San Francisco.

Only "PEBBLE" Establishment.



Muller's Optical Depot,
185 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.



The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,000 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.	Hill's Sweepstake Road and Breaking Plow.	Hill's Improved Horse Powers.
" Improved Granger Gang.	" Side Hill Gang.	" Cultivators.
" In'd Single Sod and Tule Plow.	" Double Deep Tiller.	" Gen'l Seed Sowers.
" Single Plows.	Fresno Ditching and Grading Plow.	Hill's Improved Headers.
		Wood and Iron Harrows, etc.

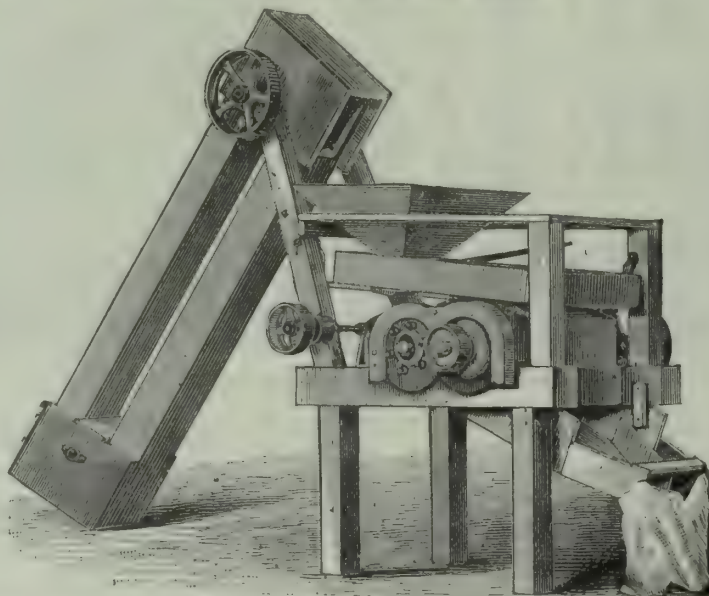
Remember that Water-Conveyance Insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 10 of them in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

Nathaniel Curry & Bro..

113 Sansome Street, San Francisco,



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS. Ammunition in quantities to suit. A liberal discount to the trade. Price List on Application

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR YOUNG LADIES.

Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

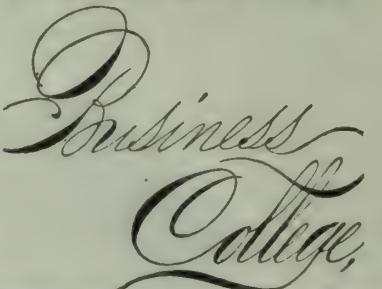
The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study: Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers' Course, Preparatory Course, Telegraph, Languages. The College Journal, containing full information, will be sent post paid to any address. F. E. CLARK, Principal.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

Paid in installments, \$75.

Send for circulars.

THE HOME SCHOOL

FOR YOUNG LADIES,
1825 Telegraph Avenue, Oakland, Cal.

The next year will begin on
WEDNESDAY, JULY 26, 1882,
H. N. FIELD, Principal.

SACKETT

(FOR BOYS)

SCHOOL.

Takes first rank for thoroughness and ability of its teachers; also for home care.

Business, Classical, and English Departments.

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M., Principal, Oakland, Cal.



417 Kearny Street, San Francisco.

C. N. ANDREWS, President. G. B. BARNARD, Business Manager.

Send for Circulars.

BOONE & MILLER, Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexia from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

Silos, Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER Saxe & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Willard Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Seitate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S.S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

HOG RINGING A FAILURE!
OUR TENDON CUTTER
A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.
"Tendon Cutter," \$2.75 each.
Sold by the trade generally, or address

G. G. WICKSON,
General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

Mission Rock Dock and Grain Warehouse.
San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors
Office—318 California Street, Room 3.

Duroc, or Red Hogs.

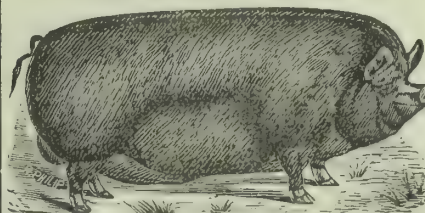


The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Spaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 683 lbs. gross, and 584 lbs. dressed. On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F., killed one weighing 1018 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

HINKLEY & GETCHELL,

Laureles Ranch, Monterey, Cal.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

FOR SALE.



Twenty (20) head of Thoroughbred BERKSHIRE PIGS from six (6) weeks to three (3) months old. Can furnish males from different herds of equally good stock. Apply to G. M., 39 Clay street, S. F.

POULTRY,
Hogs & Cattle.

Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,
Los Angeles, Cal.

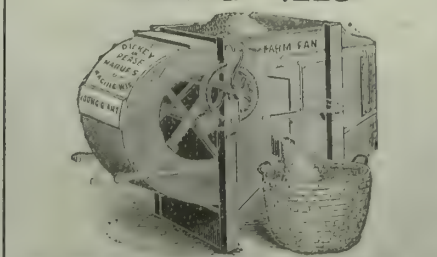
PURE BRED POULTRY.

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.
I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock. For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

A. P. DICKEY FARM AND WAREHOUSE
FANNING MILLS.

The BEST FANNING MILL IN THE WORLD. Obtained Centennial Award and Grand Medal, also best award at Paris Exposition in 1878. It cleans perfectly Oats, Chaff, Cocks, and all foul matter from Wheat and Barley. It grades and separates for Seeding and Market, cleans all kinds of small seeds, and will save any farmer its cost annually. Lowest freight procured for purchasers. Address,
DICKEY & PEASE, Manufacturers, Racine, Wis.

E. W. WOOLSEY & SON,
Importers and Breeders of THOROUGHbred

SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUSENBERG & CO, Sole Agents, 314 Sacramento St., San Francisco.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco

RAMS FOR SALE.

350 THOROUGHbred

And Graded

SPANISH MERINO

Rams for Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High-Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, MRS. E. MCCONNELL WILSON, Elk Grove, Sacramento Co., Cal.

ONE HUNDRED

SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

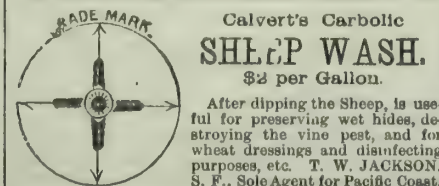
Cornwall Station, Contra Costa County.

BUCKS FOR SALE.

Spanish Merino, French Merino, LEICESTER.

Apply SHOOBERT & BEALE,

405 Montgomery St., San Francisco.

Calvert's Carbolic SHEEP WASH.
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER.

Baden Station - San Mateo Co.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872. In lots to suit. Address
I. A. POPPE, Sonoma, Cal.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

30 California St., SAN FRANCISCO

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTPELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co.
J. H. GARDNER, Rio Vista
T. E. TYNAN, Stanislaus Co.
URIAH WOOD, Santa Clara Co.
J. C. MERYFIELD, Solano Co.
H. M. LARUE, Yolo Co.
I. C. STEELE, San Mateo Co.
THOS. MCCONNELL, Sacramento Co.
O. J. CRESSEY, Merced Co.
SENECA RIVER, Napa Co.
A. D. LOGAN, Colusa Co.

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLATERATIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Oakland Poultry Yards,

(Cor. 17th and Castro Sts., Oakland, Cal.)



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys,

And the new fowl, AMERICAN SEBRIGHT or EUREKA. AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

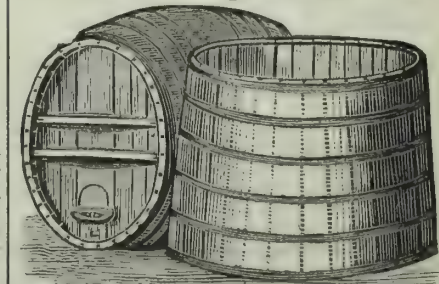
Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

Poultry and Stock Book.

A complete manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Hens and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

CALIFORNIA
Wine Cooperage Co.

FULDA BROS., Proprietors.

30 to 40 Spear St., S. F.

ALL KINDS OF CASKS, TANKS, ETC.

Ship, Mining and Water Tanks a Specialty.

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS.

Cor Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in Dewey & Co.'s Scientific Press Patent Agency, 252 Market St., S. F.

FOR THE WEEK ENDING AUGUST 1, 1882.

211,776. BOOK MARK AND PAPER CUTTER—FRANK D. ADAMS, Auburn, Cal.
261,914.—BERR FAUCHET—R. Eberhard, S. F.
202,181. GRAIN SEPARATOR FOR THRASHING MACHINES—R. H. Johnson, Woodland, Cal.
211,537. EGG BEATER—Geo. M. Kittelman, San Rafael, Cal.
202,127. CONSTRUCTION OF CABLE RAILWAYS—Henry Root, S. F.
202,167. WOOD PLANING AND SAWING MACHINE—Jos. F. Welch, Globe City, A. T.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending Aug. 15, 1882.

HIGHEST AND LOWEST BAROMETER.

Aug. 9	Aug. 10	Aug. 11	Aug. 12	Aug. 13	Aug. 14	Aug. 15
29.67	29.63	29.61	29.68	29.62	29.56	29.615
29.78	29.68	29.55	29.82	29.82	29.59	29.630

MAXIMUM AND MINIMUM THERMOMETER.

	9 A.	9 P.	9 A.	9 P.	9 A.	9 P.
65.5	94	69	62.5	64	60.5	61
50	74	55.5	74.5	56	54	53.5

MEAN SURFACE HUMIDITY.

	74.3	72	73	66.7	57.7	53	53.7
--	------	----	----	------	------	----	------

PREVAILING WIND.

W	SW	W	W	SW	SW	SW
329	293	278	339	318	259	264

WIND MILES TRAVELED.

Clear	Clear	Clear	Fair	Cloudy	Cloudy	Fair
22	22	22	22	22	22	22

RAINFALL IN TWENTY FOUR HOURS.

Total rain during the season from July 1, 1882, ——— inches.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers, who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chihuahua, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 80 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co. 306 Battery street, S. F.

May Rakes.

The celebrated hay rakes manufactured by John Dodds, Dayton, Ohio, can be found in large stock at the San Francisco branch, 37 Market St. The old reliable Hollingsworth Rake has taken three Gold Medals at International Fairs. The Red Bird is cheap, simple and a great favorite. The new Reinder is the strongest and most durable Self-Dump Rake on the market. The iron axle and wheels, rocker-frame movement, adjustable teeth, dumping device and other improvements make them the most desirable Rakes manufactured. See the agent, S. H. Gould, before purchasing, 37 Market St., S. F.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Promptness Displayed, Etc.

Messrs. DEWEY & Co., Patent Agents.—The Canadian patent obtained through you is at hand. This makes three patents received within a month. The ability, energy and promptness displayed by your firm must certainly be gratifying to your numerous patrons—as it assuredly is to
Yours respectfully,
THOMAS & BERNOLLI.

New GIG OR SULKY.—Something novel and very elegant in the way of a Sulky, may be seen across the way from our office, at the store of Geo. A. Davis, the well-known Agricultural Hardware man. It must be seen to be appreciated. A cut of it will appear in our columns soon. Photographs sent on application to Geo. A. Davis, S. F., or Jacob Price, San Leandro, who is the inventor of it.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RUMOUR & Co., 10 Barclay St., N. Y.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 16, 1882.

A low commercial barometer prevails this week. Almost every change in our list is a decline, except Provisions, Butter and Hops. There is considerable Wheat selling in a quiet way at a slight concession from last week's rates. As we write, on Wednesday, there is a little better feeling, and a recovery from the dullness and decline is possible, although foreign advices are now rather unfavorable.

The latest from abroad is the following:

LIVERPOOL, Aug. 16.—Wheat—California spot lots are dull at 9s 8d to 9s 11d. Cargo lots, 46s 6d for just shipped, 47s 6d for nearly due and 47s 6d to 48s for off coast.

The Foreign Review.

LONDON, Aug. 14.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Rapid progress has been made with the harvest, but the grain is generally very soft, the yield variable and the quality a little indifferent. The crop is offered in small quantities. The 1881 crop is unsaleable, except the finest samples, which are 1s cheaper. Foreign grain is excessively dull and slow, and declined 1s on Friday. No business is doing in off-coast cargoes. There have been several arrivals. Business in cargoes on the passage and for shipment is trifling. Maize is very scarce and prices are maintained. The sales of English Wheat the past week were 10,122 quarters, at 50s 6d, against 10,932 quarters, at 46s 9d, for the corresponding period of last year.

Freights and Charters.

Freights are just where they have been for two weeks, say £2 17s 6d for iron vessels to Cork, with a moderate inquiry for tonnage. Charters drawn during the week, both spot and prior to arrival, number 9 vessels, of a register of 11,280, or a carrying capacity of 16,920 short tons, or 338,400 cts. The chartered Wheat fleet now in port has a register of 32,037, or an export capacity of 48,055 short tons, or 961,100 cts, against 71,433 tons at the same time last year. The disengaged tonnage in port has now a register of 47,410, or an export capacity of 71,115 short tons, or 1,422,300 cts, against 149,600 tons at the same time last year. There is also a disengaged register of 10,633 at adjacent ports. Tonnage now on the way to this port has a register of 298,370, against 359,270 at the same time in 1881 and 190,166 in 1880.

Eastern Wool Markets.

BOSTON, Aug. 15.—The Wool market remains quite steady, with a fair demand from manufacturers, and prices unchanged. Supplies continue to arrive quite freely from all points, and the market is well supplied. Sales of Ohio and Pennsylvania fleeces have been made at 40¢ for X and XX, and choice lots at 41¢ to 42¢. Michigan X fleeces have been selling at 39¢ to 40¢, but are difficult to obtain over 39¢ for good average lots. No. 1 Michigan and Ohio have been selling at 43¢ to 45¢, and are in fair demand. Combing and delaine fleeces are firm and in demand, 43¢ to 45¢ being offered for fine Michigan and Ohio delaine, and 40¢ to 42¢ for fine No. 1 combing. In unwashed Wools sales have been made at 25¢ to 32¢ for fine and medium; choice medium selections, 33¢ to 35¢, and low and coarse, 19¢ to 23¢. Pulled Wools are in demand, and sales are made at 42¢ to 45¢ for good and choice, and 34¢ to 36¢ for common and good. California Wools are quiet, and foreign Wool remains unchanged. The supply of carpet Wool has been sold up close.

Eastern Grain and Provision Markets.

CHICAGO, Aug. 15.—Closing quotations: Wheat, irregular and easier; \$1.02 August; 98¢ September; Red, \$1.04; Spring, 1.04½. Corn, weak, lower; 77¢ cash; 77½ August; 76½ September. Pork, weak; \$21.17½ cash; \$21.32½ October. Lard, weak and lower; \$17.32½ cash; \$12.42 October.

BAGS—Bags have tumbled from ½ to ⅓ of a cent. There is little doing just now.

BARLEY—Barley has been depressed, but is showing a little better disposition to-day. We note sales: 300 tons No. 1, August, \$1.24½; 100 do, September, \$1.23½; 100 do, \$1.23½; 100 do, October, \$1.25; 100 do, \$1.25½; 300 do, November, \$1.26½. The transfers in No. 2 Feed included 400 tons August at \$1.21, and 200 do, seller 1882, at \$1.17 per cbl. Spot lots of No. 1 feed are held at \$1.26½, with \$1.23 bid. Brewing was offered at \$1.29 in September for No. 1, with \$1.27½ bid. Nothing doing in Chevalier.

BEANS—There is no change in beans.

CORN—Corn is not in much demand, and prices are reduced.

DAIRY PRODUCE—Fresh roll is scarce, and has advanced to 37¢ for the fancy brands. Firkin is lower than it was a day or two ago, as there is much Eastern-packed butter in store. Cheese is unchanged.

EGGS—Eggs are just the same as a week ago. Strictly choice are in good request, but lower grades are abundant.

FEED—Bran and Middlings are higher again. Cornmeal has declined \$1 per ton. Hay rates are as follows: Wheat, \$14¢ to 15¢; Wild Oat, \$12¢ to 13¢; stable, \$10¢ to 12¢; stock, \$10¢ to 11¢; Alfalfa, \$11¢ to 13¢ per ton.

FRUIT—Fruit rates are much reduced, owing to the large amounts now in sight. Much is sold at little above cost of picking and shipping. The present state of the market cannot last long.

FRESH MEAT—Meat prices are unchanged.

HOPS—Hops are booming. Choice California are quotable up to 50¢ per lb. The blight abroad and the short crop in the United States combine to make Hops very lively this year. The following is of interest:

WASHINGTON, Aug. 15.—The Hop crop of the United States indicates a small rate of yield. About 385 lbs per acre on over 30,000 acres is reported in New York. The total acreage of the State slightly exceeds 40,000 acres. Indications point to a product of not more than 93,000 bales of 280 lbs in that State. The area of the Wisconsin plantations has decreased in breadth. The Pacific coast crop has increased, with the present conditions favorable.

OATS—Oats are easy and sell from \$1.60 to \$1.70, according to quality.

ONIONS—Onions are considerably lower and are in large supply.

POTATOES—Potatoes are about the same as one week ago.

PROVISIONS—Provisions are still higher, as shown in our price list.

POULTRY AND GAME—The high price of Meats is helping the Poultry market, and a general improvement is noted in our price list this week.

VEGETABLES—Vegetables are in good supply, and rates are lower for all kinds.

WHEAT—The Wheat market is a shade better than yesterday, but lower than a week ago. One hundred tons is said to have sold at \$1.65, but not at open sale. On call, bids and offers were: Extra choice, September, \$1.69 bid; November, \$1.72½ bid; No. 1 White, spot, \$1.65 bid, \$1.67 asked; August, \$1.65 bid; buyer 20, \$1.68 bid, \$1.69 asked; September, \$1.68 bid, \$1.69 asked; October, \$1.69 bid, \$1.70 asked; November, \$1.70 bid, \$1.71 asked; December, \$1.69 bid; buyer 1882, \$1.64 bid; seller 1882, \$1.62½ bid, \$1.65 asked; No. 2 White, August, \$1.62½ bid; September, \$1.62½ bid, \$1.63 asked; October, \$1.65 bid, \$1.65½ asked; No. 1 Sonora, August, \$1.65 bid; No. 1 Amber, buyer August, \$1.68½ bid, \$1.70 asked. Sales on the 3 o'clock call of 100 tons No. 1 White, October, \$1.70, and 100, \$1.69½. Business on the Grain Exchange was light, as follows: 600 No. 2, September, \$1.63; 200, January, \$1.64½; 100, \$1.65. Bids and offers were: No. 1, August, \$1.67½ bid, \$1.68½ asked; September, \$1.68 bid, \$1.68½ asked; No. 2, October, \$1.63½ bid, \$1.64 asked; November, \$1.64 bid, \$1.64½ asked.

WOOL—There is little or nothing selling this week, and prices are unchanged.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Aug. 16, 1882.	
BEANS & PEAS.	
Bayo, chl., 25 @ 62 30	
Butter, 35 @ 64 00	
Castor, 35 @ 64 00	
Pea, 40 @ 25	
Red, 20 @ 40	
Large White, 35 @ 63 40	
Small White, 40 @ 25	
Lima, 40 @ 25	
Field Peas, b'l eye 5 @ 75	
do, green, 20 @ 25	
BROOM CORN.	
Southern, 3 @ 3	
Northern, 4 @ 6	
CHICORY.	
California, 4 @ 44	
German, 6 @ 7	
DAIRY PRODUCE, ETC.	
Cal. Fresh Roll, 33 @ 35	
do, Fancy Brands, 35 @ 37½	
Pickle Roll, 30 @ 32½	
Firkin, new, 29 @ 30	
Eastern, 18 @ 20	
New York, — @ —	
CHEESE.	
Cheese, Cal., 12½ @ 13½	
Cal. Fresh, doz., 29 @ 31	
Ducks, — @ —	
Oregon, — @ —	
Eastern, by express, 22½ @ 25	
Pickled here, — @ —	
Utah, — @ —	
FEED.	
Bran, ton, 16 @ 20	
Corn Meal, — @ 23 00	
Hay, — @ 10 00	
Middlings, — @ 35 00	
Oil Cake Meal, — @ 32 50	
Straw, bale, 70 @ 75	
FLOUR.	
Extra, City Mills, 5 @ 65	
do, Country Mills, 4 @ 75	
do, Oregon, 4 @ 75	
do, Walla Walla, 4 @ 75	
Superfine, 3 @ 50	
WHEAT MEAL.	
Beef, 1st quality, 14 @ 8	
Second, 6 @ 7	
Third, 5 @ 6	
Mutton, 4 @ 5	
Spring Lamb, 6 @ 6	
Pork, undressed, 6 @ 8	
Dressed, 10 @ 11	
Veal, 8 @ 8	
Wm. Calves, 7 @ 8	
do, choice, — @ 10	
GRAIN, ETC.	
Barley, feed, chl., 17 @ 21	
do, New, 12 @ 25	
do, Brewing, 12 @ 25	
do, N. W., 13 @ 31	
Chevalier, 12½ @ 37½	
Buckwheat, 13 @ 21	
Corn, White, — @ —	
Yellow, 15 @ 61	
Small Round, 60 @ 61	
Oats, 60 @ 61	
Milling, — @ —	
Rye, — @ 20	
Wheat, No. 1, 16½ @ 71	
do, No. 2, 15 @ 61	
do, No. 3, 15 @ 61	
Choice Middling, 12½ @ 75	
HIDE.	
Hides, dry, 19 @ 19½	
Wet salted, 9 @ 11	
HONEY, ETC.	
Beeswax, lb., 23 @ 25	
Honey in comb, 12 @ 20	
Extracted, 8 @ 9	
do, light, 8 @ 9	
do, 7 @ 8	
HOPS.	
Oregon, 40 @ 42½	
California, 45 @ 50	
Wash. Ter., 40 @ 42½	
Old Hops, — @ —	
WALNUTS.	
Walnuts, Cal., 11 @ 12	
do, Chile, 11 @ 12	
Almonds, hd shd, 8 @ 10	
Soft shell, 15 @ 17	
Brazil, 10 @ 12	
Pecans, 14 @ 15	
ONIONS.	
San Joaquin, free, 18 @ 20	
do, fair, 18 @ 19	
do, dusty, 15 @ 17	
Southern Onions, 14 @ 22	
Modoc & Siskiyou, 24 @ 25	
Humboldt, 26 @ 27½	
Calaveras & Foot, 22 @ 24	
hill, — @ —	
Stamens & Tuol, 22 @ 24	
unme, — @ —	
Sonoma & Mendo, 25 @ 27	
cino, — @ —	
Nor. Sacramento, 23 @ 25	
Oregon, eastern, 20 @ 25	
do, Valley, 23 @ 27	

Pacific Coast Weather for the Week.

[Furnished for publication in the PRESS by NELSON GOROM, Sergt. Signal Service Corps, U. S. A.]

The following is a summary of the rainfall for each day of the week ending 11:58 A.M. Wednesday, Aug. 16th, at noon, for the stations named:

Date.	Olympia.	Portland.	Roseburg.	Red Bluff.	Sacramento.	San Francisco.	Visalia.	Los Angeles.	San Diego.
Thursday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Friday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Saturday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Sunday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Monday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Tuesday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Wednesday.	.00	.00	.00	.00	.00	.00	.00	.00	.00
Totals.	.00	.00	.00	.00	.00	.00	.00	.00	.00

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, Aug. 16, 3 P. M.
SILVER, ½. GOLD BARS, \$90 @ \$91. SILVER BARS, 10 @ 18 ½ cent, discount.
EXCHANGE on New York, 5 premium; London, 49 @ 49½; Paris, 5.13 francs @ dollar; Mexican dollars, 90 @ 91½; New York (4 per cent), 11½.

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Aug. 16, 1882.

FRUIT MARKET.

Apples, bx., 75 @ 1 25	
do, Basket, 40 @ 60	
Apricots, bx., 50 @ 75	
Bananas, buch., 2 @ 50	
Blackberries, 4 @ 50	
Cantaloupes, crt., 75 @ 1 00	
Cherries, chst., 11 @ 12 00	
Cherry Plum, bx., 25 @ 75	
Cocoanuts, 100 @ 60	
Crabapples, bx., 50 @ 75	
Crabberries, bbl., 12 @ 50	
Currants, chst., 4 @ 50	
Figs, box, 50 @ 1 00	
Gooseberries, 4 @ 8	
Grapes, bx., 50 @ 75	
do, Rose Peru, 75 @ 1 00	
do, Muscat, 30 @ 1 25	
do, B. Ham's, 75 @ 1 00	
Limes, Mex., 5 @ 75	
do, Cal. box, 75 @ 3 50	
Lemons, Cal. bx 2 @ 2 50	
Sicily, box, — @ 10 00	
Australian, — @ 50 00	
Nectarines, — @ 1 00	
Oranges, Cal. bx 4 @ 50	
do, Tahiti M., — @ 40 00	
do, Mexican, 15 @ 17 00	
do, Loreto, — @ —	
Peaches, box, 40 @ 75	
do, Crawford, 40 @ 40	
Pears, bak., 40 @ 70	
do, Bartlett, bx., 75 @ 1 25	
do, do, bak., 50 @ 60	
Pineapples, doz 6 @ 80	
Plums, — @ 10 00	
Prunes, — @ 40 75	
Raspberries chl., 10 @ 12 00	
Strawb's, chst., — @ 20 00	
Watson's, 100 @ 4 00	

VEGETABLES.

Citron, — @ 28 @ 30	
Dates, — @ 9 @ 10	
Figs, pressed, — @ 4 @ 7	
do, loose, — @ 34 @ 4	
Marionberries, — @ 14 @ 15	
Peaches, — @ 5 @ 6	

E. DETRICK & CO.,

Importers, Manufacturers and Dealers in

BAGS AND BURLAPS OF ALL KINDS.

BAG TWINES—HYDRAULIC HOSE.

SOLE AGENTS FOR

MOUNT VERNON COMPANY'S DUCK, ALL WIDTHS.

RUSSELL MANUFACTURING CO.'S COTTON BELTING, RUSSELL MANUFACTURING CO.'S SEAMLESS LINEN HOSE, TOWER'S CELEBRATED OILED CLOTHING.

TENTS, HAMMOCKS, CAMP-COTS, CHAIRS, STOOLS,

AND CAMPERS' OUTFITS,

BUNTING AND AMERICAN FLAGS.

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1836 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange.)

20 California Street. San Francisco.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: 120 Davis Street, S. F. Prompt Returns. Advance Liberally on Consignments.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-and-Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire-arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

MAN

chester Strawberry Plants, 75c. per doz., \$4 per 100. Valuable information in free Catalogue. Address F. I. SAGE & SON, Wethersfield, Conn.

THE PACIFIC RURAL PRESS.

BUY

SEWING MACHINES

AT

HEADQUARTERS.

900 Machines in Stock.

PRICES FROM \$25 TO \$80.

Packed and Shipped Free upon Receipt of Price.

SEVEN LEADING MAKES TO SELECT FROM, VIZ:

"DAVIS," "HOUSEHOLD,"

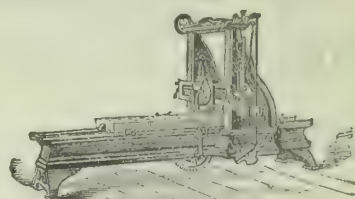
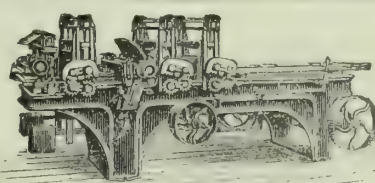
"QUEEN," "HOWE," "SPRINGFIELD,"

"STEWART" and "SINGER."

Every Machine Warranted Perfect.

NEEDLES, OIL AND ALL SUPPLIES, BEST AND CHEAPEST.

MARK SHELDON, Nos. 9, 11 and 13 First Street, SAN FRANCISCO, CAL.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

THE ONLY TRUE

"RICHARDSON."

If you wish to get the only true "Richardson"—and there is only one—be particular to order by the whole title:

Richardson's New Method

FOR THE

PIANO-FORTE.

By NATHAN RICHARDSON.

Price, \$3 25.

AMERICAN AND FOREIGN FINGERING

It is the most wonderfully successful instruction book ever published.

OVER 300,000 COPIES

Have been sold, and still its popularity does not wane. With its perfect and progressive system and thoroughly practical course of musical study, it stands without a peer as the

Most Perfect of Music Books,

Absolutely without errors, and a universal favorite

DON'T FORGET THE TITLE!

OLIVER DITSON & CO., BOSTON.

Established 1834.

C. H. Ditson & Co., 843 Broadway, N. Y.

SEVENTEENTH

Industrial Exhibition

OF THE

MECHANICS' INSTITUTE

WILL OPEN TO THE PUBLIC ON

Tuesday, August 15th, 1882,

AT THE

NEW PAVILION,

Larkin, Hayes, Polk and Grove Sts.,

AND CONTINUE UNTIL SEPTEMBER 16.

PREMIUMS of Gold, Silver and Bronze Medals, Diplomas and Cash, will be awarded to meritorious exhibits in Art, Manufactures and Natural Products.

Full information will be given or sent by applying at the office, 27 Post street.

P. B. CORNWALL, Pres't.

J. H. CULVER, Sec'y.

J. H. GILMORE, Supt.

CALIFORNIA'S

Exposition.

The Twenty-ninth

Annual State Fair

Begin at

SACRAMENTO, CAL.

On the 11th, and ends on the 16th of September.

THE PREMIUM LIST

Embraces liberal awards for all kinds of

LIVE STOCK, MACHINERY, IMPLEMENTS, ETC., TEXTILE FABRICS, MECHANICAL, AGRICULTURAL, HORTICULTURAL PRODUCTS, and FINE ARTS, ETC.

Any further information may be had upon application to the Secretary, from whom Premium Lists may be procured.

HUGH M. LARUE, Pres.

EDWIN F. SMITH, Sec'y, P. O. Drawer A, Sacramento, Cal.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists—large practical patent attorneys—enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

CLEAR LAKE AND CALISTOGA STAGE LINE.

San Francisco

LAKEPORT

In Eleven Hours.

Passengers leave San Francisco via C. P. R. R., at 8 A. M.; arrive at Calistoga 11:15 A. M. Leave Calistoga at 12 M. daily (Sundays excepted); arrive at Lakeport in evening. On Tuesdays, Thursdays and Saturdays, stages leave Calistoga for Lakeport via Middleton, Glenbrook, Kelseyville and Soda Bay; returning alternate days.

This is the Most Direct Line from San Francisco to Lakeport.

Most Picturesque and Romantic Route on the Coast. From Mt. St. Helena it affords the traveler a view of the famed Napa and Russian River Valleys and the Coast Range; and from Cobb Mountain to the great Clear Lake Region in front and the Pacific ocean in the rear. This line connects with stages for Anderson, Adams, Siegler, Howard Springs and Soda Bay. On Mondays, Wednesdays and Fridays stages leave Calistoga at 12 M. for Middleton, Guenoc, Lower Lake, and Sulphur Banks; returning alternate days. This line connects at Lower Lake with stages for Siegler, Howard, Adams and the celebrated Bartlett Springs. These lines are stocked with fine

SIX-HORSE CONCORD COACHES!

Driven by the most skillful drivers on the coast. For full information and tickets apply to SAM. MILLER, Tourist and Ticket Agt., 2 New Montgomery St., Palace Hotel.

Round Trip Tickets to Lakeport and Return, \$12. Single Tickets, \$6.50. Lakeport office at W. W. Green's Hotel. JOHN CLARK, Agent. W. F. FISHER, Proprietor.

DEWEY & CO'S SCIENTIFIC PRESS PATENT AGENCY

No. 252 Market St. (Elevator, 12 Front), S. F.

FRUIT DRYING!

THE ZIMMERMAN Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

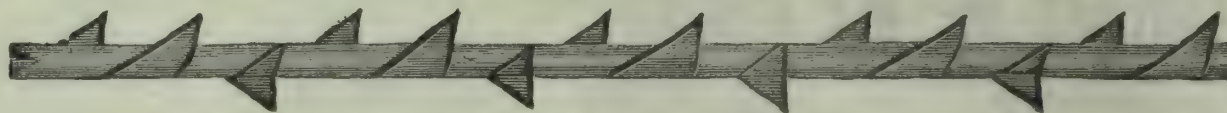
Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO., 325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Leach, Marysville; T. H. Watt, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.



AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire.

HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire.

The Barbs are short, and broad at the base, where strength is required.

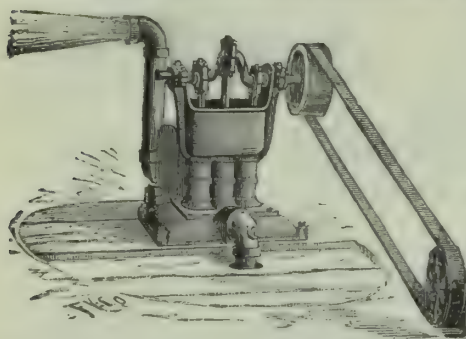
THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.



TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE-POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.

F. W. KROGH & CO.,

Manufacturers
And Sole Proprietors,

No. 51 Beale Street,
SAN FRANCISCO

CHEAP CASH GROCERIES

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

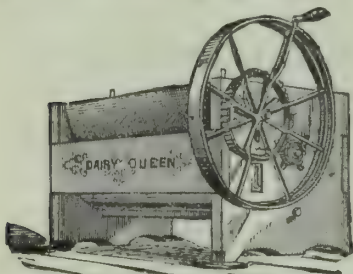
1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

"THE DAIRY QUEEN"
Improved Churn and Butter-Worker.
Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,
Oakland, Cal.

Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,
111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.



Endorsed by the Grange and all others who have used it.
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor



Steel Laid and Hand Made.

Parties wishing Star Teeth, telegraph at my expense.

Address,

A. F. LA SHELLS,

Biggs, Butte County, Cal.

M. COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

YOUR NAME
On 50 large size CARDS. Remem-
ber, Sacramento, Hard Bros. & Co.
No. 211th, 10c, 11 pks. \$1. Please send
20c. for Album of 100 samples and list of
200 elegant premiums and Reduced Price List.
20 fine gilt level edge cards, turned corner, 10c.
Your Name in this interesting
Agents make 50 per cent. We offer the largest line of cards
the best Premiums and the lowest prices. We fill all orders
promptly and guarantee satisfaction. Amateur Printers sup-
plied with blank cards at wholesale prices. Established 1870.
NORTHFORD CARD WORKS, Northford, Conn.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

ADAMS SPRINGS,

Lake County, Cal.

MILLER & STOLLE, Proprietors.

These Springs are particularly beneficial in purifying the blood, and unsurpassed by any in the State for the cure of rheumatism, dropsy, scrofula, weak lungs, dyspepsia, constipation, catarrh, liver and kidney complaints, and all kinds of diseases arising from impurity of the blood. Good Hunting and Fishing. Road and Room per week, \$10 and \$12.

The ADAMS SPRINGS are located in the Pine Mountains of Lake County, California, about eight miles south of Clear Lake, two and one-half miles from the Steeper Springs, two and one-half miles from "Bassett's" place, in Cobb Valley, only six miles (by a good trail) from the Harbin Hot Sulphur Springs, and twenty-eight miles from Calistoga.

Connections made with Lakeport stages at Calistoga, Tuesdays, Thursdays and Saturdays, through in one day fare, \$7.50. The Hotel and Cottages are thoroughly renovated, and the new proprietors will do everything in their power to make their visitors comfortable.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

IMPROVED THRESHING MACHINERY

FOR SALE BY

BAKER & HAMILTON,

San Francisco and Sacramento, Cal.

This is the Most Economical, Safe
and Effective

THRESHING ENGINE

On The Coast.

It is mounted upon trucks having 6-inch tires on the wheels, a substantial brake and a seat for the driver. Run boards upon each side of the boiler. The boiler has a jacket made of 2-inch staves held in place by brass bands.

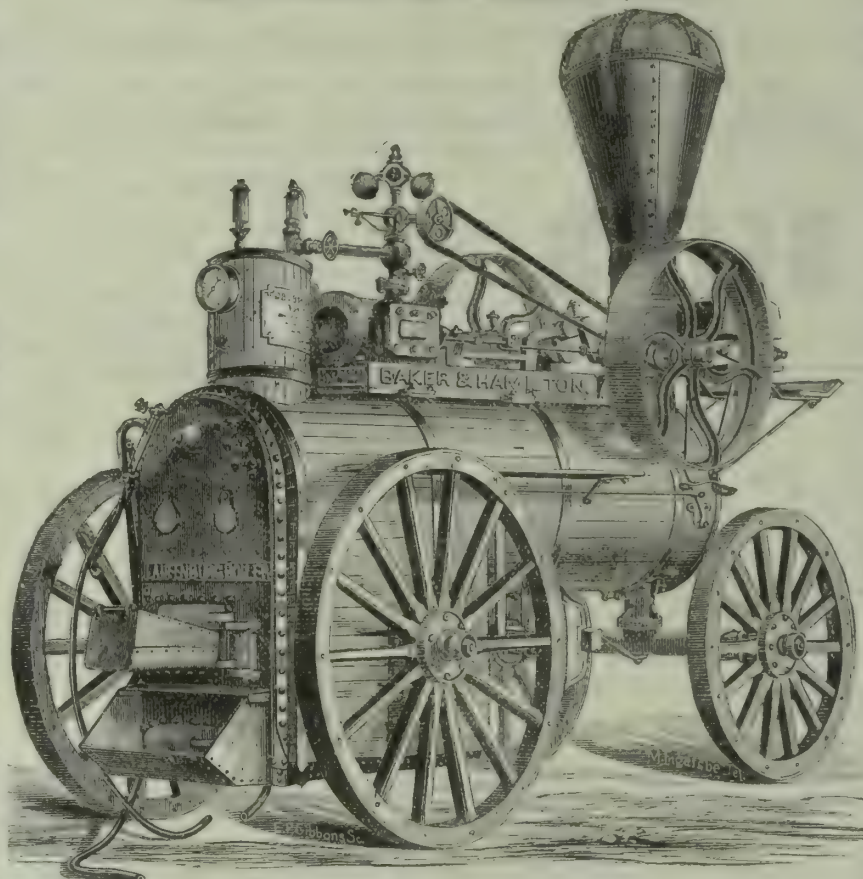
The Smoke Stack

Is of the safest and most approved pattern. In fact, it is the only Engine that is ready for work as it leaves our store.

It embodies all the essential points and improved principles which a long experience in the field could suggest, and is particularly adapted to the requirements of threshermen and farmers. Its design is perfection—complete, compact and effective, and manufactured of the very best material obtainable. All parts are duplicated, and in case of breakage (which does not often happen), can be expressed to any part of the Pacific Coast on short notice. No machine shop necessary to keep the

AMES ENGINE

In repair, or loss of time and expense sustained in shipping to and from the repair shop.



LAUFENBURG'S PATENT FURNACE BOILER—For Burning Wood, Coal or Straw.

THE LAUFENBURG

Patent Furnace Boiler

WITH

AMES ENGINE,

Subsequent to the advent of burning straw for fuel, and ever since, has maintained its superiority, and with recent applications of confirmed improvement to its already perfect design, is without a rival—the foremost self-contained

Threshing Engine in the World.

We have carefully guarded against introducing any emotional discovery, or even plausible ideas, which have invariably exploded; nor could we hazard the reputation of this engine to any venturesome experiments to test any primitive notions, or jeopardize life and property while such were being made.

We are confident that any intelligent man, who will carefully examine the style, arrangement, dimensions for rated horse-power, workmanship, material of construction, completeness and working economy of our engines, would select them for his own use in preference to any and all others.

We ask and court the closest and most intelligent scrutiny of all the detail and general "make up" of our engines, being satisfied in that event the "verdict" must be unhesitatingly given in our favor.

TO FARMERS

And others who may contemplate purchasing for use during the season of 1882, we can now offer special inducements and low prices.

THE BUFFALO PITTS AND BRONSON THRESHERS, IMPROVED FOR 1882.

The "Farmers' Friend"
STILL AHEAD!!

Another Year's Success—The
Greatest of Them All!

The united efforts of the proprietors of the Pitts Agricultural Works, of Buffalo, N. Y., and ourselves, to keep the Buffalo Pitts and Bronson Threshers far in advance of all competitors for California work, have met with their customary reward in the results of another season's threshing on this coast. From every quarter comes the acknowledgement that these machines maintain their stand as

THE CHIEFS OF THRESHERS.

The manufacturers have thus been cheered on to redoubled efforts to further improve and to keep up the advance, so that others, in stead of losing the beach, are compelled year after year to fall still further behind, doomed at last to be lost sight of entirely, their machines remembered only as things of the past.

Unapproached

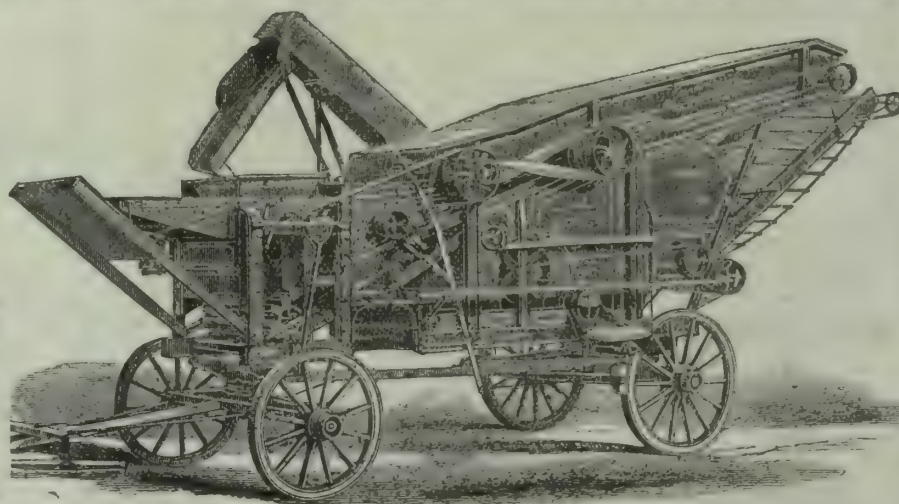
— AND —

UNAPPROACHABLE.

The gradual changes and improvements made especially for California work during the past years have kept these "Kings of Threshers" continually in the lead for good work and durability, as well as progressive improvement, and yet it will have to be admitted that perfection itself was not attained until the 1882 model was built.

It is a source of great satisfaction to us to glance back over the history of the Buffalo Threshers and observe their record, especially on this coast in the last two or three years. We, as well as all who have used them, are satisfied that in superiority they are unapproached and unapproachable. The manufacturers have spent a vast amount of money in experimenting, improving and bettering the machines, and although they have always stood at the head of the whole family of threshers, they have been so greatly improved by the 1882 trade that now they may almost be said to have surpassed the old ones.

The enviable reputation for building an HONEST MACHINE maintained by the proprietors of the Pitts Agricultural Works for over a quarter of a century, and their, as well as our, known responsibility, guarantees to the purchaser the greatest value for the price. This is also assured by the manufacturers' acquired discretion in selection of the best materials, and the use of none other in the machines, the employment of the best mechanics, the best machinery and tools, perfect patterns, the attainment of uniformity in workmanship, correct proportions and correct arrangement of all the parts.



GENUINE BUFFALO PITTS SEPARATOR.



GENUINE PITTS BRONSON SEPARATOR.

This is the Secret of the Great Success of the Buffalo Pitts and Bronson Separators on the Pacific Coast:

They have been built from the bottom up for California work, upon California ideas, obtained by actual experience in California by the manufacturers and California men, and not on theory and scientific principles alone.

Farmers and threshermen often ask why California threshers cannot find other threshers to equal them. The question is easily answered. Other threshers are made for other markets, and the fact that they suit other markets is sufficient evidence that they will not suit California, because of the great difference in climate and grain. If other machines ever reach the point now attained by our machines for California work, they must begin anew, then if they are practical, painstaking, and industrious, and have the necessary perseverance and courage, they may attain the same degree of perfection in twenty or twenty-five years from now, but it is probable that the few remaining competitors will lack courage to try this, and will gradually drop out, as scores of others have done before, to be forgotten and unremembered, the Buffalo Pitts and Bronson Machines remaining as heretofore the

KINGS OF THE FIELD.

CHEAP.

There is no word apparently so popular as the word Cheap. This is a practical age, and no man proposes to pay too much for anything he buys if he knows it. The danger of this state of things is that men may, in their desire to secure cheapness, sacrifice excellence. It is plain to every observer that within the past few years there has been, to some extent in almost every department of industry, reduction in prices of both labor and material. In view of this fact the question may be fairly asked, why is it that there has not been a reduction in the price of these separators? Our answer is easily and reasonably given, and shows that it is our customers, and not we, or the manufacturers, that are benefited. During these years of shrinkage in the cost of material and labor, it has been our constant effort and fixed determination to give our customers the whole benefit by adding to the machine in the way of valuable improvements and betterment, even more than the difference between the cost of the labor and material now and years past.

Every one acquainted with these machines knows perfectly well that each year it comes out greatly improved, and that these improvements are not without increased expense, and that the expense is considerable and well applied in improvements and betterments that threshermen appreciate and would not be willing to do without. Take the machine as it is built today and compare it carefully with that built even three years ago, and you will notice, in almost every feature, a very marked difference. Suppose we were to offer you a Buffalo Pitts machine to-day, built as it was built even three years ago, for \$50 or even \$100 less than the price of those now built, would you buy it because it was \$50 or \$100 cheaper? Certainly you would not. You would wisely conclude that you must have the best, and that THE BEST IS THE CHEAPEST.

SEND FOR SPECIAL CIRCULAR.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, AUGUST 26, 1882,

Number 9

Igneous Meteors.

Observations on meteors, or shooting stars, reported by our readers last week, lead us to present some facts about these interesting bodies, accompanied by an engraving of a notable meteoric display like those which occasionally appear and fill the beholders with awe and admiration.

It is reported that on Wednesday night, August 9th, about 9 P. M., a remarkably brilliant meteor was observed by some of the guests at Highland springs, traversing the heavens in the near west. Its motion appeared exactly in a horizontal line and exceedingly rapid, leaving a brilliant and, as it were, a perfect line of fire in its track through the atmosphere. An unusual number of falling stars were also quite noticeable in the remarkably clear atmosphere of that region.

There are meteors of several kinds. The whirlwind and the tornado are termed aerial meteors; fog, rain, snow, etc., are called aqueous meteors; rainbows, halos, etc., are luminous meteors, and lightning, auroras, etc., are electrical meteors. The bodies which are commonly called meteors are igneous meteors, and comprise shooting stars, aerolites, meteorites, etc. It is of the last class of meteors of which we would speak at this time.

Igneous meteors may be seen on any clear night, if one will watch patiently for them; but at stated times of the year they always occur in unusual numbers and brilliancy. One of these times is during the second week of August—generally about August 10th. They radiate from the constellation Perseus, which is adjacent to the Polar star. Another meteoric period is the second week in November of each year—generally from November 12th to 14th.

It has been determined that these meteors are not seen higher than about 100 miles from the earth's surface, nor nearer than 30 miles. The meteors and their trains have various colors—white, green, blue, scarlet, etc. The duration of the flight of a meteor is generally about one second, but the brighter ones may last several seconds. Sometimes a shooting star leaves behind it a cloud of phosphorescent light, sometimes of short duration, but sometimes visible for minutes, and rare cases have been reported in which the light remained an hour.

Meteors move with a velocity of from 8 to 40 miles per second, the average speed being about 30 miles, or 100 times that of a cannon ball. All the smaller meteors have a solid substance, sometimes of stony composition, sometimes of iron. Concerning the origin of meteors, Mr. Newton, in an article in *Johnson's Cyclopaedia*, says: We may regard the meteoroid as a small solid body describing its long elliptic orbit about the sun, like any comet. The number of such small bodies is so great that every day many millions of them come within 4,000 miles of the earth's center, the number being but little increased by the earth's attraction. They are entirely invisible until, at a height of less than 100 miles from the ground, they enter air dense enough to resist their motion and create light. The air being compressible, an intense heat is developed directly in front of the body. The anterior surface is, in consequence, melted away, the melted matter being wiped off by the air. This streams back, forming in part the apparent flame and the train of the meteor. Its own firmer constitution prevents the meteorite from like condensation and internal heating, and it therefore proceeds many miles before it is entirely destroyed. Under favorable circumstances of velocity, chemical and mechanical constitution and size, the meteoroid is not entirely scattered, but, breaking up into fragments, comes to the ground in a shower of stones. These stones often show traces of the flow of melted matter, also evidences of successive fractures, and even the partially developed cracks which, with further action, would have become fractures. But for this action of the air in arresting and destroying the meteoroids, we should be intolerably pelted with them. The meteorites are all evidently fragments, not separate formations. They are in the heavens, to some extent at least, grouped in streams

along the orbits of known comets, and hence have some common origin with them. The continuity of these streams, the double and multiple character of Biela's and other comets, and the steady diminution of comets in brilliancy at successive returns, seem to argue a continuous breaking up of the comet into fragments by some cause—probably by the sun's heat.

PERSONAL.—Professor Hilgard, of the State University, returned from his northern trip much refreshed in general health, but suffering from an affection of the throat, which gives him

DEATH OF B. B. REDDING.—B. B. Redding died suddenly of apoplexy in his home in this city, on Monday. His death will be widely deplored, for he was a man of action and of public spirit. His work as a member of the State Fish Commission gained for him popular thanks. Mr. Redding was also a regent of the State University, and a trustee of the Academy of Sciences. He was one of the organizers of the State Horticultural Society. He was looked upon generally as the friend of progressive movements for the development of the State and the



DISPLAY OF IGNEOUS METEORS OR FALLING STARS.

much discomfort. Professor Hilgard is a good worker with the pen, and could well be allowed to give his throat a rest for a few months and to employ his time in writing up for general information the many facts concerning the resources and adaptations of the State, as learned by his analyses and observation. It seems to us that the University could well do more for the general good of our agricultural interest by a freer and more speedy publication of results of experiments and investigations than it has done hitherto. But this calls for time, and if the instructors are held down too closely to the class room, the circle of their influence and benefits must be contracted. We trust Prof. Hilgard may not be long incapacitated for lecturing, but his present indisposition reminds us that there is a valuable and wide-reaching work which he might do with the pen, as well as with the voice, and the Regents would certainly receive popular approval for ordering such work, if the voice is not speedily restored.

advancement of knowledge. His place in the community and in popular esteem will be hard to fill.

THE MECHANICS' FAIR.—The Mechanics' fair, in the new pavilion on Larkin street, near Market street, in this city, has had a very prosperous opening week, and bids fair to be a brilliant success throughout. The attendance is unusually large, and the visitors find a display of art, industrial products and merchandise which requires many hours of study to encompass. The plan of the new pavilion embraces many improvements which are decidedly to the advantage of visitors and exhibitors. The display of incubators in operation is very interesting, and gives poultry fanciers the opportunity for comparative examination of different machines. Our country friends will do well to time their city visits so as to have a day at the Mechanics' fair.

Hot Ground and Cold Air.

A man who had artesian wells yielding warm water in Kern county, came to us some months ago, to see what stood in the way of his using warm water for irrigation, hoping thus to force the growth of vegetables and bring them forward in the winter to gain high prices, which such unseasonable produce would command. We were unaware at the time that experiments had been made to test the principles involved; but we have since learned that tests have proved that plants in warm soil, but surrounded by cold air, did not make satisfactory growth. We read that a curious modification of the normal structure of plant stems, showing the effects of light and heat upon vegetation, has been observed by M. Prillieux, on making the temperature of the ground about the plant higher than that of the air above. Beans and pumpkins gave the best results. The seeds were placed in earth in a large dish, in which was inserted part of a brass rod, bent at a right angle, and having a gas flame applied to its horizontal end. The chamber was moist and cold. The seeds germinated well; but on coming above ground the plants acquired a peculiar shape; they grew but little in length, and became unusually thick, the latter growth involving much tension in the surface layers, so that deep rifts before long appeared (mostly transverse), and made further growth impossible. M. Prillieux found the enlargement traceable mainly to an increase, not of the number, but of the volume of cells of the interior (cells of the cortical tissue and the pith). The excessive growth of these cells occurred not only in the cell wall, but in the nucleus, which was often multiplied. The excess of temperature of the ground over the air was about 10°.

Thus it appears that satisfactory top growth cannot be had, if the plant stands in cold air, even though the soil be warm. It is, however, still a question whether good results would not be had by placing above the growing plants a covering of light cloth, which would prevent the radiation of heat, and thus keep the air warm as well as the soil. Cloth spread upon a frame one foot above the ground might make a good arrangement for melons and cucumbers, protecting them from frost, and giving the bottom heat a chance to force the tops without the ill-effects of cold air. Let those who have warm artesian water or warm springs try the experiment, and if they get a dollar a dozen for the cucumbers, we will accept the usual rate of commission.

STEEL SHIPS.—In last week's *PRESS* there was a paragraph about the proposition to build a line of steel ships in California. Those unacquainted with marine architecture may have thought that iron ships were intended, but the fact of the matter is that the use of steel for shipbuilding is rapidly increasing, and the success the superior metal is meeting with is astonishing even its boldest advocates. It is stated by some prominent shipbuilders that on account of the decreased weight required in steel substituted for iron, and the consequently greater floating power that can be obtained in a steel vessel over one of iron of the same size and shape, that it is more economical to build a ship of steel than of iron, even if the former metal costs 30% more than the latter. Such, however, is the wonderful development of the steel industry within the past five years, that it is probable that within a very few years the price of steel ship plate will be no greater per pound than iron plates.

PURSUING THE BEEF.—Buyers are chasing the cattle in all parts. The *Carson Appeal* says that cattle speculators are putting in an appearance at most every point in the State where they are likely to come across anything in their line, with a view to purchase. In some cases they are offering a slight advance above the market value. There appears to be a desire on their part to get a corner on the beef market, and the outlook is that this will be successful before the close of next winter.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

Canyons for Consumptives.

EDITORS PRESS:—It is now generally admitted that a large percentage of our immigrants and tourists are the advanced guard of a host of invalids who are searching for a more congenial climate. These generally put up at the hotels till the boarders and proprietor feel that they have to "put up" with a large amount of discomfort and annoyance from the irritability and nervousness which naturally develop and manifest themselves in a chronic invalid. Of course no one complains of the poor patient who coughs all night in the adjoining room ("sleeping day times"), but though his auditors may be as patient as they make 'em, they don't fancy that kind of treatment—not for a regular rest. Even the "regulars" in medical practice would, no doubt, in this case, prefer homeopathic doses. Then, too, there is the expense attending hotel life, and the stay-at-homes are duly posted regarding this state of things. The sick man becomes dissatisfied and capricious and querulous. Now, if these malcontents could have their attention directed to a means whereby their expense account would be lessened, with a possible income in place of the present continuous outgo, they might, some of them at least, be induced to make an effort to be self-supporting institutions. I am willing to admit that many of our wealthier class of patients have sufficient unto the end, but even these would be the better for a departure from the old beaten rut so generally followed by the average invalid—a hotel home, and finally a handsome house.

Understand me, I am not finding fault with hotels, but I know that both landlords and guests are very much bored by the presence of a permanent party with the prevailing pulmonary affections. "Transients" can be tolerated. These can be endured because they move on.

So much by way of introduction. Now for my scheme: Let the sick man flee to the mountains, and stay there. "But where?" Anywhere where there is wood and water and an unoccupied building spot for a cottage; or buy out a pioneer's claim (he will sell cheap), or take up a piece of Government land. How many cozy cottages will the coming 10 years place in the numerous gorges of the Sierra Madre mountains, between the tunnel at San Fernando and San Geronimo pass, on the Southern Pacific railroad? These comprise some of the choicest and grandest, because the largest, canyons in Los Angeles and San Bernardino counties. They are natural water courses. All of them contain timber, and some have trout fishing. Small game is not so abundant up in these canyons as it is on the table lands (mesas) and valleys below, but here, and away farther up the rugged mountain sides the only large game is to be found. There are beautiful locations for cottages, like the picturesque Swiss chalets, waiting to be appropriated and appreciated, for, from a financial standpoint, it must surely be a paying investment. The small outlay precludes the possibility of great pecuniary loss. Locations can be secured at nominal figures, either from the Government or private claimants, as the case may be. I have no lands for sale; neither am I interested, directly or indirectly, in the sale of these lands, but I will cheerfully answer all inquiries regarding these sites for future mountain homes.

It is admitted by all medical men throughout the State that asthmatic patients improve by going up into the mountains. How many invalids are there now who gasp and wheeze with asthma, being ignorant of this fact. Many think that going up into a canyon implies complete isolation from "all the world and the rest of mankind." Of course, retirement is to be expected from the nature of the surroundings, but it is possible to find locations not very far removed from agreeable neighbors; and then, in the near future, under ordinary events, the "soft spots" will all be occupied by followers, who will not be slow to settle in the vicinity where others have established so happy a precedence.

It is not an expensive experiment, but one that an invalid can ordinarily very well afford to make. The rocks are handy for building purposes, and a garden wall, if one is needed, may be very cheaply built. The running stream furnishes the best water to be found in all this country. The fire-wood is convenient, and here is the place of all others for a profitable bee ranch. Bees, if left to themselves, select the ruggedest places imaginable, and these can only be found in the canyons. Bees may be equalled, but not excelled, by the ant in point of industry; and the sluggard might have been referred to the busy bee as a model of industry without the least abatement of the correctness of the counsel. A few stands (hives) of healthy bees will furnish a family with all the honey needed for domestic uses. A few more will yield a surplus sufficient to supply the table with everything needed in the line of groceries and provisions. Others may carry this bee business still farther as a financial venture, with varying success, depending upon the season and the ability and interest exhibited by

the amateur. I am not putting it too strongly when I state that with the aid of the present book lore on the subject as guide, within one year the aspiring apiarist may become master of the situation, sufficiently for all practical purposes, if not an actual expert.

Quite a revenue may be derived from raising poultry of all kinds. Aside from the home market for fresh eggs and palatable poultry, there is always a lively demand for California eggs in Arizona, and San Francisco appropriates our spare poultry at very fair figures. I have said nothing yet about keeping a few goats and a donkey, or a Jersey cow and a pony, and a pig and a potato garden. These all help one to worry along, in a healthful fashion, up in a canyon.

B. H. FAIRCHILD, M. D.
Pomona, Los Angeles Co., Cal., Aug. 15, 1882.

THE FIELD.

Hop Growing in Washington Territory.

A quotation of 50 cents per pound brings the hop industry again to the front and fills with gold the pockets of those who have stuck to the crop through thick and thin. As the subject of hop culture is now of special interest, we shall condense from the Tacoma Ledger, an account of the famous hop region of Puyallup, W. T., one of the leading producing districts of the Pacific coast:

The best information we have is that Jacob R. Meeker, the father of Ezra and J. V. Meeker, was the first hop grower in Puyallup valley. Jacob came to Washington Territory in 1854, taking as a donation claim what is known as the Geer place, on the edge of the prairie about five miles from New Tacoma, south, there residing until 1862, when he moved to the neighborhood where Sumner now is, taking a pre-emption claim, where his widow and family now reside. Mr. Meeker received from Olympia a lot of hop roots, between a peck and a half bushel in bulk, J. V. Meeker having packed them on his back from the prairie, at a point where they had been laid by the carrier from Olympia, to his father's place. But, still not appreciating the project he was undertaking, nor ever dreaming that it would develop to an extent that would make the little valley famous, he did not regard it as the beginning of a branch of farming that would be permanent with him; and so, in planting the roots, he set them out in his apple orchard between rows of trees. He thought of it as a small venture, involving little or no risk, by which he might make a few dollars in the year just as one would on a small potato patch. At the end of the season he had as a result 185 pounds of cured hops, which had been cured by spreading them in a loft over the kitchen, and depending upon the ordinary heat of the kitchen stove to dry them. In the fall he sent his product to Olympia, and to his great surprise. Mr. Wood gave him 85 cents per pound for the 185 pounds of hops. He realized more out of these few hop plants than from all the balance of his place last year. And such was the

Beginning of Hop Growing

In Puyallup valley, which was in the spring of 1866. Encouraged by his unexpected success on this small scale, he was not slow in determining to venture upon a larger scale for the next season, and thereupon he sent to E. A. Light, at Steilacoom, who was known to have a few hop roots in his garden, and obtained all that Mr. Light could spare, paying the latter's charge of \$125 per thousand. The supply so obtained added to the roots or runners from his own little pioneer patch between the apple trees, gave him enough to plant two acres for the year 1867. The quantity of yield for that season was large, and the prices continued good. He sold part of that crop to Mr. Wood and part to Capt. S. W. Percival, both of Olympia, for 75 cents per pound, a result than which hardly any agricultural crop could be more encouraging. The first roots planted by Mr. Meeker, being those obtained by Uncle Charley Wood, proved to be too small and of an inferior kind, being light and seedless because they were without stamens, and would not yield over 400 lbs. to the acre. But he improved his stock and was fairly in the business as a permanent undertaking and means of livelihood and profit. In the following year, 1868, he raised another and still larger crop, which he dried in a little

Smoke House,

And the cured hops of this crop were marketed in Portland by his son Ezra, who sold them for 25 cents per pound. But after the first year's experience among the apple trees, he was not alone among his neighbors in hop culture. Knowledge of his success stimulated others to try. Adjoining the farm of Jacob Meeker was that of Mr. L. F. Thompson, who also had taken a pre-emption claim, covering the place where he now resides at Sumner, who had the enterprise to go vigorously into the business. Mr. Thompson, now one of the foremost hop growers in the Territory, formed a partnership with his near neighbor, E. C. Meade, and with A. R. Williamson, who is now in hops up to the Skagit river, for the purpose of sharing the expense and profits of what was then regarded as a considerable venture in planting, on Mr. Thompson's land. They sent to Flint, a hop grower of Sacramento, and bought 4,000 roots, which filled two barrels and stocked four acres of ground. Although they did not plant these roots until May, did not pole the vines until July, nor train them until August, yet they

had the astonishing yield of 500 lbs. to the acre, which equals the average yield of Germany, where for centuries they have grown hops on a very large acreage, and studied and experimented attain to the

Best Methods

Of hop raising, demonstrating in a very marked way the adaptability of the Puyallup Valley soil to this particular culture. The 2,000 lbs. raised by them in 1867 were sold for 55 cents, which was 20 cents per pound less than the price obtained by Mr. Meeker the same year, owing probably to the lateness of their crop. In that year the only hop yards in the valley were those of J. V. Meeker and the above-named firm. In the following year Ezra Meeker went into the business in connection with A. R. Williamson, who shortly afterwards moved to Skagit valley, and in that year and during the year following, up to 1871, there were only three hop yards in the valley of the Puyallup. In the year last mentioned, J. P. Stewart and J. V. Meeker planted hops at Puyallup, and there were then five yards in the valley. But prices were not sustained to anywhere near the point attained in 1866. From 25 cents in 1868 they dropped down in the year after, reaching in 1870 as low as four cents a pound. The prices so discouraged Messrs. Thompson & Meade, who remained in partnership, and naturally enough, that in the spring of 1871, after a disastrous market, they were about to plow up part of their hop plants. Their acreage had been increased beyond the capacity of their hop houses, and the

Prices being so Low,

With no indications ahead of any improvement for the next year, they did not think it worth while to go to the expense of enlarging their facilities for curing, but rather that it would be better to decrease their acreage to accommodate the curing facilities on hand. Indeed, their vines, when Ezra Meeker's son, Marion, went into the field with a proposal from his father to lease the portion about to be plowed, which was two acres. The lease was given, and Ezra Meeker cultivated the two acres, getting the unprecedented yield, except previous crops on this same yard, of 2,000 pounds to the acre. The extreme fluctuations in price and consequent great hazard of this business are illustrated on the fortunate side by the outcome of this lease. From a low market of four cents a pound, and the consequent disheartening effects, to a high market and perfect fever of success represented by the quotation of 50 cents a pound, is a long distance in price but a short one in experience. Mr. Meeker sold his 4,000 pounds at the figure last named, a yield in gross of \$1,000 an acre, and he could in that season have sold at twenty cents higher with the full information daily of the state of the market in San Francisco and the East that the hop growers now have. From about that time dates the

Mania for Hop Growing

In Puyallup valley, and it will answer well in the stead of a detailed account of the increase in number of yards and acreage from year to year, with names of recruits and their varied experiences, to now give a statement showing the names of those who are at present engaged in the business, with the acreage planted by each. But the following statement, submitted for this purpose, is, in a few instances, approximate only as to acreage:

Maas Haggard.....	5 Frank Young.....	11
Whiteell Bros.....	12 Geo. W. Harmon.....	5
William Harmon.....	5 A. Gardella.....	11
E. A. Lorenz.....	7 W. Boatman.....	20
A. Leslie.....	9 John Carson.....	20
H. Beckett.....	7 S. P. Stewart.....	14
T. F. Patten.....	4 A. Miller.....	8
Van Ogle.....	52 W. J. Bowman.....	23
A. J. Quarry.....	14 M. R. Ross.....	19
Chris Helmsold.....	30 Mrs. E. A. Clark.....	5
Robt. Grainger.....	8 A. G. Mathews.....	14
Arthur Sherman.....	6 J. V. Meeker.....	9
R. McCumra.....	5 Geo. A. Cook.....	2
— Taylor.....	5 E. Meeker & Co.....	83
D. Winkler.....	7 H. Crockett.....	2
A. Woolery.....	11 S. V. Jackson.....	2
Chris Kincaid.....	6 C. H. Spinning.....	8
E. C. Mead.....	30 K. Nix.....	11
S. Bonney.....	7 Robert Moore.....	6
L. F. Thompson.....	30 Wm. Lane.....	6
J. H. Ryan.....	12 A. J. Oliver.....	8
W. G. Gibbs.....	10 Z. J. Stone.....	8
Wm. Forrest.....	4 O. M. Annis.....	9
J. K. Dickinson.....	30 H. McConn.....	4
John Kincaid.....	14 B. Alvey.....	4
B. M. Spinning.....	8 Fred Hinkelman.....	4
J. D. Gilliam.....	12 John Murray.....	6

Total.....685

Some of the best-informed hop raisers estimate the average yield of the Puyallup yards at 1,600, and a few even as high as 1,700 lbs. per acre, but a more conservative and undoubtedly a reliable estimate is 1,500. Contrast this with the average of Germany, the leading hop-producing country of the world, which is only 500 lbs. per acre.

Washington Territory ranks fourth among the hop-growing States of the Union, according to the returns of the last Federal census, which gave the crop reports for the year 1879, as may be seen from the following table:

States.	Growers.	Acres.	Pounds.
New York.....	9,765	30,072	21,628,331
Wisconsin.....	2,317	4,438	1,066,427
California.....	89	1,119	1,444,077
Washington Ter.....	65	534	703,277
Michigan.....	493	490	266,010
Oregon.....	70	344	244,371

Twelve other States are listed in the census reports as hop-growing States of less production, Kansas being the lowest at 500 lbs. total yield for the year. The average for the whole of Washington Territory for the year 1879 is thus seen to be 1,317 lbs. per acre, against only 553 for New York, 443 for Wis-

consin, 1,290 for California and 803 for Oregon. In average yield per acre it is therefore far ahead of all the States and Territories of the Union. But Puyallup valley neighborhood, as above shown, now has a greater number of hop growers and acreage than the whole Territory had in 1879—the report now being, as shown, 57 growers and 699 acres. Yet about 100 acres are in new hops, and are therefore to be excluded from the count in estimating the probable yield of the valley for this year. It is deemed quite safe to calculate upon 600 acres, which, at the average named, 1,500 lbs., would give a yield of 900,000 lbs. for the season. Some of this has already been sold at prices lower than the present quotation, which is 40 cents; but estimating the proceeds at the rate of 30 cents per pound, this year's crop will bring into the valley for distribution the large sum of \$270,000. It may not be amiss to speak of the possibilities of Puyallup valley as a hop district, considering whether it may not eventually go foremost of all the other hop districts of the United States. The soil is a sandy loam—the alluvial deposit of the Puyallup river and tributaries—and what is now the valley is reckoned to have been, in times long ago, for miles up from the bay, an arm of Puget sound of great depth. It is thought to comprise fully 30,000 acres of land of the peculiar kind from which such good results have already been obtained.

THE STOCK YARD.

Value of Pedigrees.

Henry Stewart, in the N. Y. Times, offers arguments on the worth of pedigrees, as follows:

"It is a maxim among breeders that 'like produces like,' and every farmer knows and appreciates this truth. If a young animal is kept to increase the farm stock, it is the produce of the best old stock, the calf of the best cow, the lamb of the best ewe, the best of the litter of pigs; or it should be, for it is not always that this wise course is pursued by farmers. If it were, there would be no reason for this writing, the purpose of which is to induce farmers to be more particular in the selection and breeding of their stock than they, in a great measure, are, and to show them, as far as possible, with what profit this greater care may be exercised. When we consider the value of the products of carefully bred herds or flocks, and the much smaller value realized from those of the ordinary character, the profit of the one kind and the loss of the other become very apparent. It is very certain that if one farmer, at no more expense or labor, realizes \$100 per head from his cows, or four dollars a head from his sheep, or two dollars from each of his hens, while another realizes one-half or a third as much from his stock, the difference is a loss to the latter. This is clear, because a gain that might be made, but is missed, is as much a loss as if so much money dropped from a person's pocket, and could not be recovered, or was spent in a losing stock speculation. It is a matter that may be easily proved, if questioned, that the most profitable herds and flocks are those which are selected and bred with a view to their improvement. One noted dairyman has raised his yield of milk to 6,000 lbs. per head yearly; another has a record of 250 lbs. of butter per cow; another, by improvement entirely within his own herd, produces an average of 300 lbs. of butter per cow; and similar cases are to be found among ordinary working farmers on every hand. It is not to be supposed that these improvements make themselves by merely keeping a herd within itself and raising every calf or every lamb; on the contrary, it is done by always selecting the best for the rearing of fresh stock. But it is apparent that one must have a record to know which are the best, and to trace these through several generations, and that this record must be closely studied and compared. This is the foundation of a recorded pedigree, and it is clear that this use of the pedigree gives it a great value; in fact, that it is indispensable to success in rearing improved stock, even when a person confines his work of improvement to his own herd or flock.

"But one must necessarily go outside of his own stock to begin to carry on a course of improvement, and then the full value of a pedigree appears. When one is spending money, he wants to get the most for it, and when he is purchasing a breeding animal for the improvement of his stock, he should be very careful to get the best animal he can for his money. But without searching the pedigree he has nothing but appearances to guide him in his selection, and appearances often deceive the best judges. It is rare, however, that an animal goes back on its ancestry. There may be a falling off in one individual, as there may be 'a black sheep in every flock,' as there may be a bad boy in some good families, but the current is only turned aside by a temporary obstruction, as it were, and flows on when this is passed, broad and deep as ever; for there are cases in which even a black sheep has done the best service in improving a white flock, as Mr. Bakewell proved in his history; and we may all remember what remarkable men some temporarily bad boys have turned out to be. 'Blood will tell' in spite of occasional exceptions, and it is for this reason that the pedigree of an animal is its best recommendation, even in spite of present contradictory appearances. There is a process of 'breeding back'—it is called atavism—by which an animal shows some peculiarities that

have belonged to a remote ancestor. This, of course, will show equally in both directions, for the produce of a superior animal may not equal the dam or the sire, but the produce of that inferior animal may surpass in value every one of its ancestry. And this is a point of great importance in fixing the value of a pedigree. For if the ancestry has been exceptionally good, the progeny will be good, and although one animal may not reach the average, yet its descendants will be more than likely to come up fully to the standard, and may very possibly surpass it. For this reason one should have faith in a good pedigree, and patiently await its eventual promises.

POULTRY YARD.

Duck Growing.

We find in the London *Mark Lane Express* an essay on duck growing, which contains some points of universal application, and may excite our California duck raisers to discussion of their local bearings: Unlike fowls, there is but a small selection among the duck tribe, and an intending breeder is not troubled with a year or two's experiments before he finally settles down with the breed he shall make his own. Before the introduction of the Pekin, some six years ago, there were but two really valuable breeds, the Aylesbury and the Rouen, so that unless a breeder kept the ordinary mongrel of the country, he had to choose between these two varieties—the one absolutely white, with a flesh-colored bill; the other, darker plumage, and marked exactly like the common wild duck. As a rule, the Aylesbury was the favorite where pure breeds were kept, but it was only in the Aylesbury district that the real thing was found among the farming classes; those about the country called Aylesbury being diminutive misrepresentatives of the popular breed. Then the Pekin came, and its immense size, striking shape, marvelous eggs and prolificness made it popular through the whole country in a quicker time than any domestic fowl we have has ever made itself known. The Pekin, first in the hands of one, next year spread to half a dozen, then it could be counted in the yards of hundreds of farmers, who, in their turn, spread it through farm and cottage, village and town; and, in four years, we may safely say that it was known everywhere, and hundreds of thousands had been bred. To-day it is as common as the Aylesbury, but a great deal larger and more valuable, if we consider the ordinary farm Aylesbury. The poultry fancy, then, never did a more beneficial act than when it brought the Pekin duck before the public. What, then, are its qualifications? We can safely say that it has great size, great vigor, and a strong constitution; it is most prolific, it lays larger eggs than any other duck, and never sits. Its one fault is, if fault it be, that it does not carry flesh compatible with its size; that, indeed, taken up in the farmyard off hand it will not be found fat enough to kill. This is undoubtedly so, and although in appearance, if the best Pekins are placed side by side with the best Aylesburies, the former look greatly superior, yet the latter will be found, perhaps, 50 per cent. heavier. We have had considerable experience with the breed, and we are satisfied that although this is so with mature birds, it is not so with young ones. Breeders for market usually kill the birds when the feathers are half through, or, as they term it, "in the stub." If a Pekin is taken at this time, it will be found to be as heavy as the best of other breeds, and most delicious; consequently, much of even this fault vanishes. As a pure breed, much of its value over the other varieties is in its eggs and prolificness, for while one can depend on a greater yield and larger size in the one case, it is certain that a much larger number can be reared in the other.

In recommending a farmer to breed ducks for profit, we say, without hesitation, that he will never beat the cross between the Pekin and the Aylesbury—a drake of the latter breed mated with ducks of the former. From these he will get size, constitution, prolificness, lots of eggs, and the heaviest ducks it is possible to obtain; in fact, we have seen the finest ducklings of this cross that we have ever met with. It is not well to breed from these again; on the contrary, the practice should be to breed from the two former races every year, otherwise the profit is certain to be less.

It is a mistake to suppose that for rearing ducks water is necessary; on the contrary, they do better without it, unless in the case of youngsters just feathering, which are put in an old pond full of duck-weed, animal life, and other foods, which will accumulate in waters never frequented by water fowl. In such a case, they can almost be seen to grow, but in all other cases a dry yard is the best, and pond or no pond, they should not swim until more than half grown. There is nothing like a small, clean yard strewn with dry earth, sand, or straw, with a compartment of the same kind for night, where they keep dry and clean. Instead of anything to puddle in and get wet and dirty, they need only a small, shallow trough, with thinly mixed meal, and another of water and fine gravel, made of galvanized iron, and so that they cannot get into either. They will amuse themselves with the gravel, and should clean up the meal whenever it is given. Ducks are very like pigs: Give them all they require, and they go away and rest or sleep. Boiled rice and meal is also a good food, and helps to

prevent their scouring, a complaint which is the most fatal to them of any, and which carries off whole broods with great rapidity. The profit in ducks is made between January and May or June; the rest of the year they are something of an expense to keep, so that it is perhaps politic, unless we have a valuable breeding stock, to sell off directly they cease to lay. Some breeders believe that young birds alone should be used for stock. We do not go so far as this, but we do think that young birds are the most profitable, because they begin to lay earlier and lay more eggs. Every effort should be made to obtain eggs in December, and for breeding, water should be at hand for the birds to swim in, as without it their vitality is less. One drake is best to every four ducks thus early, and the first eggs should be hatched, if possible, by the middle of January, continuing to hatch right up to the end of April. Hens are best for setting on the eggs, and when the young are hatched they can be placed in companies of 30 or so in a warm place for a few days, until they can stand a compartment where the atmosphere is 70 to 75 degrees. Young ducks do very well without their mother in the coldest weather, if they can be kept warm, and a heated room is best where there are so many. Hatched thus early, they sell well, and make capital prices.

HORTICULTURE.

The Cannery's Combination.

EDITORS PRESS:—I was greatly rejoiced to see that Dr. O. F. Shaw called the attention of the public to this matter, which is, most emphatically, of vital importance to the fruit growers of California. Something must and will be done, and that speedily; for this "combination" errs if it thinks that it alone possesses brains, energy, or Anglo-Saxon grit. The fruit growers can have this thing in their own hands, and be entirely independent of any avaricious monopolies.

I will give one instance to show that Dr. Shaw's suggestion, for the producers to be prepared to dry their own fruit, is practical. Four years ago the fruit crop in this State was very large, and but few canneries were in operation. A great deal of inferior sun-dried fruit was thrown on the market, and prices quoted were very low. The proprietor of a large orchard erected a drier, dried his whole crop, and pressed and packed it in boxes in the very best shape. A tasty label was printed and pasted on one end of each box, with the brand of the fruit, giving, also, in smaller type, quality of the fruit as compared with sun-dried, properties contained therein, directions for using, etc.

The crop included peaches, plums, prunes, pears, apples, blackberries and nectarines, which was shipped to a leading San Francisco commission house, all labeled and boxed alike. The fruit was shipped off as it was dried, and before the season was over, orders were sent up repeatedly for more fruit, as this brand of fruit was already in demand. Dried apples were quoted in papers at two and three cents, while these brought nine cents, and other fruits proportionally high. It will be seen by this what can be done on a small scale, and fruit growers can decide on style of boxing, packing and labeling, and, if necessary, send an agent to the Eastern and European markets with samples of their fruit.

I have been in England this last spring, and find the people hungry for our fruits, especially in a dried state, as there exists there a good deal of prejudice with regard to "tinned" goods. Nothing but a good article will find a market there; and in New York, in talking with a leading fruit merchant who imported California products, I find that complaint is already being made of some of our canned goods. This will again bear me out in what I said in a paper read before the State Horticultural Society last fall, on "The Peach," deploring the fact of so much inferior fruit being put up, and to which a firm of canners replied at some length in the *Chronicle*, accusing me of willful misrepresentation or ignorance on the subject. I replied to their letter, but the *Chronicle*, as is usual with that paper, had neither the manliness nor the courtesy to insert it.

Fruit men, Mr. Editor, are alive to this evil, and will thwart it in its infancy. Already canneries are being started, controlled by fruit men, in their own localities; and next year the "combination" will be ready to meet them half way. There is not to be found anywhere a more intelligent and enterprising body of men than California fruit growers; and this "combination" would have done well to have taken into consideration. One of these men said to me to-day, that he would never come down to the demands of the canners, but would dry every pound of his fruit first. The *RURAL PRESS* has always declared itself against monopolies and avaricious combinations of any sort, and will, I am certain, exert its powerful influence on behalf of the fruit-growing interests of California. LEONARD COATES.

Napa, August 19, 1882.

A LARGE VINE.—With Frank Kimball, we visited S. C. Field, of National City, San Diego county. In his back yard, near one of his out-houses, was a mammoth grape vine. Five years ago this vine was so small that it was covered up for a time with a barrel to keep the chickens from eating off the buds and destroying the vine. It was trained up on a

trellis the next season; it has never been cut back any, and the trellis has been extended as the requirements of the vine dictated. Last fall Mr. Fields picked 650 pounds of grapes from this vine, from which he made fifty gallons of wine that he sold to physicians for \$2 per gallon. The vine is of the Rose of Peru variety. Your correspondent measured the trellis, over which the vine was spread, and he found that the branches covered very thickly about 450 feet of surface. An average section of the trellis eight feet square was selected on which the bunches of grapes were counted, and an estimate was then made that the vine was maturing 925 bunches of grapes. These bunches were, of course, of all sizes, weighing from half a pound to probably some bunches that would weigh five or even six pounds.—*Riverside Press*.

THE CHINESE AND THE FRUIT BUSINESS.—A gentleman who has interested himself greatly in the development of our fruit interests, and who has traveled extensively through the fruit-growing districts of the State, informed a *Fresno Expositor* reporter that the Chinese have become the leading manipulators of the fruit crop of California, and that they, by reason of the extent and boldness of their transactions, were driving the heavy fruit commission merchants of San Francisco out of the field. Their method of procedure is to visit the fruit districts as soon as a reasonable estimate of the extent of the crops can be made, and then contract for the fruit, paying so much per tree, or acre, as the case may be—they taking all chances, and picking and boxing the fruit themselves. In this manner they buy up the products of entire districts. They peddle out all they can throughout the surrounding country, and either ship the balance to the city markets or dry it. Their action is an advantage to many of the fruit growers, as they realize as much as, or more than formerly for their fruit crops, and are not subjected to the annoyance and trouble of picking and shipping. And so John obtrudes himself into a new avenue of trade, and, like all other lines that his influence has been felt in, he bears down all before him. Grasping and unscrupulous as the white commission merchant is, he is preferable to his Mongolian competitor. For, should he be driven from the field, the wily heathen would dictate to the producer mere autocratically than has ever been done before.

RIVERSIDE CANNED FRUIT.—The *Press and Horticulturist* says: At the close of the apricot season, the Riverside cannery had put up 121,708 cans of apricots, 358 cans of three gallons each of apricot pulp, and 473 cans of one gallon each of pulp. They also dried about 12 tons of apricots. When the fact is taken into consideration that this is the first season the cannery has been in operation, and that five weeks before canning commenced, the work of erecting the large buildings, making cans, etc., had not been begun, we think no cannery in the State can make a better showing. There are many disadvantages in starting a new enterprise of this kind, such as unskilled labor, lack of experience, and a consequent inability to correctly judge the crop and the force necessary to handle it. But, with all these disadvantages, the managers of the Riverside cannery have reason to feel proud of what they have already accomplished.

FORESTRY.

Forest Trees of California—No. 10.*

The Great Washington Cedar—(*Sequoia Gigantea*)†

"If I will that he tarry till I come, what is that to thee."—*New Testament*.

We cannot give a full history of this wonderful tree here; so we chiefly collate from Mr. J. Muir, who has best said, substantially: "The great sequoia timber belt lies along the Sierras upon the first exposed mountain side"—moraines of recent retreating glaciers—that face the Pacific, from Calaveras on the north to near the head of Deer creek on the south—a distance of 200 miles, or little above 38° north to a little below 36°; altitude, 5,000 to 8,000 ft., rarely 8,400 ft.; broken by two gaps, each 40 miles wide, caused by manifest topographical and glacial reasons given; one gap between Calaveras and Tuolumne, the other between Fresno and King's river; thence the vast forest trends south, across the broad basins of Kaweah and Tule, a distance of 70 miles, on fresh moraine soil, ground from high mountain flanks by glaciers. The inscriptions (which we have often examined with Mr. J. Muir), are scarce at all marred by post-glacial agents, and the contiguous water-worn marks are often so slight in the rock-bound streams as to be measured by a few inches. Rarely does one of these sound and vigorous cedars fall, and if so, lie 800 to 1,000 years, scarcely less perishable than the granite on which it grew. The great sequoia ditches, dug at a blow by their fall, and the tree tumuli, always turned up beside the deep root-bowls, remain, but not a vestige of one outside the pres-

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

† As historic truth demands it, it is but just to say, I, myself, took Mr. Lobb to the California Academy of Sciences, and showed him the first specimens he ever saw of this marvelous, now world-renowned, Washington cedar, which was so named by me before he ever saw the tree. This fact is well known to the old charter members of the Academy, several of whom are still living. It is, therefore, the earliest among common names, and claims precedence, by all courtesy, in point of time, as also in appropriateness of honor. Our relations to its earliest identification we leave to the historian of the future.

ent forests has yet presented itself, hence the area has not been diminished during the last 8,000 or 10,000 years, and probably not at all in post-glacial times. The notion, therefore, that this species tends toward extinction more than others, or the planet itself, seems absurd, for its vital vigor is assured in ages past and present, and, so far as mundane things can be, to come. These colossal sublime sequoias rise 275, 300, and even 400 ft. aloft; are 20 to 30, and in some rare cases, 40 ft. in diameter, like vast columnar pillars of the skies. No known trees of the world compare with them and their kin, the redwoods, for the focused proximity of such a marvelous amount of timber within limited areas—as it were, the *ne plus ultra* standard of timber-land capacity. Nor is language alone adequate to impress upon us any due realizing sense of such vast tree magnitude without comparative and associated statements, as if this were the all-important idea—and truly the utilitarian is a good foundation—indeed, enormous factor of some import; thus, the stage-coach passes through one; 120 children and a piano crowd inside another; house for cottillion parties to dance "stout on stumps;" horse and rider travel afar within burnt-out hollows of others, and so on, with variations. A single tree would furnish two-rail fencing 20 to 30 miles, etc.

Having often visited these groves, a word may be allowed relative to their sylvan claims, apart from lumber and cord-wood contemplations. Familiar as we all are with their ready growth into sturdy, conic, juvenile trees, with exceedingly broad sloop of base, we pass to those of columnar towering and spire-topped youth of a few hundred years or so; then, at length, we behold, face to face, the Great Washington cedar in its prime, to the grand and picturesque with the ages. To our view, their expression is one of softened and more lovely beauty with advancing years. Vastness harmoniously merges into dignity and elegance, even in the most picturesque, with here and there huge arms thrust out towards the horizon round about. They never exhibit the wayward vagrancy of many other trees, but so soon as they approach the appropriate outline of towering symmetry, swoop upward in one grand triumphant air of sublime attitude, their bright and burning arms aloft, appealing to Jove's high throne in the heavens. The lesser and more massed branches accumulate above in ever-refreshing variety, insphering the upper body and crowning the venerable domed head and massive brow in a halo of softer, serenegrory. Fragments of special foliage in rounded or varied tufts and touches, tiny buttoned bouquets of beauty, as it were, pinned on gracefully here and there for effect, to foil Herculean brawn—so in least as in largest, to fill and soothe the sense; the tiny, tender, slender and delicate little sprigs e'en hiding the finishing hand that gives the final touch of the Great Artist—forcible reminder of the light, gauzy texture lines of the finest figures of our earth-born artists; but these drawn by hallowed hands on the celestial canvas—pictures of inimitable grace and beauty graven on the blue tablet of the skies. But what should be said of that great behemoth-like hide of bright cinnamon-brown bark, in massive mantle folds one to two feet thick, of lightly compacted shreddy fibers, darker on the shady side, or in youth and early prime tinted in royal purple, nay, crimson-fired in the lingering smiles of the western sun's adieu. Then behold it flowing into large deep water-line troughs, as it were, careering silently on a smooth bed adown the mountain height, until broadening and free they serenely glide into their great earthy sea.

The hue of young trees becomes of somewhat soft invisible sea-green or delicate bloomy tint, but when the venerable foliage ripens into its golden age of glory, it becomes yellowish-green. From noting the foliage in a general way, if more closely inspected, the leaves are awl-pointed and boat-keeled on the back, lapping one over the other in a scale-like way, loosely, as it were, alternating or spirally in four rows, and so passing round the ultimate sprays. Flowers on the tips of twigs, tiny pollen ones globoid. When cone-bearing forests are in bloom, the gentle rolling breezes waft the golden or yellow-folded clouds of pollen everywhere among the trees, or in this genus and firs, lighter or spirited aloft, the pollen clouds drift along high up over common tree-tops; nor have firs any fruit save on their tip-tops. This sulphur-like dust is often carried by storms afar, and, precipitated by rains, marking margins of pools, foot-prints, and ruts of roads. Cones, egg-form, two by one and one half inches, thick-shield scales, diamond-disked or obliquely trapezoidal, roughly puckered, the radiating wrinkles indrawn by the quilted center point, laterally transverse-ridged, the concealed part broadly wedge-shape, strongly persisting; seeds, three to five to each scale, slightly oblong or subrhombic circuloid, being obliquely wing-margined; the middle body part narrowly wedge-like, often very short, pointed in the slightly notched end, which is apt to remind one of parsnip seed or the like.

Finally, in all due homage, do we accord to this great first-born of the forest, not only priority in time, but in degree of goodness as to quality, pre-eminence at nearly all points of view, and as to state—past, present and to come—whether as to use, magnitude, dignity, elegance or beauty, yielding the palm of our forests to sequoias, for they are indeed the great St. John cedars that never grow old, are never decayed, or ever diseased, and forever rallying in youthful vigor to repair their storm-lost crowns; never known to die a natural death—sylvan types of the immortals.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Decision Against Railway Discrimination.

The *Federal Reporter* for June 27, 1882, a periodical devoted to the publication of the decisions of the United States Courts, announces the decision by Judge Baxter, in the United States Circuit Court of the northern district of Ohio, of the following very important case, which fully refutes the position taken by railroad attorneys and advocates, that carriers have the right to discriminate in rates, basing their discrimination on the amount of freight shipped.

Suit was brought by John Heays & Co., who were engaged in the business of mining and shipping coal in Salineville, Ohio, against the Pennsylvania company, to recover the difference between the rates paid by them and those paid by others. The case, as stated by the *Federal Reporter*, is as follows:

"The plaintiffs were wholly dependent on the defendant for transportation. The regular tariff between those points—Salineville and Cleveland—was \$1.60 per ton, with a rebate of from 30 to 70 cents per ton to persons shipping over 5,000 tons during a year, the amount of rebate being graduated according to the quantity shipped. Under this schedule plaintiffs were required to pay higher rates on the coal shipped by them than were exacted from other and rival parties, who shipped larger quantities. The defendant claimed that the discriminations were made in good faith, to stimulate production, and to increase its tonnage, and were within the discretion conferred by law to every common carrier. In an action to recover back the excess of tariff paid by plaintiffs, held, that such discriminations were illegal, and that plaintiffs were entitled to recover the amount paid, with interest thereon. * * * Its road, though owned by the corporation, was nevertheless constructed for public uses, and is, in a qualified sense, a public highway. Hence, everybody constituting a part of the public, for whose benefit it was authorized, is entitled to an equal and impartial participation in the use of the facilities it is capable of affording. Its ownership by the corporation is in trust, as well for the public as for the shareholders; but its first and primary obligation is to the public. We need not recount all these obligations. It is enough for present purposes to say that the defendant has no right to make unreasonable and unjust discriminations."

In discussing what are reasonable discriminations, mention is made of carrying one person free for special reasons, when no harm is worked to others, or in carrying supplies to a destitute community free, or in carrying machinery, etc., for mining into districts, to develop the country, at lower rates than are charged on other classes of freight. Freight carried very long distances may also be carried at a reasonably less rate per mile than freight transported for short distances, simply because it costs less to perform the services, but in this case it was decided that the unjust discrimination rested on the amount of freight supplied by the respective shippers during the year, and that if this was allowed, the business of the country was, in a great degree, subject to the will of the railroad officials. That such a discrimination is in favor of capital, and is contrary to sound public policy, violative of that quality of right guaranteed to every citizen, and a wrong to the disfavored party, for which the courts are competent to give redress.

This is one of the most important decisions yet made by the courts, and fully sustains the position taken by champions of the rights of the public.

Mr. Depew, the Legislative counsel of the New York Central R. R., in a recent speech before the New York Legislature, ridiculed the idea that charges should be based upon the cost of the service rather than upon the principle of what the traffic would bear—the latter question being wholly at the discretion of the railroads.

The United States Courts have, as a rule, always protected public rights against the abuse of power on the part of corporations.

THE GRANGE AND THE YOUTH.—The distinctive social feature of the Order of Patrons of Husbandry, ministering to one of the greatest needs of our rural population, has enabled it to survive the probationary period and the mistakes into which its leaders fell at first in affiliating it with political parties; so that, after the first recoil, it is reviving and steadily extending on a more solid basis than before, and with less prospects of reaction. Its declaration of purposes and principles expresses well and forcibly the foremost need of American agriculture; not a holding down of the aspirations of youth to the grindstone, by unremitting labor and a stunted education, like the peasant class of Europe; but the ennobling of the farmers' pursuit by the use of knowledge, under the guidance of a trained intellect, and the lightening of the burden of labor there by, both in directing it into the most profitable channels, and in taking from it the sensation as well as the reproach of drudgery by rendering it intelligent.—*Prof. Hilyard, of Alabama.*

TAXATION.—The Grangers of Lawrence county, Missouri, are attacking the taxation problem. At their last meeting they instructed their delegates to the State Grange to use their influence to have that body petition the Legislature, through the subordinate Granges of the State, to so amend the law that taxpayers be relieved from paying taxes on indebtedness, and that a law be passed requiring assessors to provide themselves with a seal or stamp; and that all notes, bonds, mortgages or evidences of indebtedness which shall be held over the time of assessment and not stamped with said seal or stamp, shall be null and void.

An Effort for Cheaper Transportation.

The Grangers of Lompoc have entered upon a matter of great import to the producing element in all this region. At the meeting of the Grange last Saturday, S. K. Shilling and B. F. Tucker were appointed a committee to receive from the farmers having grain or produce to ship over our wharves this fall the probable amount in tonnage each will have to ship. This step is preparatory to securing cheaper transportation. In San Luis Obispo county the people have a like committee already in full operation, with a prospect of securing a reduction of some 35% in the usual price per ton for freights to San Francisco. There is also a rebate on wharfage expected, which in amount will reduce the freights and wharfage 50 cents on each ton shipped. It is believed that it will be an easy matter to secure this saving to our farmers if the people will act with the proper unanimity, and not frustrate the object of the Grange. It is estimated that 25,000 tons were shipped last year, and this simple rebate would have left \$12,500 of that crop with the people more than they received. This matter is worthy the consideration of every man having a ton of produce to ship. It is these small savings that finally bring the farmer up to some degree of competency. This is a needed co-operation on the part of our farmers, if they are to escape the oppressive rates that so many now complain of. By combining in this way the general companies, doing a general transportation business, will not wait for the shipping public to adopt coercive measures by making terms with outside shippers, but come to some terms at once, and meet the people on their own ground. It is only by combination that capital can accomplish any great purpose; so it will be with the combination of the produce. We believe that we can save, by fully carrying out this plan, \$10,000 this year, and increase the saving just in proportion, in future, to the increase of produce of our people. The reason why the average farmer is such good picking for those having need of his products is, that he is generally found going it alone, when a proper combination would increase his profits and reduce the cost of marketing his produce. We shall watch the workings of this committee, in the interest of our farmers, and expect to see some good results at an early day.—*Lompoc Record.*

A GRANGE FAIR.—The holding of fairs by subordinate Granges is a project worthy of attention. Small fairs in towns are common in the East, and they could be held here by the Granges, and much profit and enjoyment result. A Grangers' fair would be a genuine agricultural event, and that is more than can be said of all fairs. We learn from an exchange that the farmers of Sutter county have prospered so well this year, that the Grange at Yuba City has decided to hold an agricultural and industrial fair this season. We have no doubt it will be a success, and that the example will be followed by other Granges.

The Fair Season.

For the information of our readers, we give below a list of the coming exhibitions on this coast in the order of their occurrence:

Bay District Association races, San Francisco, August 5th to August 12th.
Mechanics' Institute fair in the new pavilion, San Francisco, August 15th to September 16th.
Santa Cruz County fair at Santa Cruz, August 15th to August 19th.
Sonoma Park Association races at Santa Rosa, August 22d to August 26th.
Sonoma and Marin District fair at Petaluma, August 28th to September 2d.
Golden Gate District fair at Oakland, September 4th to September 9th.
Mendocino County fair at Willitsville, September 4th to September 10th.
Butte District fair at Chico, September 5th to September 8th.
Eldorado District fair at Placerville, September 5th to September 8th.
California State fair at Sacramento, September 11th to September 16th.
Contra Costa County fair at Pacheco, September 11th to September 14th.
Modoc, Plumas and Lassen District fair at Greenville, September 18th to September 22d.
Humboldt and Mendocino District fair at Robnerville, September 19th to September 22d.
San Joaquin District fair at Stockton, September 19th to September 23d.
San Mateo and Santa Clara District fair at San Jose, September 25th to September 30th.
Lake County fair at —, September 26th to September 29th.
Monterey District fair at Salinas City, October 2d to October 6th.
Shasta and Siskiyou District fair at Yreka, October 4th to October 8th.

We shall be pleased to hear from all the societies, that our list may be complete in some future issue of our paper.

Guide to Silk Culture.

A Useful Manual for Beginners.

The "Silk Growers' Manual," by W. B. Ewer, contains, in a condensed and clear form, instructions for the sericulturist. We advise our lady friends to buy a copy.—*Fresno Express.*

Furnishes in a brief and explicit manner all necessary information in the matter of silk culture.—*San Jose Mercury.*

An interesting compilation to encourage home silk culture in California. Everybody should read it.—*Anderson Enterprise.*

Anyone interested in silk culture will find this full of valuable information.—*San Joaquin Valley Review.*

Furnishes all necessary information to begin the silk business.—*Mariposa Appeal.*

It is a very interesting little work, and well worth the price.—*Mendocino Beacon.*

It is worthy the perusal of all interested in silk culture.—*Concord Sun.*

Copies of "The California Silk Growers' Manual" mailed from this office for 25 cents each.

AGRICULTURAL NOTES.

CALIFORNIA.

CONTRA COSTA.

COUNTY FAIR.—The Agricultural, Horticultural and Mechanical Society of Contra Costa County will hold its annual fair this year at Pacheco, commencing September 11th, and closing September 16th. The directors and officers are determined to make this meeting an attractive and profitable one, and have included Murray township, of Alameda county. The following is the speed programme: Six hundred-dollar purse, for all horses in the State that have not beaten 2:40, five to enter and three to start. Purse \$250, free to all in the State. For all horses owned in the county, as follows: Purse \$250, trotting. Purse \$150, running. Purse \$100, trotting, three-year-olds. Purse \$75, running, three-year-olds. Purse \$100, trotting, two-year-olds. Purse \$50, trotting, yearlings. Purse \$50, running, two-year-olds. Purse \$50, half-mile running, for all. Purse \$60, pacing, to beat 2:50. Purse \$200, trotting, stallions. Purse \$50, running, mules. Purse \$100, foot race, five to enter and three to start; best three in five. Purse \$15, ladies' riding. All the races will be governed by the rules of the Bay District Agricultural Society. No old "plug" or broken-down horse shall be allowed to compete for, nor shall they receive any premium or purse offered by the society.—*WM. CAVEN, President; R. L. STAFFORD, Secretary.*

THE GRAIN YIELD.—*Concord Sun*, Aug. 19: "More sacks," is the almost universal demand throughout the valleys of Contra Costa county. Ever day encouraging reports reach us. Mr. Ike Smith bought sacks enough to fill about 150 to the "setting," and finds he needs double the quantity, each "setting" yielding from 300 to 400 sacks; this is the winter-sown grain. It is encouraging to the farmers throughout Mt. Diablo valley, the majority of whom have been purchasing sacks in excess of what they anticipated. The yield has been fully from one-fourth to one-third more than expected.

FRESNO.

AN EXPERIMENT WITH TOMATOES.—*Expositor*, Aug. 16: This season has been a favorable one for tomatoes, and, though the time for setting them out has passed, it is not out of place to give the result of several methods, by way of experiments, which may interest those engaged in growing them. Plants of the same age and height were placed in parallel rows, one row being heavily manured, and treated in the usual manner, while the other row was subjected to a different process. Before the plants were set out, a square hole one foot in diameter was dug for each plant, the depth being about two feet. At the bottom coal ashes were placed, and the plant was set directly on the ashes. A mixture of manure and dirt was then filled in around the plant, which was placed at such a depth as to leave only a few inches of the top shoots remaining out of the ground. The manure used was less than for the rows set with plants in the usual manner. The effect is plainly perceptible, as the plants in those rows containing the coal ashes have made double growth, and tower high above those in the other rows. It is not claimed that the application of coal ashes was the cause of such rapid growth, as the experimenter used them for convenience, but the preparation made by their use admitted of good drainage, while the receptacles of the roots were deep and safe from dryness, and the application of the manure and dirt was such as to allow the plants good feeding room, and plenty of it. The extra preparation saved manure and gained growth.

KERN.

TROUBLE WITH FARM HANDS.—*Californian*: One of our large farmers, who has 1,000 acres of alfalfa, informs us that he will not cut it again this season, because he is worn out with the difficulty he has had in finding laborers. They were unable to endure the excessive and unrelenting heat, and the task of supplying the places of those who gave out he is heartily glad to bring to an end.

MENDOCINO.

HOP PICKING.—The hop picking season is going to be exceedingly lively in Mendocino county this season. The Ukiah papers estimate that 1,000 pickers will be needed to accomplish the work necessary to be done, and that at present the demand is about 200 short. They are paying a very fair price for picking (one and one-fourth cents per pound), and an energetic boy can make from \$1.50 to \$2 per day.

MONTEREY.

CROPS.—*Watsonville Pejaronian*, August 10: Harvest reports from the Salinas valley tell of a large number of thrashing machines at work, and an unusually large yield. Six months ago the outlook for that valley was bad, but the season will turn out the best one the Salinas farmers have had for years. The S. P. R. R. will do a heavy grain-freighting business from Monterey county this fall and winter, and business men of Salinas will experience better times than they have had for years.

NAPA.

THE WILD VINES.—*Register*, August 19: Mr. A. Grossman, who has a large vineyard near Napa, has been testing the availability of California wild grape vines for use in phylloxera-infested sections. The wild vines used in his experiments were the *Vitis Californica*, and were obtained both in Napa and Lake counties.

He states that so far the wild vines have proved satisfactory. He has also seen other places where the experiment worked successfully. Cuttings from old vines do not do well, however. They start to growing all right, but do not flourish. In his experiments he grafted some early in the spring and others as late as April. Some of those grafted earlier in the season are not thriving. He prefers the wild vine sprout or seedling to the slip. His plan is to cut the wild vine well down into the ground and plant it, and a large number of sprouts are produced, which may be planted out the next year, and as soon as the roots are fully enough developed to sustain a graft, they may be grafted and planted. He also uses the young cuttings of the old stock. He believes in planting as early as possible, when the soil is dry, and that the slips should be put at least from 15 to 18 inches into the ground. Those desiring to plant the wild vine rootings should dig up the diseased vines this month (August) and put lime in the hole, which acts as a fertilizer.

LOS ANGELES.

WATERMELONS.—*Commercial*: Mr. N. Cochem yesterday brought to this city, from his brush-land ranch, Cabuenga, 14 watermelons, whose aggregate weight was 824 lbs. Who will beat it? The melons were sold to Woodhead & Gay, and attracted much attention.

MORE BUTTER NEEDED.—*Express*: Considering the vast expanse of dairy lands in Los Angeles county, it is not especially complimentary to local enterprise to read that firms of this city are daily receiving choice rolls of butter from San Francisco. Los Angeles county is as well able as Marin, San Luis Obispo and other dairy counties to produce the very best article of butter, which many of our dairymen have been doing for years. But it seems that the local product is still short. Whether this deficiency is caused by a lack of local enterprise, or because so much milk is used in the manufacture of cheese, we are not able to say. We do know, however, that our territory for dairying is only partially occupied; and as long as a roll of butter comes from the upper counties, there is an inviting field for this industry in Los Angeles county. We not only have a fine local market, but are in closer proximity to the Territory markets than any other county in the State. If the dairymen of this county are not discriminated against in the matter of freights, there is no better field for cheese and butter making on the Pacific coast than Los Angeles county.

A MAMMOTH YIELD OF ORANGES.—*Riverside Press*: A. B. Clark, Postmaster at Orange, will this season gather 1,600 boxes of oranges—about 256,000 oranges—from six acres of orchard, planted six years ago, to trees budded to the Wilson's Best. This, as far as we know, is the best yield of fruit ever reported in this State—age of trees considered. If the fruit is sold at \$2.50 per box, it will net Mr. Clarke about \$500 per acre, which is certainly good enough, although some people might grumble and say an orange orchard don't pay.

SACRAMENTO.

THE MELON TRADE.—*Folsom Telegraph*, Aug. 19: A watermelon patch on the ranch of Mr. Shields, between this place and Sacramento, largely supplies Sacramento, Placerville, Folsom and other places with the finest melons. We have been informed that \$400 worth have been sent to Placerville alone.

AN IDLE DRIER.—The fruit canneries having more than a supply of fruit, the Natoma Co., for the last two weeks, has been drying the fruit from the large fruit orchard below town, Sun-drying being the process most in favor, the large fruit-drying house, built by the company some years since, remains idle.

SAN LUIS OBISPO.

EDTORS PRESS.—We are having a hard time here this year, but orchards look very promising, and probably the almond will be a perfect success. At three years' growth it "beats all nature."—*G. W. PROCTOR, San Miguel.*

SANTA CLARA.

SEEDLING APRICOT.—*Mercury*, August 17: Vestal's late seedling Moorpark apricot, one of the most famous bearers in this valley, has the advantage of being a month later than the grafted varieties, which places it beyond the reach of the late spring frosts. Mr. Vestal's trees are now coming into splendid bearing, and his fruit is unsurpassed.

SONOMA.

AN EARLY FROST.—*Editors Press*: Mr. Josiah Thomas has a beautiful farm in Green valley, situated about 12 miles from Santa Rosa. It is one of the most productive places in the valley. On the evening of August 16th, a very heavy frost did much damage to his corn, potatoes and squashes; the damage alone on his corn was over \$300. This was on his low bottom land, while on the upper part of his place the vegetables were not affected. Mr. Thomas has been living for 20 years in this valley, and never before saw such a heavy frost at this season of the year.—*T. E. THORNTON.*

RUSSIAN RIVER LAND PRICES.—*Cor. Santa Rosa Republican*, Aug. 17: The warm, sandy, loamy nature of the soil hereabout, and the configuration of the country, make this a choice fruit and agricultural part of the valley. A glance at its products is enough to justify very high future expectations. One mile from town, W. N. Gladden owns a 15-acre bearing orchard, from which he sold 50 tons of peaches to the S. R. cannery for \$40 per ton, net price. He also sold from \$600 to \$800 worth to peddlers.

There are yet about \$1,500 worth of Bartlett pears and plums on the place, and he lately set up a drier. When his new seven-acre orchard comes into bearing, and the additional 20,000 fruit trees in his nursery are set out, the property will yield him a liberal income. At present it is about \$4,000 a year. The demand for land is growing. Dr. Cook sold 10 acres lately, with common improvements, for \$6,000. J. H. Curtis refused \$12,000 for 50 acres, and is planting a large orchard. Both places are near town. James A. Mead's place could be sold for \$9,000. In the same vicinity the 60-acre Hudson tract was bought by Passelague and cut up and sold for \$250 to \$500 an acre this summer. C. Sawtell disposed of the fruit of a young 10-acre orchard, in bulk, for \$250 an acre. Hops are a large yield. John Born contracted part of his 20-acre crop for 42½ cents. J. D. Grant declined an offer of 45 cents for 19 acres, which, at that price, will net him \$10,000. Philip Peck's 10-acre nursery, it is believed, will clear him \$4,000 profit. The grape crop is reported large. The wineries are enlarging and others building. Messrs. Gobbi have one of 50,000 gallons capacity. Mr. Simi has doubled his to 75,000. The Optimas winery of Wright & Finlayson, with Julius Scott, superintendent, and retaining his interest, has a capacity of 250,000, with sherry house and distillery. J. N. Bailhache's 60 acres of new vines look well, with corn and beans between the rows. He, by the way, also thought we looked hungry, and kindly invited us to get some dinner. Alfalfa lands worth \$250 per acre yield two and three crops, with pasture, and pay 10% interest on the investment. What else can be said, except, of course, that it is always necessary to bestow labor and skill on investments to make them profitable.

SUTTER.

LARGE YIELD.—*Farmer*, Aug. 18: Our Meridian correspondent informs us that the grain crop in No. 70 is yielding far beyond all expectations. From 47½ acres of barley James Messick got 1,574 sacks, averaging 114½ lbs per sack, and from a little less than 18 acres of Sonora wheat he got 447 sacks of an average weight of 146 lbs. per sack, an average of 83 bushels to the acre.

NEVADA.

SALE OF A SHORT HORN.—*Reno Gazette*, Aug. 19: B. F. Leete has sold his Short Horn bull, "Washoe Duke," to Jos. Marzen for \$500. "Washoe Duke" is a thoroughbred of perfect pedigree, a splendid ideal of a beef bullock. He is two years and eight months old, and weighed to-day, on L. W. Lee's scales, 1,865 lbs. He was shipped at four o'clock P. M. to Marzen's ranch, at Lovelocks.

Rich and Poor.

EDITORS PRESS:—I agree in the main with H. J. S. in his conclusions concerning "Rich and Poor;" but is it possible to read the reported wealth of rich men without reflecting on the hard struggles endured by the honest poor to keep the wolf from the door? It is supposed that Mother Earth produces sufficient for all natural wants without the necessity of drudging 10 or 12 hours per day. Perhaps one out of every six or eight may be recorded amongst the producers, and that one is generally the very person who knows nothing of the luxuries or refinements of life. Truly the life of the laboring man is not to be envied, as it is forced upon him by circumstances beyond his control. Mingle, if you will, with a company of non-producers, educated and refined; then change your inquiry to the company of a gang of laborers, who earn bread according to the Scripture rule. A stranger of civilization would consider the different grades of humanity as belonging to a different planet or sphere. Suppose the conditions had been reversed, the result would still remain the same. Wealth attained without earning it seems to subtract that amount from those who do labor.

An article is going the rounds of the papers proclaiming about the great wealth of some of New York's citizens—Vanderbilt, Keene, Gould, Stewart, Morgan, etc.—closing with this remarkable statement: "Within five minutes' walk from the place where these men live, one can find multitudes whose life is but a prolonged battle with famine."

Is the picture not sufficient to prove that "the rich are growing richer, and the poor, poorer," conditionally, of course. Who would have dreamed a very few years ago that any one man's income could attain to the colossal sum which is credited to any one of the men mentioned above? The world's requirements necessitated a very large circulating currency, and the hoarding of such large sums by individuals must necessarily cripple the general exchange of the nation's currency medium through the marts of trade. We go further, and maintain that an undue and unnecessary wealth is a crime and a sin—a sin which will bring its due reward. It is also a sin to keep the producers in a state of brutal ignorance for lack of opportunity. The mind of man is naturally aspiring. The learned should teach the ignorant. The wealthy should use the great power of wealth to relieve the world of its ills. What a wealth flows from higher spheres to those who seek the world's happiness, and

what a mental night follows those who only seek their own aggrandizement! "Am I my brother's keeper?" may well be asked. All inspiration and all common sense gives answer in the affirmative, and the fulfillment will serve us better in the day of trouble than all the creeds of Christendom or fulsome professions. In the name of the struggling poor and laborious producer, if this world's wealth is denied you, the riches of the Spirit are yours. A cup of cold water given in the spirit of a good Samaritan will open the doors of the inner temple far easier than if you possessed the locked up millions of the Vanderbilts. The rich might be less rich and the poor a little richer without subtracting an ounce of happiness from anyone. JOHN TAYLOR.

CROP REPORTS.—A prominent farmer from Union creek was in Austin the other day. Desiring to obtain some reliable figures about the oat crop, we asked him if he could tell us precisely how many acres he had in oats and how many bushels he raised to the acre. "I can't give you the precise figures, but I raised a heap, sold right smart, and I've got a powerful lot left."

News in Brief.

RUSSIA is concentrating a formidable army in the Caucasus.

THE APACHES are still committing frightful atrocities in Sonora, Mexico.

A VIGOROUS war has been commenced in Chicago against the lottery business.

THE FIRST iron works in Utah have been started at Ogden, and are in successful operation.

THE BUILDING now in course of erection in Seattle, W. T., will cost nearly \$250,000.

DURING the week ending August 19th, the mints issued 289,000 standard silver dollars.

SERIOUS trouble is feared among the Chinese laborers on the railroad in British Columbia.

SILVER to the amount of \$118,000,000 is lying idle in the Treasury vaults at Washington.

THE ATLANTIC & PACIFIC railroad track is completed to Pitman valley, A. T., 80 miles from Prescott.

TWO THOUSAND persons are out of employment at Brownsville, Tex., on account of the yellow fever.

THE OLD Jenkins toll-house, between Hornitos and Bear valley, Mariposa county, has been destroyed by fire.

ENGINEER MELVILLE and party arrived at St. Petersburg, and are expected in Washington in about three weeks.

THE NEW \$50,000 court house being built by the people of Custer county, M. T., is rapidly approaching completion.

THE MAYOR and five Councilmen of Reading, Pa., were arrested on an indictment for not keeping the streets clean.

MR. LONG, the American Consul at Alexandria, was attacked Friday by about 40 natives, who were dispersed by soldiers.

THERE IS danger of another outbreak at the San Carlos reservation, and things look rather serious. This time it is the Tontos.

THE BRITISH took possession of Port Said and Ismailia, and have also secured control of the telegraph line from Port Said to Suez.

AN OLD landlord says that not more than one-half of the Eastern summer hotels will escape loss this season, nor more than one in five yield a profit.

AN INTERVIEW with leading vineyard and cellar men of St. Helena, within a day or two, goes to show that phylloxera has no existence there, and if there is an isolated case of it in any vineyard, those who have opportunities to gain reliable information on the subject express the belief that there is no danger of the pest putting in an appearance there this season.

THE CITY of Davenport, Iowa, formerly received an income of several thousand dollars from licenses to liquor dealers. Under the new order of things in that State this revenue is lost. An ingenious official has hit upon the plan of taxing the sale of lemonade, soda, and other beverages allowed to be sold. A charge of \$50 a year is to be exacted, with a fine of \$1 to \$100 for violating the ordinance.

THE STATE Fish Commissioners say that in order to supply the demands of the canneries, fishermen on the Sacramento and San Joaquin rivers have resorted to the practice of catching salmon in the close season. With a view to prevent this, the Commission has instituted a river patrol, consisting of six boats containing four men each.

AUDITOR BRICKWEL has forwarded to the State Controller the following statement concerning the values of San Francisco property as they appear on the books of the Assessor: Value of city and town lots, \$108,487,048; improvements thereon, \$43,122,220; improvements on real estate assessed to persons other than the owners of the real estate, \$48,500; value of personal property, exclusive of money, \$42,306,636; money, \$7,799,358; deductions on account of mortgages or other obligations by which debt is secured by lien on property, \$28,878,061; value of franchise, roadway, roadbed, etc., of railroads, as apportioned to the county by the State Board of Equalization, \$218,400; total value of all property after deductions, and after equalization by the Board of Supervisors, \$201,982,162.

EXTRA COPIES.—Persons receiving an extra copy of this issue of the RURAL PRESS are requested to present it to some one likely to be interested in reading or patronize the same.

Fruit Drying.

The Ely-Meeker Sun Drier.

EDITORS PRESS:—In your last issue you publish a letter from Mr. J. M. Hixson, of Hixson, Justi & Co., showing forcibly the importance, or, rather, the absolute necessity of every fruit grower providing himself with the means of drying his own fruit. It is, indeed, generally acknowledged that drying is the only resource for the fruit grower against the often-recurring glut of the market for green fruit and the increasing pressure of the combination of canners. The immense breadth of land planted out in fruit during the last few years makes it perfectly certain that the quantity of the fruit produced which can be sold green will soon bear quite a trifling proportion to the whole fruit crop. The importance, then, of fruit growers directing their earnest attention to finding out the best mode of drying is obvious. The experience of each coming year will more and more forcibly demonstrate this. Dried fruit of the highest possible quality is an article all but unknown to the public. When it becomes known, we have no hesitation in saying that it will be preferred by consumers to any kind of canned fruit. Mr. Hixson's letter, however, assumes that evaporated fruit, meaning, we suppose, fruit dried by artificial heat, is much superior to sun-dried fruit—so much so, that while evaporated fruit must be packed in boxes, sacks he considers are good enough for sun-dried fruit. This assumption arises from the fact that sun-dried fruit is generally understood to mean fruit dried in the open air, during a space of some days, exposed to dust, insects, night dews and other injurious influences, which make it unclean and weaken its flavor. But fruit dried in an efficient sun drier, constructed on sound principles, with thorough ventilation, avoids all of these evils, and is, we maintain, very greatly superior to fruit dried by artificial heat—it matters not in what one of the artificial heat driers now in the market.

Will you allow us to allude to-day to only one or two of the many points of superiority which sun drying possesses over the drying of fruit by artificial heat. One of those points of superiority is, that in sun drying all of the sugar in the fruit is speedily crystallized, so that none of it is lost, but all of it retained, in the best form, in the dried fruit. This crystallization is one of the effects produced solely by the singular, but well-known chemical action of the sun's rays. To give a simple illustration of this, let us take a vial filled with a solution of camphor, and expose it to the sun's rays. In a short time crystals will form upon and adhere to the glass on the side of the vial next to the sun. If the vial be then turned half way round, the crystals formed will disappear, and crystals will be formed again on the side of the vial on which the sun's rays first impinge. It can be easily demonstrated that this chemical action is not an effect of either light or heat—not even of solar light or heat—but of a distinct and peculiar chemical power which the sun's rays, and the sun's rays alone, possess. To show this, let a sunbeam, by being passed through a prism, be broken and divided into its variously colored component rays, and if then both the heating and the lighting rays are intercepted and shut out, and only the chemical rays allowed to fall on the solution mentioned, crystallization will take place in the same time as before. In a similar way, the power of the sun's rays in producing chemical combination and precipitation can be made evident. A mechanical mixture of certain gases will remain forever in the dark, without combining, but if exposed to the sun's rays combination is instantaneous. The bleaching power of the sun is another instance of its wonderful chemical action. We have, indeed, distinct evidence that a sunbeam cannot fall upon a solid body without leaving permanent traces of its action. If these truths appear to you to be too well known and elementary to require to be insisted upon, we may be excused for referring to them in connection with fruit drying. They are too generally overlooked in this connection, and they show how impossible it is to imitate the beneficial action of the sun's rays in fruit drying by any artificial process, for all of this manifold chemical action of the sun is beneficially exerted in the drying and curing of fruit by the sun's rays. The only other point of the superiority of sun drying to which we shall now refer is, that it preserves, uninjured, the flavor of the fruit it dries better than can be done by any other mode of drying. It is the sun alone which can ripen fruit, and, by its mysterious and beneficent action, bring into existence the delicious flavor proper to each kind. It is the sun alone which, in drying, can fix and preserve these flavors in the fruit it has brought to perfection. The sun not only dries the fruit, but it cures it. The essential oils in which the flavor peculiar to each kind of fruit resides are of much too subtle and volatile a nature to be able to withstand uninjured the violent and unnatural treatment to which they are subjected in driers using artificial heat. It is too much to expect that delicately flavored fruit can be thrust into dark ovens and exposed to excessive heat and to the fumes of artificial fires, which it is impossible altogether to exclude, and that it will emerge with all its original charm uninjured by the process. The outward appearance of the product may be good, but the essence or soul of the fruit has departed. It will be asked, where, then, can a good sun fruit drier be procured? A few weeks ago there appeared in the PACIFIC RURAL PRESS a description, with drawings, of the Ely-Meeker sun drier. It is well spoken of by those who have used it. We think it would be well for fruit growers to take some trouble in ascertaining its true merits for themselves. This can be easily done, for already a number of well-known fruit growers have it in use. Let them commit themselves to no particular fruit drier; but of one thing we may be certain, sun drying will, before long, supersede all other modes of drying fruit, but for this a special apparatus is necessary. The introduction of a satisfactory sun drier would be an event of much interest to fruit growers. But let us not suppose that any apparatus will supersede the necessity of careful attention, close observation and experience for those who aim at attaining the highest results in fruit drying. It will always be true that we would have done better if we had taken more pains. If you want the results of work you must do the work which brings the results. The cost of production, either in money or pains, is the measure of worth in well nigh every branch of the world's commerce. MAKER & PORTER, Excelsior Mills, Fifth and Bryant Streets, S. F., August 23, 1882.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 23, 1882.

There has not been much movement in Wheat, the tone being rather dull, in sympathy with reports from abroad. The foreign advices yesterday had a more promising phase, but to-day they have relapsed, as may be seen by the following dispatches:

LIVERPOOL, Aug. 22.—California spot Wheat, firmer, at 9s 7d@9s 10d. Cargoes are slow, at 4s 6d for just shipped, and 4s 6d for nearly due and off coast. Receipts for the past three days, 306,000 cts, including 194,000 American.

LIVERPOOL, Aug. 23.—Wheat: California spot lots are dull, at 9s 8d to 9s 11d. Cargo lots, 4s 6d for just shipped, 4s 6d for nearly due and 4s 6d for off coast.

The Foreign Review.

LONDON, Aug. 21.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: There have been few native samples of Wheat on offer. The market has been irregularly cheaper, and Wheat increasingly difficult to sell. Foreign Wheat has been dull and lifeless, and a deduction of one and two shillings has been necessary to effect sales. Off-coast business was almost nil. Twenty-nine cargoes of Wheat arrived; 2 were sold and 18 withdrawn. The floating stock shows an increase of 67,500 quarters. Maize was cheaper. The sales of English Wheat during the past week were 8,899 quarters, at 50s 5d, against 12,934 quarters, at 48s 10d, for the corresponding date last year.

Freights and Charters.

Freights have been lively during the past week, as holders, having become tired of waiting for an improvement in rates, let go at lower figures, and the market is now quotable at £2 12s 6d for iron vessels to U. K., against £2 17s 6d at the same time last week. The charters reported, both spot and prior to arrival, number 15 vessels, of a register of 20,313, or a carrying capacity of 30,469 short tons, or 609,380 cts. The chartered Wheat fleet now in port has a register of 43,008, or an export capacity of 64,512 short tons, or 1,290,240 cts, against 71,594 tons at the same time last year. The disengaged tonnage in port has now a register of 35,659, or an export capacity of 53,488 short tons, or 1,069,760 cts, against 2,137 tons at the same time last year. There is also a disengaged register of 9,409 at adjacent ports. Tonnage now on the way to this port has a register of 302,370, against 364,115 at the same time in 1881 and 190,166 in 1880.

Eastern Wool Markets.

BOSTON, Aug. 22.—The market for Wool is steady and firm, with a good demand from manufacturers. Both fine and medium grades are in request. Sales of Ohio and Pennsylvania X and XX have been made at 42c, with choice selections higher. Michigan X fleeces are quoted at 39c and are in steady demand. In unwashed fleeces 17@23c is offered for common and loose, 25@32c for fine and medium, and 33@35c for choice medium. Selections of combed and delaine fleeces are in demand, at 43@46c for fine delaine, and 46@48c for fine and medium combed. California Wool is quiet, and sales are small, at 25@32c. Pu. Fed Wools are reported in fair demand, at 42@47c for choice extra and Maine supers, and 25@40c for common and good. Foreign Wool is in small stock and quiet. Desirable carpet Wools are scarce and wanted.

London Wool Market.

LONDON, Aug. 22.—The third series of colonial Wool sales commenced to-day. The attendance was good; there was a fairly spirited competition. Good Australian brought about the closing rates of the last series, while the prices of faulty, cross-breed and Cape were barely maintained. The total stock available for the series is 362,000 bales, consisting largely of New Zealand. The sales conclude in October. A total of 6,800 bales was sold, which was mostly New Zealand, Sydney and Cape.

Eastern Grain and Provision Markets.

CHICAGO, Aug. 23.—Closing quotations: Wheat, steady, firmer and regular; \$1.02½ August, 93c September. Corn, steady, at 75c cash, 75c September. Pork, firm and higher, at \$21 60 cash, \$21 75 October. Lard, firmer, at \$12 32½ cash, \$12 42½ October.

BAGS.—Bags are unchanged; 50,000 Calcutta sold at 9c spot.

BARLEY.—The Barley market holds up well, as supplies are not excessive. Prices to-day are 2½c better than yesterday. Two lots of 100 tons each sold on August account at \$1.20@1.29½ per cwt, respectively. Other sales aggregated 200 tons for October delivery at \$1.25½ per cwt. In No. 2 feed the only transaction was a lot of 100 tons, August, at \$1.26 per cwt. Sales at the Grain Exchange: 100 tons No. 1 Feed, October, \$1 24½; 200 do, \$1.24½ per cwt.

BEANS.—Beans are unchanged.

CORN.—A short crop in Central America is elevating buyers' views, and choice Yellow is quoted at 15@20c per cwt higher than last week.

DAIRY PRODUCE.—There is no change in Butter. The recent rise is leading to the use of much cheaper packed Butter and pickled roll. Cheese is unchanged.

EGGS.—Eggs are still plenty in the lower grades, and fine fresh Eggs scarce. Prices are unchanged.

FEED.—There is no change in Feedstuffs.

FRUIT.—Figs have been plentiful this week and cheap. Peaches are advancing. Grapes hold up well and come in slowly.

FRESH MEAT. Everything holds up value except Pork, which is more abundant, and shades off ½c per lb.

HOPS.—Rates are about the same as before. Holders are asking 50c for future delivery.

OATS. Oats are unchanged, and the market rather easy.

ONIONS. Silverskins are doing a little better this week.

POTATOES.—The market is well supplied with choice potatoes. Early Rose are very abundant and cheaper. Sweet potatoes are selling 25c lower per cwt.

POULTRY AND GAME. There has been a reduction of 50c per dozen on all fowls.

PROVISIONS.—Trade is good and rates are unchanged. VEGETABLES.—Changes are very slight, except in Marrowfat Squash, which is considerably lower this week.

WOOL.—Wool prices are unchanged. Sales are very few and stocks on hand large. Holders are firm and awaiting the course of events.

(CONTINUED ON PAGE 144.)



Song of the Plow.

Ye drawing rooms and palaces, I recognize your splendours,
Your ladies bright and beautiful—the power of their defenders;
The while I creep across the field, and toil for man's existence,
And see his roofs and minarets that sparkle in the distance.
But well 'tis known that in the soil your best foundations lie;
What would you do, what could you do, and were it not for me?
Unless I pierce the darkness where the golden grain has birth,
Your beauty and your brightness will go crumbling to the earth!

So drawing-room and palaces,
Lay by your social fallacies,
And listen for a moment, till you've heard the cheerful song
Of the old plow, the bold plow, that moves the world along.

Ye rumbling manufactories, that loom as bold as mountains,
And a nd your stream of smoke aloft in raven-colored fountains,
I see your fiery temper gleam, in flakes of cinders burning,
I strike a spark of flinty fire, the bright salute returning;
But think, how closely coupled in our varied works are we;
What would you make, what could you make, and were it not for me?
I build you, and I feed you, and your servants all I keep;
My stalks and blossoms toil for you when others are asleep.

To recognize my royalty
In honest, earnest loyalty,
And see a burnished scepter in the sharp and gleaming prong
Of the old plow, the bold plow, that moves the world along.

Ye sailors of the argosies that miles of ocean measure,
Trade's never-ceasing penicilums are swinging to your pleasure
Your cities decked with spire and dome, in spite of waves and weather,
Go traveling from shore to shore, a thousand leagues together!
And yet from my unceasing toil your grandeur is not free;
Where would you sail, where could you sail, and were it not for me?
But little might those gallant flights to you or others yield
If 'twere not for my voyages across the fertile field.
So share my grim emotions,
Gallant plowmen of the oceans,
And ring out a jolly chorus, and we'll make it loud and strong,
For the old plow, the bold plow, that moves the world along!

Ye potentates of merchandise, ye traders and ye bankers,
Into whose capacious harbors wealth is casting all its anchors;
I bow to your magnificence—I like your brain and daring;
I know your table luxuries, the jewels you are wearing!
But lay aside your vanity this humble truth to see,
What would you own, what could you own, and were it not for me?
Look well, I clothe the fallow lands and feed the cattle fold;
You will not wear your iron, and you cannot eat your gold;

So drop all needless vanity,
Good cash-boys of humanity;
For your success is fastened with a never-breaking thong
To the old plow, the bold plow, that moves the world along!

Ye legislators, governors and dignitaries awful,
Who make receipts for keeping men respectable and lawful,
Ye teachers and ye preachers, and you who the presses borrow,
To raise your heroes high to-day and pull them down to-morrow;
Ye workers in all sorts of brain, on one affair agree;
How would you rule, how could you rule, and were it not for me?
The monarch of this Western world would have marched behind the plow;
The boys who yet shall be the same are in the furrow now!

So bow to my utility
You men of brain ability,
And make me first and foremost of the great progressive throng,
Yes, the old plow, the bold plow, that moves the world along.

Though simple my biography 'twould fill out many pages;
I was within a tree top born in very distant ages,
They dragged me in my infancy o'er sleeping hill and hollow,
But where I went prosperity was ever sure to follow.
Rich harvests were the children of this tantalizing of a tree;
How would they grow, how could they grow, and were it not for me?
So they shed me and they armed me with the metal of the mine;
Till my joints are iron-girded, and my breast with silver shines!

So crown me with sincerity
As monarch of prosperity,
And as the foremost enemy of famine, shame and wrong;
I'm the old plow, the bold plow, that moves the world along.

—Will Carleton.

CRYSTALS IN THE DARK. It has often been observed that when many crystalline bodies, such as sugar, are suddenly broken in a dark room, a flash of light is seen. A phenomenon, probably similar, has been recently noticed when a piece of twilled calico is quickly torn in a room from which the light is excluded. After the calico was washed, the phenomena could not be obtained, whence it is probable that it was due to the dressing contained in the new goods.

A Receipt in Full.

The tins had all been scoured until she could see her face, or grotesque caricatures of her face, in each and every one of them; the window-panes polished until they sparkled like bright June sunshine; the silver burnished until neither spot nor speck marred its mild luster; the loaves of bread baked until each crispy crust took on the right shade of tempting brown; and Molly was scrubbing the only unscrubbed corner of the kitchen, when Miss Cameron's deep, harsh, precise voice came to her from the dining-room: "Mary, are you not through yet?"

"Almost, ma'am," answered Molly.
"I think it is nigh time you were quite," declared the voice. "You must make haste. We are going to the lecture this evening, Miss Georgette and I; and, as Mr. Malcom also wishes to go out, we will be obliged to lock up the house. Therefore, it is necessary that you should leave as soon as possible."

"Yes, ma'am," said Molly, meekly, and finished her scrubbing, with her tears falling fast and thick. Poor little girl! she had tried so hard to please her mistress—for Miss Georgette was but a reflection of her elder sister—and her efforts had been met with grim silence that betokened a begrudged satisfaction, until the last few weeks; that is, in fact, until Mr. George Malcom came there. Mr. Malcom was a sort of step-brother to the Misses Cameron (his father, a widower with two boys, had married their mother, a widow with two girls), and they inheriting nothing in the way of property from their own father, he generously made them an allowance from the moderate fortune left him by his. Generously and forgivingly—for they had not rendered a tithe of the respect, to say nothing of affection, which was his due, to their indulgent and kind-hearted step-father, choosing to look upon their mother's second marriage as an insult to the memory of the parent whose not-at-all-amiable characteristics had been his only legacy to them.

The cottage in which they lived, situated in the prettiest part of Meadowville (the furniture there being their own, the bequest of a maternal grandmother), belonged to Mr. George; and here he had come in search of solitude and quiet, for the first time in 12 years or more, to spend a month or two in thinking out and arranging plans for starting a large business in a neighboring city. And, as I have already intimated, things had changed much for the worse with Molly, the servant maid, since his arrival. The grim silence had given place to most open fault-finding when Mr. Malcom was not within hearing. The coffee was too strong, the tea too weak, the chickens underdone, the steaks burned, the eggs boiled too hard, the rooms badly swept, the shirts poorly ironed; and all these complaints, with many more, the elder spinster, confirmed by the younger, gave her to understand, originated with the guest.

"What a hard man to please he must be!" Molly said to herself many times. "And yet he has one of the handsomest, kindest faces I ever saw; and he speaks right pleasantly to me the first day he came, and even offered me his hand (how Miss Cameron blushed!); but I pretended not to see it, for I knew it was my place to shake hands with him. It is strange he should have become so fractious. He was so good, and merry, and kind when I was a little girl; I'd often heard father say he'd rather shoe a horse for him than for anyone else in the village."

And then she would fall to thinking how grand he looked to her childish eyes when he came riding up on his bay mare to the smithy, where she spent half her time watching her father at the forge. And he always brought her a gay picture book, or a pretty ribbon, or a box of candies, or a bright, new silver piece—on Christmas it was a gold one—and claimed a kiss (good gracious, how her cheeks flushed at the remembrance!) for payment when he rode away again. How happy, how very happy, she had been then, with that dear father and dear old Aunt Nanny!—so happy that she had scarcely ever felt the loss of the mother who had died in giving her birth. But when Molly was 15, the blacksmith, so strong and ruddy that it seemed impossible pain or sickness could ever come near him, fell sick and, after lingering, sorely crippled for nearly two years, died, leaving nothing to his darling but hard work. Yes, there was one alternative—to become Mrs. Jake Willow, and mistress of the forge again; but Jake was a rough, vulgar fellow, and Molly, inheriting the delicate tastes and gentle ways of her mother, who had been a shy, pretty young governess before she married the handsome blacksmith, shrank from the loud voice and rude laughter of her would-be husband. And so, in preference to accepting Jake's offer, she became—Heaven knows this was a hard enough thing to be—maid-of-all-work in the cottage of the Misses Cameron. Poor little Molly! prettier than many a princess, with lovely, black-fringed gray eyes, and hair of the very darkest brown—hair that would curl in spite of her, to Miss Cameron's great displeasure. "If I had such untidy hair," that lady would often declare, glancing approvingly into the mirror at the flat-dyed bands that made a triangle of her high, narrow forehead, "I'd shave my head!" and "We'd certainly shave our heads," would echo Miss Georgette.

The kitchen floor finished, the rugs shaken and returned to their places, the bread put away in the big stone jar in the cupboard, Molly sought her own room (which, to tell the truth, was no room at all, but a corner of the garret rudely partitioned off, with only a skylight to admit light and air—there were rooms,

empty, unused rooms, in the attic, but "they were much too good for a servant," Miss Cameron said; and "very much too good for a servant," agreed her sister) to make ready for her sitting. Molly looked around it as she tied her straw hat over her rebellious tresses, and again the tears filled her eyes. It had been a place of rest and a shelter, and she had been glad to have it, fearing to leave it lest worst luck lay beyond.

And she would not have been compelled to leave it had it not been for that unfortunate mirror, and the unceasing complaints of the old bachelor. Why, he could not be so very old, after all, for he was only one and twenty, and she between five and six when he gave her ribbons and books and silver pieces, and she gave him kisses.

But the sound of closing shutters broke in on her reverie, and reminded her that her departure was waited for, and taking her bundle in her hand, she ran quickly and lightly down stairs to the parlor, where the maiden ladies sat erect and stern, their bonnets already in readiness for the lecture.

"I'm going now," said Molly, standing in the doorway, her sweet, pathetic face, with its pleasing gray eyes and quivering lips in no way touching what her mistresses were pleased to call their hearts. "Good-bye, ma'am. Good-bye Miss Georgette."

But the only reply was: "Bear in mind that you are still indebted to us eight and twenty dollars. If, however, you should prefer to purchase a mirror yourself, in place of the one broken by you, we will consent to receive it, provided it is in every way as good as that left us by our grandmother. And in that case we will agree to refund the eight dollars for last month's wages, which we have retained as the first installment of your debt, which is really much more than you could have expected of us."

"Oh, yes, indeed, very much more than could have been expected of us," murmured Miss Georgette.

"For such gross carelessness—" Miss Cameron went on.

"Indeed, ma'am," interrupted Molly, her cheeks flaming and her eyes sparkling, "as I told you, I never touched it; I wasn't near it. I was sweeping the other side of the parlor when it fell, and the cord it hung by was all moth-eaten, and had broken just in the middle, as I showed you at the time."

"You should be punished," continued Miss Cameron, not paying the slightest attention to the girl. "And one word more. Please remember that we have your signature to an acknowledgement that you consider yourself responsible for the breakage."

"You frightened me so that I scarcely knew what I was signing," said Molly. "But as I promised, I will pay you, for it shall never be said that my father's daughter broke her word. I'd give you the few dollars I have saved if I had not to keep them for my own support until I get another place. Poor Aunt Nanny can only give me shelter, for, as you know, she has depended entirely on me for food and clothes since my father died."

"Yes, and a very ridiculous thing for both of you," snapped Mrs. Cameron. "She had much better sell the hut she lives in for kindling wood and go to the poor house, and you might much better save your wages to pay for the things you break. For break you will to the end of your days. I never saw a person with such fly-away hair as yours that was not vain, careless and frivolous. You may go."

"Yes, indeed, you may go," added Miss Georgette.

And the poor child went out into the road, homeless and almost friendless, with a shadow on her fair young face and a pain in her young heart. But she had only turned into the lane that led to old Nanny's cottage when some one came quickly to her side, and said in a kindly voice, "Molly, poor little Molly!" and there was Mr. Malcom. And Molly, in her grief, thinking only of him as the friend of her childhood, who had known her as the darling of the kindest of fathers, flung her bundle down, and burst into a passionate flood of tears.

"They were hard on me, your sisters, Mr. Malcom," she sobbed, "very hard on me. I did my best for them. I worked—and I am not very strong, though I am a blacksmith's daughter—from morning till night, and yet I could not please them. And it was not my fault about the mirror. It was not—it was not—it was not. Though Miss Cameron insists that I stopped sweeping to look at my curly hair—I can't help its curling, I did everything to make it straight; I tied it back so tight, over and over again, that my head ached awful—and knocked it with a broom. She was a little better before you came; but after you came, and complained so much about the tea and coffee and your shirts—and everything!"

"I complain?" exclaimed her listener, breaking in upon her rather confused narration of her wrongs. "Why, I never complained of anything. How could I? there was nothing to complain of."

"She said you did. But I beg your pardon, sir," suddenly remembering the difference between candy-and-kisses time and the present. "She is your sister, and—my troubles are nothing to you."

"She is my sister an extremely long step off," he replied, gravely; "and your troubles are a great deal to me; and, furthermore, I see a way—a pleasant way—out of them. Let me walk with you to your Aunt Nanny's, and there, with her to advise us, we will talk the matter over."

"Oh, it is such a poor place, Mr. Malcom. Miss Cameron called it a hut, and said it was only fit for kindling wood."

"I've been in much poorer places, Molly," said he, and picking up her bundle, he walked by her side to the old woman's cottage.

Two weeks passed by. A poor drudge from the workhouse, whose chief (in fact, whose sole) recommendation was "no wages," had taken Molly's place in the Misses Cameron's kitchen. Mr. Malcom had gone away on business directly after her coming, and on the evening appointed for his return the two sisters, attired in dresses of dull gray, unrelieved by a single touch of color, sat (everything in the house being in a heart-chilling, dreadful stony order), one at each parlor window, awaiting his arrival.

"He must be coming; I think I hear wheels," said the elder, in her usual precise tones.

"Wheels," repeated her sister.

And "wheels," they were, but not the wheels of a carriage, but those of a truck, on which lay a long, wooden box, stopped before the cottage door.

"A mirror for Miss Cameron," the driver called out, as he jumped down.

"A mirror!" repeated the spinster, unable to restrain a gesture of surprise. And "a mirror!" said Miss Georgette, with another gesture of surprise.

"Yes, ma'am; from Willards, New York. Where is it to be taken?"

"First unpack it out here," commanded the lady, recovering her self-possession. "I can't have the house littered up with splinters and shavings."

"No, indeed!" chimed in Miss Georgette, also recovering her self-possession. "Splinters and shavings!"

So the box was unpacked at the roadside, and the mirror taken from it proved to be better and handsomer in every respect than that it had been sent to replace.

"I've brought wire to hang it with," said the man, as he carried it into the house; "so there'll be no danger from moths this time."

"Moths!" said Miss Cameron, glaring at him. And "Moths!" echoed her sister, also glaring. And they both continued to glare, as though called upon to superintend a piece of work highly repugnant to their feelings, until the mirror was hung, and the driver again in his place on the truck.

"Of course George sent it," said Miss Cameron, when the man had driven away. "But Mary Brown must pay for the other all the same. Our having this makes no difference in regard to the agreement with her."

"No difference in regard to the agreement with her," assented Miss Georgette—when who should walk in, in a gray silk walking dress, a bunch of crimson flowers at her throat and another one in her belt, and the most coquettish hat, adorned with more crimson flowers, but Molly herself.

"Good evening," she said smilingly. "I have called for a receipt in full."

"A receipt in full! And for what, pray? Have you brought the money?" asked her whilom mistress. And, "Have you brought the money?" echoed her other whilom mistress.

"No, I have not brought the money," answered Molly; "but I have sent you a mirror that more than answers your requirements."

"You!" from both sisters at once. And again, for the second time in one short hour they were guilty of being surprised and letting their surprise be seen.

"Yes, I. I have the bill with me. A receipt in full, if you please."

Miss Cameron arose, walked in a stately manner—Molly following her—to her desk in the dining-room, seated herself, took pen, ink and paper, and began: "Received Mary B—"

when—

"Stop a moment," said Molly; "my name is no longer Mary B own."

"And what may it be?" said Miss Cameron, regarding her with lofty contempt.

"I'll answer that question," said Mr. Malcom, suddenly appearing, and passing his arm around the slender gray silk waist, thereby crushing the bunch of roses in the natty belt—"Mrs. George Malcom."

The pen fell from Miss Cameron's hand, and for the first time in her life that estimable woman went into hysterics, whither her equally estimable sister immediately followed her.

And Mollie taking her leave at that moment, never received any receipt, in full or otherwise, after all.—Selected.

WHAT IS AN INGRAIN CARPET?—The two-ply ingrain known to the trade is a fabric composed of two webs or plies of cloth made with different colored yarns—say, one ply green, the other red—of equal consistence of texture, united at the edges of selvages of each by the selvage threads, and ingrain or united at different parts of the cloth, wherever called for by the design or pattern. If the red ply represents the ground color of the design, then the green will be the figure color; and whenever the green figuring ply appears over the red ground ply, that is ingrain. The more general this ingrain or mixing up of the two webs or plies, the better the fabric is ingrain, and the longer it will wear. The three-ply ingrain is made and ingrain after the same manner. A two-ply carpet, woven on the same loom and "mounted" in the same manner as a two-ply ingrain, if woven plain, without any design of pattern, would be a seamless bag, or two bags joined together by one side of each.

Women and the Law.

EDITORS PRESS:—It is not often I care to trouble you with press corrections for past communications, but by printing "any information" instead of "my imagination," a paragraph in my last letter became notorious nonsense. What I wanted to say was, that I had not sent my imagination back to those dark ages when barbarous custom crystallized to equally barbarous law; described in doggerel as

"The good old law, the simple plan
That they should take who have the power,
And they should keep who can."

The introduction of gunpowder sadly shook the pillars of this law, and placed giant and dwarf very much on an equality; perhaps placed the advantage with the dwarf, as composing a smaller billet for a possible bullet. Thus, power gradually departed from the few, "mighty in battle," to the many, who could furnish more "food for powder." No graceful abdication of "rights" transpired; but those "rights" were rudely torn from the few by the many, to whom they appeared intolerable wrongs.

It somehow happens that the owners of "rights" are all too often purblind to the feelings and interests of those over whom those "rights" are exercised. Oppression thus becomes increasingly galling; the oppressed chafe under the yoke; submission ceases to be a virtue; the bond is broken, and the serf is free. Such has been the tendency of the ages; such it is, and such will it be. Those rare instances where revolutions (as we call these readjustments of power) have been accomplished peacefully, we applaud. Havoc, blood, "red ruin," and the breaking up of laws, have been the too frequent concomitants of revolutions; and though all unite to deplore these accessories, the candid student of history admits these sad cataclysms of carnage and blood to have been the waves on which human progress has triumphantly ridden onward.

It is our happiness to live in a day of increasing tendency to right wrongs by just arbitration rather than by appeal to force. There is a world-wide growing disposition to be less indifferent to the rights of others, even among nations. Surely, then, there should be no indifference to the rights of those whom we profess to believe "our nearest and dearest."

That there has been indifference to "woman's rights" is partly due to the fact that women themselves have been indifferent regarding them. In a circle of six ladies, a few evenings since, I put the question, "Would you vote if woman's suffrage were legalized?" Ayes, two; noes, four. So few know or care for the legal disabilities of the sex.

Let me confess at once that my interest in the question is partly selfish. I am anxious to do what I can to insure to my own children all possible legal protection and safeguard. The question naturally arises, why are my daughters to be less qualified than my son to give an intelligent vote, or to hold desirable property? If any father dares to reply, "Oh, my girls are more frivolous!" I would like to ask him to whom the fault is attributable; to them, or to himself?

I have been awaiting Mrs. Nichol's promised continuation of her argument before offering any reply. Meanwhile I have endeavored not to be wholly "slolthful or cowardly." I showed the Wyoming resolutions to numerous friends, all of whom approved thereof. Among them was Senator Hill, of Monterey county, who told me he had drafted a bill and brought it before the Senate, the provisions of which were almost verbatim those of Mrs. Nichol's letter. Debris, however, so choked and overwhelmed legislation of any profitable character that his bill suffered asphyxiation.

Yesterday, having been chairman of the Committee on Platform, etc., in our Republican convention, I unsuccessfully urged the adoption of this resolution, very hastily drawn up:

Believing that the sound underpinning of equal rights and justice to the whole nation is the prime essential to the success of our platform, this convention resolves that it deprecates the existing legal disabilities of half the nation—the women—and recommends that such legislative measures should be adopted as would insure that women should receive the same protection, as women, married or single, that men do, as men; and for any unjust usurpation of her property or natural rights, a married woman shall have the same right to appeal, in her own name alone, to the courts of law and equity for redress that her husband has; and should have identical rights with the father as to the control, custody and earnings of children.

Being delegated to the Sacramento convention, I may possibly find an opportunity of again ventilating the subject. EDW. BERWICK.
Monterey, Cal.

A KNOWING BEGGAR.—Regent street was regularly patrolled by a beggar who asked alms of no passers-by except old ladies. To these he addressed himself thus, "Oh, young lady, have pity on a poor beggar!" He was singularly successful in his appeals. In reply to an inquiry, he explained his success thus: "You see, sir, my plan pleases all the ladies. Some of them believe me, and are pleased with the compliment; others see it's all a sham, and they are tickled by the joke; so you see I get something from all of 'em."

"What did you say the conductor's name was?" "Glass—Mr. Glass." "O, no!" "But it is." "Impossible—it can't be." "And why not, pray?" "Because, sir, Glass is a non-conductor." Deafening applause from the scientific passengers.

Young Folks' Column.

Jenny Ring.

One day my cousin entered the room, with what I thought was a rat; then, looking closer, I saw it was too long and not so round as a rat, and it had a heavy tail; then I thought it was a little bear, but where did he get such a small mite of a bear? How could he bring it in his arms? He put it in my lap. "I have brought you a pet," said he. "It is not a bear or a rat; it is a tamed moongoose."

The moongoose is a native of Africa, and lives on ants and other insects. Its tongue is long, narrow and pointed, covered with a sticky substance. It runs its tongue down into ant hills, and the ants stick to it, and the moongoose draws it back into its mouth like a flash, then running it out again and again until its hunger is satisfied.

Jenny Ring, that was the name of the moongoose, came to live with me. At first, I was a little afraid of her, but as long as she lived she never bit anyone. I think she was the most loving little animal. She would lick your hand like a dog. When you sat down she would jump on your lap, and try, in her dumb way, to show how much she loved you. When you said that was enough, she would crawl up on your shoulder, sit there looking very wise, and trying to understand all that was said.

Jenny loved company. When the door-bell rang, it did not matter whether she was asleep or where she was, she would run and sit on the stairs and wait until the door was opened. If it was anyone she knew, she would roll herself up in a ball, roll down stairs, coming with a thump to the bottom, clucking gleefully. The only noise she made was to cluck like a hen.

One day a lady called that had not heard of my pet, and, when she saw Jenny sitting on the stairs, gave a scream, and said, "There is a rat!" When Jenny followed me down stairs, she jumped on a chair, holding up her skirts, screaming, "Take away that rat, it will bite!" Though I told her Jenny would not do her any harm, she did not believe it.

Another time I heard Jenny Ring making a great noise. I went to see what was the matter, and found Jenny had cornered the cat, and there was a little fight going on. Jenny was coming out the victor, and would have killed poor pussy if I had not come to the rescue. I suppose the cat saw Jenny Ring and thought, "Now, there is a nice large rat," and sprang upon Jenny, to find out, as she did afterward, that she did not have a rat; but something else. After that, all the cats in the neighborhood kept out of the way of Jenny, and only when they were really hungry would they come to the house, and, if Jenny were seen or heard, they would run and hide.

I had a collar and chain made for Jenny, and one day when she was out with me I missed her, and found she had slipped the collar over her head and ran away. On looking, I saw the people going to the other side of the street, and soon guessed the cause, and so I walked back and called Jenny. As soon as she heard me call, she turned around; seeing me, and being frightened at so many strange people, she ran back to me, and was not contented until I took her up in my arms. She acted like a frightened child, but I soon soothed her, and she settled in my arms and went to sleep.

Jenny Ring was very fond of eggs, and would steal them if they were not given her. She always cracked them herself. She would take an egg in her front paws, then back up against the tree, swing her paws front, then back under her hind paws, cracking the egg; then she would suck the egg, and clean it as clear as any person would.

Sometimes when Jenny was naughty, I would say: "Jenny, you are a bad girl; go in the corner until you are good." Then she would go, always with her face to the wall. When she was there a little while she would cluck, but never stir until I said, "Jenny, come out now."

Jenny was very fond of playing tag, and would always catch you, clucking in great glee. Her tricks were like a monkey; she would lie on her back as if dead, and not move a muscle until the piano was played, and then she would start up, pick up a little hat that was made for her, shoulder a stick, and march back and forth on her hind legs. These, and many more tricks would she do.

But Jenny Ring met with a sad fate. She used to love to lie in the sun and bask herself, suddenly rising up before people when disturbed. One day she was startled by one of the strange men of the farm, and seeing what he thought was a rat, he shot at it, and killed poor Jenny Ring. I heard a faint cluck, and knew it was from Jenny. I found her shot and trying to come to me. When she saw me she gave a happy cluck, and, as I took her in my arms, tried to lick my hand, then gave a little cluck, looked up at me, and closed her eyes and fell back dead.

When in the Central Park I saw in one of the cages a little moongoose, and thought I had my Jenny back, but at the call of Jenny it did not answer. The keeper said its name was Tom.—Tribune.

A FACT.—Sister (to Fred, just returned from spring visit to London)—"But tell me, Fred, what was the prettiest thing you saw in bonnets?" Fred—"The prettiest thing I saw in bonnets? Why, the girls who wore them, of course. Bless their dear little hearts!"

Good Health.

Digestion of Food.

Dr. E. M. Hunt, of Metuchen, N. J., in a paper read before the Sanitary Association, thus generalizes the facts of digestion:

"Food should pass into the stomach in a finely divided state. The rapidity with which digestion is performed depends upon the various circumstances. Strong emotion, as anger or grief, will retard it; moderate exercise hastens it, and thus the state of both body and mind influences it. A usual meal is generally digested in a healthy person in from three to five hours. A mixture of food is not especially objectionable, except as by variety it encourages the appetite, and often leads us to consume more than is needful. Animal food is digested more quickly than vegetable, and solid food more speedily than soups. Oily food is more quickly appropriated by the system than muscular fiber, when agreeing with the stomach. Uncooked oil is more digestible than cooked. Cream and butter are the purest of oils. Boiled meats are the most digestible, roasted next, broiled and fried the least so.

Bulk is necessary to digestion. The people of cold climates, who live much on fat meats, mix crude matters—sometimes even sawdust—with them, and thus find them more readily digested. Milk is among the most nutritious and digestible of foods. It is considered constipating, but the chief reason is that it is almost entirely taken up by the system, and no residue left. With the same exertion, we need richer food in cold weather than in warm. Never eat between meals, unless extra exertion or exposure require it, and then select hearty and quickly digestible food.

As a rule, ripe fruits or vegetables are more digestible than green, and green fruit stewed more digestible than when eaten in the raw state. Smoked meats are less digestible than fresh; and of smoked or salted meats, the inner portion is more easily digested than the outer part. The inner part is preserved as much by the saltpeter and the exclusion of the air as by the salting and smoking process, and is in a state more allied to preserved fresh meat. Dried fruits, as prunes, raisins, apples, etc., are unfit to eat unless well cooked, and all unbroken seeds are indigestible. Alcoholic stimuli, or condiments of any kind, are not necessary in healthy conditions of the stomach.

PREVENTING CONSUMPTION.—It is not intended to give a chapter on this dire disease, consumption, believing that a few words on its prevention will be more useful. To insure success, we must begin with the infant subject—the offspring of healthy ancestors. Protect in infancy with soft flannel next the skin, and let it breathe only pure air. In youth teach it that good health is the greatest earthly blessing; without it there can be no enjoyment of life, and with it there can be no complaint of its defects. Teach it that good health, like an estate, may be squandered little by little until it is bankrupt. Teach it that temperance in all things is essential; that there can be no violation of the laws of nature with impunity. Teach it to sit and walk erect, that the chest may be fully expanded. Do not suffer the clothing to be so tight on the chest or body as to interfere in the smallest degree with the expansion of the lungs. To keep the feet dry, use thick, oiled leather, loosely applied. Exercise several hours every day in the open air. Choose virtuous and cheerful companions, with whom singing and laughter may be indulged in; and finally, take time to eat and masticate your food well.

THE REGULATION OF DREAMING.—A French investigator, M. Delaunay, finds from experiments upon himself that the character of his dreaming may be controlled by stimulating various portions of the brain by means of heat. By covering his forehead with a layer of wadding he gets sane, intelligent dreams. He has, also, experimented on modes of lying, which favor the flow of blood to particular parts, increasing their nutrition and functional activity. He has observed that the dreams he has while lying on his back are sensorial, variegated, luxurious. Those experienced when on the right side are mobile, full of exaggeration, absurd, and refer to old matters; but those produced when on the left side are intelligent and reasonable, and relate to recent matters; in these dreams one often speaks. These observations may be correct so far as Mr. Delaunay is concerned, but most people who venture to lie on their back, especially after eating, are apt to find their dreams anything but luxurious.

SCARLET flannel is poisonous to some skins, if used before washing, and as one is not always sure how one may be affected by it, it is safer to give it a scald in hot water with a little soap—not enough to make a strong suds. Let it stand and soak a few minutes, then wring out and treat like other flannels. The smell of new red flannel is not agreeable to many, and for this reason it is desirable to wash it before using. But no washing that we have any knowledge of can keep red flannel looking nice if used for underwear for any length of time, unless worn by people that do not perspire freely. It becomes badly discolored and spotted in most cases. Washing red flannel before making up will "shrink" it as much as is desirable.

Domestic Economy.

TO PICKLE ONIONS.—Take very small onions, and with a sharp knife peel them. Put them into salt and water, and let them stand in the brine six days, stirring them often, and changing the salt and water every two days. See that they are closely covered. Then put the onions into jars, and give them a scald in boiling salt and water. Let them stand till they are cold; then drain them in a sieve, wipe them dry, and stick a clove in the top of each, and put them into wide-mouthed bottles, adding a few blades of mace and a few slices of ginger. Fill up the bottles with the best cider vinegar, and put in the top a large spoonful of salad oil. Cork the bottles tight and seal.

SCALLOPED CAULIFLOWER.—Choose a cauliflower of medium size; boil it 20 minutes. Put into a saucepan one ounce of butter, half a gill of milk and one ounce of bread crumbs. Add cayenne pepper and salt to taste, and stir till the bread has absorbed the milk and butter. Beat an egg and add this to the sauce, but be sure it does not simmer after the egg has been added. Butter a flat tin dish, take off the fine leaves of the cauliflower and place them all round it; break up the flower carefully and lay in the centre, making it as high as possible; pour the sauce over this, sprinkle a few bread crumbs on the top, and bake ten minutes.

CREAMED CABBAGE.—Slice as for cold stew and stew in a covered saucepan till tender; drain it, return to saucepan, add a gill or more of rich cream, one ounce of butter, pepper and salt to taste; let simmer two or three minutes, then serve. Milk may be used by adding a little more butter; or have a deep spider hot, put in the sliced cabbage, pour quickly over it a pint of boiling water, cover close, and cook for 10 minutes, then pour of the water and add half a pint of rich milk. When the milk boils stir in a teaspoonful of flour moistened with a little milk; season, cook a moment, and serve.

RASPBERRY CREAM.—Dissolve three-quarters of an ounce of the best isinglass and five ounces of loaf sugar in three-quarters of a pint of new milk, by boiling it slowly for ten minutes; strain it into a basin and add a pint of rich cream, with the juice of three-quarters of a pint of fresh raspberries, which have been cooked with three ounces of sugar for a quarter of an hour. Strain into the mixture and turn rapidly with an egg beater until it begins to thicken. Dip a mold in cold water, put in the cream, and place on ice until firmly set. Turn out carefully.

CREAM TAPIOCA.—Soak three tablespoonfuls of tapioca in water over night; put the tapioca in a quart of boiling milk and boil half an hour; beat the yolks of four eggs with a cup of sugar, add three tablespoonfuls of prepared cocoanut or freshly-grated cocoanut; stir in and boil 10 minutes longer; pour into a pudding dish; beat the whites of the four eggs to a stiff froth; stir in three tablespoonfuls of sugar; put this over the top, sprinkle cocoanut over it and brown slightly.

PLUM TART.—Stone some plums and stew them for an hour with plenty of sugar and half a tumblerful of water. Make a short paste with the white of one and the yolks of three eggs, an ounce of butter, an ounce of sugar, a pinch of salt, a little water and flour. Roll it out to the thickness of a penny piece, line a mold with it, uniting the joints with white of egg, fill it with rice and bake it. When done, remove the rice, put in the stewed fruit, and serve.

TOMATO CATSUP.—Skin one peck of ripe tomatoes; put into a kettle and boil them, then strain through a sieve. Return to the kettle, take off the scum that rises, then add one teacup of brown sugar, one-third of a teacupful of salt, a dessertspoonful of cloves, the same of cayenne pepper, and cook till quite thick, then add one and a half pints of vinegar. Keep well stirred toward the last.

WHITE MOUNTAIN CAKE.—One cup of sugar, one-half cup of butter, one-half cup of sweet milk, one-half cup of corn starch, one cup of flour, the whites of six eggs, a little vanilla, two teaspoonfuls of baking powder. Bake in layers. Frosting for above: Take the whites of five eggs, twenty tablespoonfuls sifted sugar beaten very light; a little vanilla. Spread between layers and outside of cake.

TOMATO TOAST.—Run a quart of stewed ripe tomatoes through a colander, place in a porcelain stew-pan, season with butter, pepper and salt and sugar to taste; cut slices of bread thin, brown on both sides, butter and lay on a platter, and just as the bell rings for tea on Sunday add a pint of good sweet cream to the stewed tomatoes, and pour them over the toast.

TO CANDY FRUIT.—One pound of white sugar, and as little water as possible; let it boil down, and skim it until it is perfectly clear and thick; have whatever fruit you desire to candy, and dip each piece in the hot syrup, then spread them on a dish and they will soon become hard.

A Dainty Dish.—A dish to be served with cake and berries is made by grating a fresh cocoanut, beating the whites of five eggs to a stiff froth, adding two large spoonfuls of sugar and a pint of thick, sweet cream, and beating this also till it is very light.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. If no new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:
Saturday, August 26, 1882.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Igneous Meteors; Hot Ground and Cold Air, 133. The Weekly; The Railway Problem, 140. What it Costs to Carry Our Wheat to Market; Tornadoes and Their Causes; The Lumber Interest of the United States; Influence of the Moon on Plant Growth, 141.

ILLUSTRATIONS.—Display of Igneous Meteors or Falling Stars, 133.

CORRESPONDENCE.—Canyons for Consumptives, 134.

T. FIELD.—Hop Growing in Washington Territory, 134.

THE STOCK YARD.—Value of Pedigrees, 134.

POULTRY YARD.—Duck Growing, 135.

PATRONS OF HUSBANDRY.—Decision against Railway Discrimination; The Grange and the Youth; Taxation; An Effort for Cheaper Transportation, 136.

AGRICULTURAL NOTES.—From the various counties of California and Nevada, 136-37.

NEWS IN BRIEF.—On Page 137 and other pages.

HORTICULTURE.—The Cannery's combination, 135.

FORESTRY.—Forest Trees of California—No. 10, 135.

HOME CIRCLE.—Song of the Plow, (Poetry); A Receipt in Full, 138. Women and the Law, 139.

YOUNG FOLKS' COLUMN.—Jenny Ring, 139.

GOOD HEALTH.—Digestion of Food; Preventing Consumption; The Regulation of Dreaming, 139.

DOMESTIC ECONOMY.—To Pickle Onions; Scalloped Cauliflower; Creamed Cabbage; Raspberry Cream; Cream Tapioca; Plum Tart; Tomato Catsup; White Mountain Cake; Tomato Toast; To Candy Fruit; A Dainty Dish, 139.

QUERIES AND REPLIES.—Evergreen Millet; The Linnet Pest; Rye Grass Seed; Keeping Pits; Cottonwood Posts, 140.

ENTOMOLOGICAL.—Entomology at the University; A Cypress Hedge Pest; Nevada Grasshoppers; Entomology at Sacramento, 140.

Business Announcements.

Feed Mills, Etc., Hawley Bros., S. F.
Burgies and Carriages, David N. Hawley, S. F.
Steel Bale Ties, Jackson & Truman, S. F.
Grangers' Business Association, San Francisco.
Percheron Horses, C. W. Dyer, Ham, Wayne, Ill.
To Vine Growers, C. K., Hanover, Germany.

The Week.

The weather-wise are beginning to discern signs of approaching rains. Certainly we are drifting again toward the season of green fields and dustless roadways, and we are glad of it. The failure of the April rains which we should have had brought us early into the dry season, and it seems long indeed since the air was washed. Dwellers in the interior say there is something in the atmosphere which betokens a change of behavior. Certainly the signs of autumn are present, for already there has been quite a severe frost on the lowlands, and some injury has been done by it. In our "Agricultural Notes" this week there is an item of a frost in Sonoma county which cut off a corn crop in Green valley. There was also on the night of Saturday, Aug. 19th, on the lower division of Roberts Island, frost enough to nip cucumber and tomato vines. We presume similar deeds were done in other low places. The raisin makers are no doubt considerably anxious, for the grape crop is very late in ripening, and if the rains come early there may be considerable losses. We trust, however, that the season may prove kind to the grape interest, for it will bring much money this year.

Arrangements for the fairs have been proceeding rapidly, and indicate the expectation of unusually good displays by the managers. New pavilions, new tracks, new cattle-sheds—we do not remember a year when so much lumber has been used or so much ground disturbed in fair preparations as there has been this year.

The Railway Problem.

EDITORS PRESS:—In this day of journalistic servility and subservience to railroad interests, it is refreshing to find an article like that in the PACIFIC RURAL PRESS of August 5th, headed "The Transportation Problem." Such articles prove that there is virtue left in Israel; that the salt of newspaper independence, though almost without savor, has not become entirely worthless. We would say, "A little more grape, Captain Bragg." Handle the subject without gloves. This octopus is relentless, shows no mercy, and should have none granted. Insidiously it has fastened its wide-spreading tentacles around every interest, drawing them down, down into its insatiable maw; feasting until its bloated carcass overshadows the continent. Heroic doses of Anglo-Saxon are now necessary to rouse the people from their lethargy; to awaken them to an understanding of their position of absolute servitude. Their bonds are drawn tighter and tighter; their shackles more firmly riveted year after year. Occasional outbursts of popular sentiment have now and then caused the railroads to ponder for a moment, while they sopped Cerberus with Railroad Commissioners and like fancies, which invariably prove more detrimental than advantageous to the people.

California is not exceptional in this matter of Railroad Commissioners' worthlessness. Have not the farmers of this great sucker State found, to their sorrow and mortification, that Railroad Commissioners are one thing in proposition and another in fulfillment. Had these Commissioners of California and Illinois been cut from the same cloth they could not have been more alike. What you have stated applies directly to the do-littles or do-bads of Illinois.

Notoriously despotic and arbitrary as are railroads on the Pacific slope, their oppression is no severer than is felt by producers East, as their task masters—railroad managers—carry their purposes by using a little more taffy, or by legislative hocuspousing, which sugar-coats the dose the farmers are compelled to swallow. Whether this overshadowing railroad power and influence is to be controlled by the people, until the railroads demand and exact the epidemic entire, followed by a free application of salt to the quivering flesh, is to be seen.—G. C. FRANKSON, Danville, Illinois.

We are sorry for Illinois. We supposed that our own railway commission stood alone in its solitary grandeur as an exemplar of do-nothing-ism. We have read much of railway commissions and of the way in which they revise freight rates whenever discrimination or injustice is done to any person or product—in fact, how they put forth schedules of their own, and the railway managers conform to them or are arraigned before the courts. How sometimes the commissioners err in their rate tables and the people cry aloud. How the commissioners then right the wrong, the railways obey, and all is serene again. We have read that some such events as these transpire in Great Britain, that there is no dispute at all about the proposition that corporations are amenable to laws, and that the rights of the people against extortion and injury by carriage companies are undisputed. We have read also that Canada is discussing the establishment of a railway commission because of the good results following the establishment of the English commission; also that several Eastern States are looking toward commissions as an escape from railway evils.

But Illinois is as badly off as California. We are sorry again because, perhaps, Illinois is not as near an election as California is, and, therefore, has not the chance for new men, but must struggle along with her useless commission for an indefinite period longer. California will have a new commission, and it is the voters' business just now to see to it that it is a good commission. The old names will be washed off the office windows and new ones put on. How fine it would be if there should be put up names of men who would bend their energies to the needs of the hour, spend day after day wrestling with the vexing details presented, and brushing away the sophistries and emoluments with which the railways smother consciences, until they stand forth at length in the admiration of the people as the friends who have maintained their rights and put a stop to the evils which oppress them.

Our dying commission seems to have been unable to find anything to do; that is, the majority could not see anything worth doing. And yet whole districts of the State are suffering from the most violent discriminations. See what a mass of work for a commission a Fresno county correspondent of the Chronicle crowds into a single paragraph. He says that the railroad hauls lumber from Madera to Fresno, a distance of 25 miles, for \$10 a carload, while between the same points the rate for transporting barley is \$30. The accommodating spirit of the railroad company in hauling lumber at the low rate of \$10 per car is apparent, not real. They do so simply because if they charged more lumber would be brought down from the mountains in teams. They are now obliged to make their charges low enough to keep out the mill men, who can afford to sell lumber in Fresno as low as \$25 per thousand feet. Another illustration of the railroad principle of ascertaining the value of freight, and then charging all it can bear: The rate, for wheat from Fresno to San Francisco is \$60 a carload; but for flaxseed, a class of freight resembling wheat in every respect excepting value, the charge is \$200 a carload. The tariff on wool from Fresno to San Francisco is \$100 a carload, while cattle are transported for \$40 a carload. The cattle they haul cheaply, because if they did not the owners would drive them to the city; but the wool can't walk, so it has to pay a good round freight rate. These are only specimen instances, but they serve to illustrate the grab-all game of the railroad monopoly, and the determination of its managers to take the lion's share in every enterprise.

The people would like to see at least an effort made to correct these and many other evils, and if they are careful at the coming election, they may get someone who will not devote himself to idleness and silence.

A FIRE at Red Bluff destroyed property to the amount of \$500,000.

QUERIES AND REPLIES.

Evergreen Millet.

EDITORS PRESS:—Have you seen a circular which is being distributed among farmers about "Evergreen Millet," which is said to be gopher and flood proof, and of which half a pound of seed will produce a value of \$20 in six months? Please tell us something about it?—G. W. PROCTOR, San Miguel, Cal.

We have not seen the circular, and, if we had, we could not be sure what "Evergreen Millet" is unless the botanical name were given also. The use of fancy names for plants makes their identity a matter of much doubt. We suspect that evergreen millet is *Sorghum Halapense*, and, if so, it is a good thing in localities suited to it. Other names for it are "Green Valley grass," "Mean's grass," "Johnson grass," and, under these titles, it has come into prominence in the Southern States. In the upper San Joaquin valley it makes a wonderful growth. In last week's PRESS, under Tulare county, there is a paragraph about the growth of "Arabian grass." Meeting Mr. Paige on the street the other day, he told us the plant was really *Sorghum Halapense*.

Much harm is done by extravagant advertising of plants. Sometimes a good plant comes to be denounced as a humbug because it is unsuited to the conditions under which it is essayed to grow it. The sellers of the seeds are to blame for this, for, to make sales, they publish accounts of plant growth as to be expected everywhere, while the fact is that it will be a failure in an unfavorable soil or climate. Seeds and roots of *Sorghum Halapense* should not be high priced. There is abundance of them in the country. The plant has, as we have said, a high value in some parts, and each one should try a small patch at first to see whether his conditions are right for its growth.

The Linnet Pest.

EDITORS PRESS:—Will not some of your readers tell us the best way to destroy this, the greatest of pests to the fruit raisers? Some will say, spare the birds. I say, destroy those birds which destroy the product of our labor. I have yet to learn that the linnet and some other kinds of fruit-eating birds do any good, but a great deal of harm. They are very plenty in this part of the State. I believe they have taken one-third of my apricot crop. No kind of fruit is free from their attacks—not even the apple, if they can get no better. I have destroyed a great many by putting out ripe watermelon, with a little pulverized strychnine sprinkled on it. They will not eat it, if they can get other fruit they like better. I think the best time to destroy them is before fruit ripens or after fruit is gone.—WM. F. HUNT, Santa Barbara.

Various ways have been adopted for reducing the linnet flocks. The most common remedy is strychnine, put out in different baits. The trouble with using poison is that one kills all birds, both the friendly and the injurious. Mr. Finney, of Ventura, sprinkles the poison on corn meal and puts that out in the orchard. Mr. Brand, of Pomona, puts the strychnine in pieces of apple and sticks them on the ends of the limbs of the trees. In Pasadena, they have gone out by night, with lanterns, and beaten down the birds, which fly at the light. Poisoned water has been used effectively in dry weather. Mr. Jessup, of Hayward, advocates the use of the shot-gun. He has a \$10, double-barrel gun, No. 30 caliber, uses a thimbleful of good powder and No. 10 shot. He has killed as many as 500 linnets in two days. He has kept his orchard clear of linnets with six dollars' worth of ammunition per year. The advantage of this plan is that one kills linnets and not other birds.

Rye Grass Seed.

EDITORS PRESS:—We have read the paragraph in the RURAL of August 12th, speaking of the rye grass for dairy use. You also spoke of it, and published Mr. Sneath's instructions in the RURAL PRESS of April, 1881. These instructions I, and some of my neighbors, carried out to the letter without any return, not as much as one straw coming. We would be pleased to be informed where we can get the pure seed. That which we sowed was the Australian rye grass. If there is any difference please tell us, and the price. I paid 40 cents per lb. for mine.—J. W. KELLY, Sebastopol, Sonoma Co., Cal.

Poor seed is a vexation to the soul and a grievous affliction to the purse. A man who will deliberately sell poor seed should be drummed out of any respectable community. No doubt much poor seed is sold, as it is bought with the presumption on the part of the seller that it is good, but the conscientious seedsman should have better evidence. Before sending out any seed he should assure himself of its germinating power, and that can be easily done. Those who have good rye grass seed can write to our correspondent. We cannot assume the responsibility of vouching for any man's seed—that is a business proposition which the dealers must carry themselves. Mr. Sneath used such large quantities of rye grass seed that he imported it himself from New Zealand.

Keeping Pits.

EDITORS PRESS:—I have not yet seen an answer to "How to Keep Pits." Wright's plan is to open a manure heap, place a cloth or sack on it, put the pits on the sack, cover with two inches of loam, then six or more inches of manure. Keep watch to see when they are sprouted enough to plant. Who knows better?—G. W. P., San Luis Obispo Co.

Mr. Gillet gave an essay on this subject in last week's PRESS. There is room for further discussion, if anyone knows a better way.

Cottonwood Posts.

EDITORS PRESS:—Will you tell us if there is anything that will make cottonwood posts "last a lifetime?" Will boiled oil and pulverized charcoal preserve the wood, as I have seen time after time in the papers? We have nothing for posts near here. Please give us a recipe that is known to be good and practicable?—G. W. P., San Miguel, Cal.

Who will speak from experience on this point?

ENTOMOLOGICAL.

Entomology at the University.

The faculty of the University has decided that instruction in elementary and economic entomology shall henceforth be given in the College of Agriculture. Prof. Dwinelle has had a volunteer class for the last year or two, and the placing of the subject in the regular course shows a fitting regard for one of the greatest problems in our horticulture, and should attract the attention of young men who desire to prepare themselves for the insect warfare. We are sure that the instruction will be of the most practical character, and will have direct bearing upon the correct classification of pests, the determination of their life history, and the discovery of the best way to destroy or foster them, according as their deeds are injurious or beneficial.

A Cypress Hedge Pest.

The cypress hedges are the pride of many California gardens, and an insect despoiling them will be viewed as a common foe. The Monterey Democrat says: An insect is assailing cypress trees and devouring their foliage. It looks like incrustations of snow, and speedily reduces the trees to the condition of whitened sepulchers. Dr. Abbott has sent specimens to a noted entomologist in the East, that he may determine the quality of the insect. Meantime, in advance of his report, Bob Porter says that applications of wood ashes sprinkled on the trees, and followed by sprays of water, effectually remove the pests. Wood ashes are mild applications of lye.

Nevada Grasshoppers.

According to the Reno Journal, grasshoppers are much more plentiful and annoying in the valley than many people imagine. For some weeks past the pests have been a delightful food for those yards where poultry is kept. There is some damage being done on the south side of the river through the ravages of the hoppers. One farmer there is prematurely cutting his second crop of alfalfa before it is fairly ripened. It is a pity that a remedy for the pests cannot be found.

Entomology at Sacramento.

Matthew Cooke, State Executive Horticultural Officer, writes that he cannot find time to make an exhibit at the State fair this year, but that he will be in his office at the Pioneer Box Factory, from 7 to 12 A. M. each day, during the fair, and will be pleased to impart any information he has on the insect question to any one who may favor him with a call. He has a room devoted to insect studies, of which we hope to have a description ere long.

An Imbedded Insect.

A quartz crystal was some years since taken from the Aetna mine, El Dorado county, 150 ft. below the surface, in the center of which is imbedded a group of black gnats, with their wings spread as if in actual flight. The crystal is as clear and transparent as glass, and there can be no mistaking the character of the insect imbedded in it. The specimen was cubical in form, with its faces about four inches by four in size.

TREES AND DRAINAGE.—Says the Lefell Mechanical News: "It would now appear that trees growing near drains carry off the sewerage water. A gentleman whose cess-drain was constructed just like his neighbor's, and in the same kind of soil, had found it unnecessary to clean it out, while the others had to be cleaned out frequently. An examination showed that three large trees, whose roots had penetrated into the vicinity of his second, or waste cess-pool, were clearly the channels through which the waste all escaped. Whether it was changed into plant food, as is likely, or was exhaled through the leaves—in either case it was disposed of with equal safety." Similar experience has been noted in this State. A large eucalyptus growing beside a cess-pool has exhausted the water as fast as it has been run out from the house. Upon opening the cess-pool, its sides were found to be covered with a network of interlacing roots.

ORGANIC MATTER IN WATER.—Dr. Heish, being informed by a lemonade manufacturer that he had suddenly found it impossible to make an article that would keep, experimented upon the water used, and found that a few grains of pure sugar would cause it to be filled in a few hours with small spherical nucleated cells. It turned out that the water had been slightly contaminated with sewage. A minute quantity of sewage water to a sugar solution soon brought forth similar cells. Filtration through the finest paper would not remove the germs, nor would boiling for half an hour destroy the vitality. Filtration through animal charcoal, however, removed them.

JAPANESE SEEDS.—We have received quite a large number of applications from our subscribers for the Japanese seeds noticed last week. We shall wait a week or two until applications have a chance to arrive from a distance, and then will send out the packages.

THE members of the Leigh Smith Arctic expedition have all been found in safety, but their vessel, the *Eira*, was sunk by the ice August 21, 1881.

What it Costs to Carry Our Wheat to Market.

Last week we had a paragraph concerning a proposition to build ships to carry our own wheat to market, thus distributing among our own people the immense freight money which now goes to foreign ship owners. The subject is one of the greatest importance. One is not apt to realize, at first, what an amount of money we pay for ocean freight on wheat alone, and we can best impress the facts upon our readers by presenting a table carefully prepared by the S. F. Journal of Commerce, enumerating the rates paid the last wheat year, the number of vessels accepting, and the amount of money earned by each and by all.

The wheat fleet of 1881-82 was the greatest ever known in the history of the State. It consisted of 550 vessels carrying wheat and flour, and nine carrying flour alone. There were at one period of the year too few vessels for the wheat that came to hand, and freights were forced up to unusual figures, reaching, in one instance, \$4 10d per ton. This was the climax. But the freight market ruled high most of the year. Towards the close, from the threatened railroad competition and other causes, it declined. The lowest rate of the year was \$2 to Australia. The rate that the largest number of vessels was paid was \$3 10s for 54. The next largest was \$3 5s, which the shippers on 53 vessels paid. By far the larger portion of vessels that cleared early in the year paid over \$3. The following shows the rates which were paid by the largest number of vessels:

Vessels.	Rate.
28.....	\$4 0s 0d
52.....	3 17s 6d
38.....	3 15s 0d
48.....	3 12s 6d
54.....	3 10s 0d
28.....	3 7s 6d
40.....	3 2s 6d
34.....	3 0s 0d

The following table gives the freight business in californians:

Rate.	Ves-	Ton-	Wheat	Freight
10s 0d	1	1	1	1
4 5s 0d	1	1	1	1
4 6s 0d	1	1	1	1
4 8s 0d	1	1	1	1
4 4s 0d	1	1	1	1
4 2s 0d	1	1	1	1
4 1s 0d	1	1	1	1
4 0s 0d	1	1	1	1
3 19s 0d	1	1	1	1
3 18s 0d	1	1	1	1
3 17s 0d	1	1	1	1
3 16s 0d	1	1	1	1
3 15s 0d	1	1	1	1
3 14s 0d	1	1	1	1
3 13s 0d	1	1	1	1
3 12s 0d	1	1	1	1
3 11s 0d	1	1	1	1
3 10s 0d	1	1	1	1
3 9s 0d	1	1	1	1
3 8s 0d	1	1	1	1
3 7s 0d	1	1	1	1
3 6s 0d	1	1	1	1
3 5s 0d	1	1	1	1
3 4s 0d	1	1	1	1
3 3s 0d	1	1	1	1
3 2s 0d	1	1	1	1
3 1s 0d	1	1	1	1
3 0s 0d	1	1	1	1
No rate.	1	1	1	1
Owner's acc't	1	1	1	1

Total.....550 710,369 22,278,285 \$3,248,237 7s 1d
Add'l for no rate and owner's acc't.....53,611 18s 1d

Grand total.....£3,301,849 5s 1d

The total value in dollars of the freights paid on wheat, not including flour, has been, for the last year, \$16,069,789.86 nearly 4-5 over sixteen millions of dollars; enough to build on this coast 320 thousand-ton ships, or, if needed in war vessels, as many ironclads as of late bombarded Alexandria. No greater argument than this could be offered in favor of ship-building on the Pacific coast, especially when it is known that most of the vessels were English, and that their gains go to build up England's power and wealth, and leave America—California and San Francisco especially, poor. The number of long tons of wheat carried was 980,711, and the average rate per ton £3 6s 10 4-5d,

nearly, or in American coin, \$16.27 84½-100, nearly, or about 81½ cents per cental. If most of the wheat could be sold near at hand, this would be saved too, and add another element of industrial and commercial strength to us.

Tornadoes and their Causes.

The immunity from tornadoes which we enjoy in California is often a subject for gratulation. We read, with grief and sympathy, the accounts of the destructive winds which lay waste cities and farms in the great central areas of the country and bring many people to untimely graves. Why are we free from these visitations? It is undoubtedly because of the protection afforded our coast by the lofty mountain ranges to the east of us and forming the western boundary of the Mississippi valley. As the Sierras stop the clouds of vapor and cause the precipitation of rain and snow, which gives us a well-watered region, so the Rocky mountains hedge in the air currents and free us from the cyclone and the tornado. This fact clearly appears from an essay on "Tornadoes and their Causes," which T. B. Maury has written for the September number of the *North American Review*. We shall abstract enough of Mr. Maury's statement to show the reasons why the great Mississippi valley is subject to the tornado, and by inference, our freedom from its ruin.

The Mississippi valley is a grand continental highway in summer for the vapor-laden trade winds which, entering the Gulf of Mexico, are arrested in their westward movement, and must find an outlet to the northward. Moreover, the anti-trades, which form the "equatorial" current, are simultaneously pressing northward, especially at that season, as an upper atmospheric force, and after leaving the tropics stream away to the middle latitudes with a velocity which, if estimated by the observed velocity of the cirrus, cirro-stratus, and cirro-cumulus clouds, reaches, at times, 150 miles per hour. As the Rev. Clement Ley, the English meteorologist, has observed, it is nothing uncommon to see these "upper-current clouds" moving from the southwest at the rate of 100 miles an hour. Considering, then, the geographical relation of the Mississippi valley to the great equatorial current which glides over it, gradually descending toward the surface of the earth, and which is underdriven in summer by the trade-wind current diverted northward from the Gulf, it is not remarkable that our "central West," lying also within reach of the polar winds from the Rocky mountain plateaus, should be the scene of the most terrific aerial disturbances witnessed on any part of the globe. That the existence of an upper current from the tropics, flowing in a northeasterly direction in summer over the Mississippi valley, is not merely hypothetical, a glance at the wind observations made by the U. S. Signal Service at Pike's peak, more than 14,000 feet above sea level, will show. The result of these observations for 1874, "agrees," as Dr. Woeikof states, "with the generally entertained opinion as to the prevailing direction of the upper atmospheric current from the west-southwest, in the middle and northern latitudes." For the five years, 1875 to 1879, the prevailing winds at this high mountain station, as given in the Signal Service annual reports, were both in spring and summer from the southwest, with a slight deviation in the summer or 1876; and during May and June (the chief tornado months) of 1880 and 1881, the preponderance of winds on the Peak, as the Signal Service monthly means show, was in favor of the southwest. Were this lofty look-out station in Missouri, instead of in Colorado, the indications it affords of the sweep of the upper (or "return") trade current would in all probability be still more conclusive.

This vast atmospheric movement, the intensity of which augments as the summer solstice approaches, has apparently much to do with the origination of tornadoes. Being an outflow of ascended air from the equatorial calm belt, it advances northward with the vernal advance of the "thermal equator," which, by June, has followed the sun from "the line," nearly, if not quite, up to the lower Florida parallels. This movement may not be a steady "Gulf stream in the air," as some have regarded it, but is rather to be viewed as a sustained series of pulsations from the medial line (the movable "thermal equator"), toward which the service winds blow, and over which the air they bring must ascend and be massed, and, as it moves northward through high regions of the atmosphere, continually descends towards the earth's surface.

A FINE FRUIT FARM.—We stopped a few moments one day last week at the fruit ranch and nursery of W. H. Pepper, near Petaluma. Mr. Pepper has a beautiful fruit farm. Approaching along the county road, one sees the orchard covering a warm hillside, and protected at the top by a thick windbreak of forest trees. It is just the place we would select for a fine growth of orchard, and such was doubtless Mr. Pepper's idea of it many years ago. The grounds about his house are tastefully laid out, and planted with handsome ornamental trees, and the premises seem neatly kept in every way. Mr. Pepper's business is now both "fruit" and "nursery," and his trade in the latter has already exhausted his stock of some kinds of fruit trees.

The Lumber Interest of the United States.

We have just received from Prof. C. S. Sargent, special agent of the U. S. Census Office for the preparation of a report on the forests and lumber interests of the country, an advance copy of his table setting forth the results of investigation of the lumbering industry. The table shows the magnitude of the business. The aggregate value of the products, \$233,367,729 in a single year, is startling to those unacquainted with the subject. It is shown that the aggregate amount of capital invested in lumbering is \$181,186,122, and that something like 150,000 men are employed. The following table, which we prepare from the fuller data presented by Prof. Sargent, gives the amount of lumber produced and the value thereof, and shows the comparative rank of each State in the business:

STATES AND TERRITORIES.	Number of Establishments.	Feet of lumber (board measure).	Total value of all products.	Rank according to value of products.
United States.....	25,708	18,091,356,000	\$233,367,729	
Alabama.....	354	251,851,000	2,649,634	23
Arizona.....	13	10,715,000	215,918	44
Arkansas.....	319	172,503,000	1,793,848	29
California.....	251	304,795,000	4,428,950	13
Colorado.....	96	63,792,000	1,051,295	34
Connecticut.....	300	64,427,000	1,076,455	33
Dakota.....	36	29,280,000	435,792	38
Delaware.....	86	31,572,000	411,090	39
Dis. of Columbia.....	1	4,000,000	50,000	46
Florida.....	135	247,627,000	3,060,291	21
Georgia.....	655	451,788,000	4,875,310	12
Idaho.....	48	18,204,000	448,635	37
Illinois.....	649	334,244,000	5,063,437	11
Indiana.....	2,022	915,943,000	14,260,830	5
Iowa.....	328	412,578,000	6,185,628	9
Kansas.....	146	45,281,000	682,097	35
Kentucky.....	670	308,084,000	4,064,361	14
Louisiana.....	175	138,472,000	1,754,640	30
Maine.....	845	566,055,000	7,933,868	7
Maryland.....	369	123,330,000	1,813,332	25
Massachusetts.....	606	205,244,000	3,120,184	20
Michigan.....	1,649	4,172,572,000	52,449,925	1
Minnesota.....	234	563,974,000	7,369,038	8
Mississippi.....	295	138,747,000	1,920,335	27
Missouri.....	881	399,744,000	5,265,617	10
Montana.....	36	21,420,000	627,095	36
Nebraska.....	38	13,885,000	265,062	41
Nevada.....	9	21,545,000	243,200	42
New Hampshire.....	680	292,267,000	3,842,012	15
New Jersey.....	284	109,679,000	1,827,640	32
New Mexico.....	26	11,195,000	173,930	45
New York.....	2,822	1,184,220,000	14,356,910	4
North Carolina.....	776	241,829,000	2,672,796	22
Ohio.....	2,352	910,832,000	13,864,400	6
Oregon.....	228	177,171,000	2,036,463	26
Pennsylvania.....	2,827	1,733,844,000	22,457,359	2
Rhode Island.....	49	8,469,000	240,579	43
South Carolina.....	420	185,772,000	2,031,507	25
Tennessee.....	755	302,673,000	3,744,905	16
Texas.....	324	328,968,000	3,673,449	17
Utah.....	107	25,769,000	375,164	40
Vermont.....	908	322,942,000	3,158,816	19
Virginia.....	997	315,939,000	3,434,103	18
Washington.....	37	160,176,000	1,734,742	31
West Virginia.....	472	180,112,000	2,431,857	24
Wisconsin.....	704	1,542,021,000	17,952,347	3
Wyoming.....	7	2,961,000	40,990	47

In addition to the lumber noted in the table the following minor products are noted:

	Number of laths.	Number of Shingles.	Number of Staves.
United States.....	1,761,788,000	5,555,046,000	1,248,226,000
California.....	2,420,000	138,718,000	2,061,000
Oregon.....	18,245,000	5,040,000	
Washington Ter.....	6,550,000	3,610,000	23,666,000
Nevada.....		485,000	
Arizona.....	150,000	1,760,000	30,000

We have selected only the Pacific States and Territories in the above enumeration of minor products.

The final publication of the Census Office on the lumber interest will be a grand volume. It will contain a map of each State and Territory, colored to show the area occupied by each of the leading forest trees, with statistics of the amount of each still standing, and will probably be the most noted publication on forest resources, etc., ever made in the world.

THE DURABILITY OF WOOD.—Charred wood, or charcoal, is almost indestructible, whether exposed to the air, buried in the ground or placed under water. Wood, in its natural state, well seasoned and kept dry, may be eaten up by worms; if wet and dry, alternately, it rots; if kept wet all the time it lasts a very long time, though how long nobody knows. One of the piles of a bridge built across the river Danube by the Emperor Trajan, when taken up, in recent times, was found to be petrified to the depth of three-fourths of an inch; but the rest of the wood was little different from its ordinary state, though it had been driven more than 16 centuries. The oldest wood bearing the marks of human labor is said to have been found in some of the tombs at Thebes, and comprised two wooden statues, a little larger than life. The oldest timber still at is probably a ship now sailing from Holland that was built in 1563, when the Prince of Orange was fighting Philip II., of Spain. In digging away the foundation of old Savoy palace, which was built nearly 700 years ago, the whole of the piles, consisting of oaks, elms, beech and chestnut, were found in a state of perfect soundness, as was also the planking which covered the pile heads.

THERE are nine cases of leprosy in the San Francisco pest-house, but no small-pox.

Influence of the Moon on Plant Growth.

From the interesting work of Prof. J. P. Lesley (State Geologist of Pennsylvania), on "Man's Origin," we extract the following: "In one or two instances, modern experimental science has actually reinforced the ancient superstitious observance of the moon. It is now well understood that young plants, like human babies, must have plenty of rest. If they shoot up from the seed in the waning of the moon, they enjoy the repose of long, dark nights; if in the growing moon, their young life, overstimulated, perishes or suffers deterioration more or less. The latest observations make it certain that the sun heat reflected from the moon's face is sufficient to dispel clouds, and it must modify, therefore, notably the climate of the kitchen garden. * * These are merely instances showing how the instinct of man may sometimes anticipate the final deductions of his reasoning faculties; and we are thus taught to despise nothing, not even the follies of superstition."

Perhaps the ultimately "final deductions" of scientific men may give reasons for the popular superstitions of farmers, who regulate the planting and felling of timber, their pruning and grafting, by the phases of the moon, whilst their wives fear that all their yarn would untwist and all their soap go back unless they consulted the almanac.

Again, the view adopted by the older botanists, that light is either without effect on germination, or has an adverse effect, fails to harmonize with some results lately arrived at by Herr Stebler, in the case of many seeds of agricultural importance, such as varieties of meadow grass (*Poa*), the germination of which he finds to be favored considerably more by light than by heat. Thus, with two groups of 400 seeds each of *Poa memorialis*, in one experiment there germinated in light, 62%, and in darkness, 3%. Similarly with *Poa pratensis*, in light, 59%; in darkness, 7%, and so on. Sunlight being a very variable force, difficult of determination, experiments were further made with gaslight, and with the same result—that light favors the germination of certain seeds, especially grasses, and that these germinate either not at all, or very scantily, in darkness. The fact was verified by Herr Stebler in quite a series of seeds. *Festuca*, *Cynosurus*, *Alopecurus*, etc. In the case of seeds that germinate quickly and easily, such as clover, beans or peas, he thinks light is probably not advantageous.

Golden Gate Fair.

Preparations for the Golden Gate fair at the grounds, at Shell Mound, near Oakland, are progressing, and everything offers an unusually good display of livestock of all kinds, and a racing event of importance. The Golden Gate has usually been successful with its stock shows, and breeders find that they meet an appreciative audience, for the suburban residents have an eye for what is fine. The accommodations at the fair grounds are fine, and they are easily accessible by the Berkeley trains, which run alongside. We expect that the fair will be a success in all respects. Next week we shall have more to say of the fair, which will open Monday, Sept. 4th.

AMERICAN GAME BIRD SHOOTING.—The Orange Judd Co., of New York, have just published a book, by John Mortimer Murphy, with the above title. Mr. Murphy has devoted a large portion of his life to the pursuit of all game indigenous to Canada and the United States, whether fur, fin or feather. He spent seven years in wandering through the wilds of the West and Southwest, studying their flora and fauna, and seeking the stirring adventures which are so congenial to his nature. He has hunted and fished with some of the leading sportsmen of this country and British America, and frequently accompanied Indian tribes on their hunting and fishing expeditions, so that he is thoroughly acquainted with the various methods employed by the red men for capturing game. His work on game birds is written entirely from a sportsman's standpoint, being intended to not only describe their habits and habits, but also the various methods employed in this country and Europe for bagging them, the best dogs for field and covert work, the proper charges for guns, the devices used for luring turkeys and wild fowl within range, camp cooking, life in the wilderness, the pains and pleasures of a sportsman's existence, the unique characters, half hunter and half stock raiser or farmer to be met with on the borders of civilization, and the majestic and wonderful scenery of the far West.

ALFALFA WITHOUT IRRIGATION.—Dr. Crumpton, in his large front yard in Lakeport, has been very successful in cultivating alfalfa in drills for several years. He clears the ground of weeds and keeps the soil pulverized between the rows, which are a foot or more apart. By this means the growth is rank and rapid, and three good crops are harvested before the drying-up period in June or July. The Doctor's residence is on the hill, at an elevation of some 75 to 100 ft. above the town, giving a fine view of Clear lake and the mountain and other beautiful surrounding features.

Lands for Sale and to Let.

Fruit and Homestead Lands FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER,
Vacaville, Solano, Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$80 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE,
410 Montgomery St.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$6 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

FOR SALE.

A farm of 418 acres, 8 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennet, Martinez, and the proprietor on the place

WM. C. PRINCE.



On 50 large size CARDS. Remember, Souvenir, Handkerchief, &c. No 2 alike, 10c, 14 pks. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine gilt level Edge Cards, turned corner, 10c.

Your Name in this lettering

Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

To Farmers, Miners, Wine-Makers AND OTHERS.

PUMPS

For Wine, Mines, Ditches, Ships, Irrigation, Wells, Tanks, Etc. Hand, Horse, Steam or Wind Power. Best Pump in use.

A SMALL INVOICE FOR SALE CHEAP TO CLOSE A CONSIGNMENT.

By W. S. RAYNOR,

At Linforth, Rice & Co.'s, Hardware Dealers,
323 Market St., San Francisco



FOR THE BEST IMPROVED
ARTIFICIAL LIMBS
ADDRESS
MENZO SPRING,
9 Geary St.,
SAN FRANCISCO, Cal.
OFFICE 5, 1st St.

JOHN BERGSTROM, ORGAN BUILDER.

29th. and Mission Sts.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorsey, 527 Commercial St., S. F.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The warehouses, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Improved Granger Gang. Side Hill Gang. Improved Sod and Tule Plow. Double Deep Tiller. Fresno Ditching and Grading Plow. Single Plows. Cultivators. Gem Seed Sowers. Hill's Improved Headers. Wood and Iron Harrows, etc.

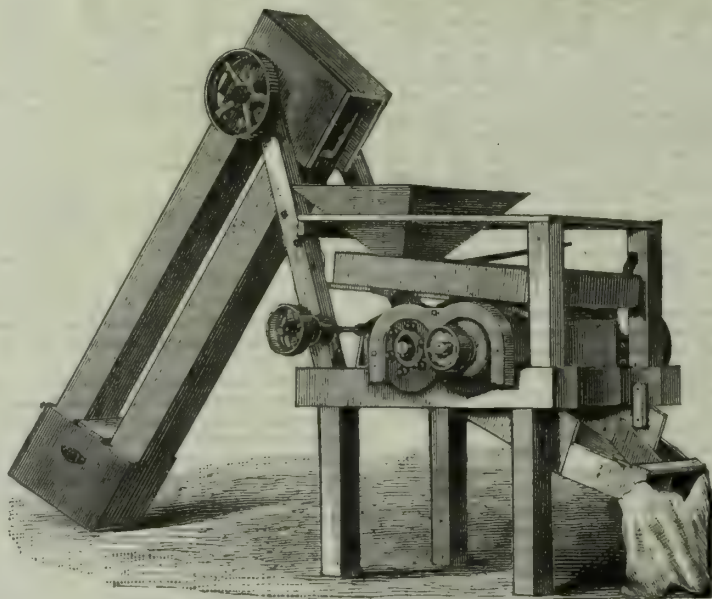
Remember that Water-Communication insures Cheap Freight. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland trail passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

Nathaniel Curry & Bro..

113 Sansome Street, San Francisco,



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS, PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit.

A liberal discount to the trade.

Price List on Application

Educational.

The Harmon Seminary, BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

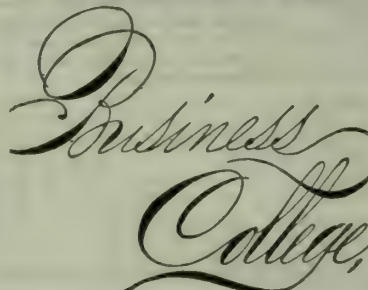
The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one half the usual rate. Excellent board, \$10 per month. Courses of Study: Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers' Course, Preparatory Course, Telegraph, Languages. The College Journal, containing full information, will be sent post paid to any address. F. R. CLARK, Principal.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 82 inches.

FOR SALE BY JOHN H. WHEELER,

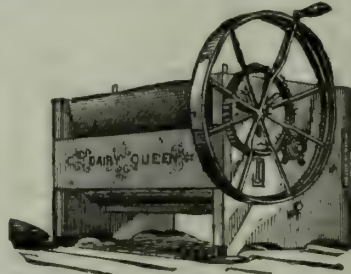
111 Leidesdorff st., S. F.

P. S. A sample can be seen at this office.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.



This Churn is the most perfect machine of its class ever made; the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC Churn ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Or Jas. L. Haley, Janesville, Lassen Co., Cal.,

Benicia Agricultural Works, Benicia, Cal.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewey & Co., at published rates.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 5 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

E. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

L. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors, STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

GILES H. GRAY. **JAMES HAVEN.**
GRAY & HAVEN,
Attorneys and Counsellors-at-Law,
30 California St., SAN FRANCISCO

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. F. MERRILL, Florin, Sacramento Co., Cal.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We can supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881 PETER SAXE & HOMER P. SAXE.
PETER SAXE & SON

Oakland Poultry Yards.

[Cor. 17th and Castro Sts., Oakland, Cal.]



GEORGE B. BAYLEY.

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEEBRIGHT or EUREKA.

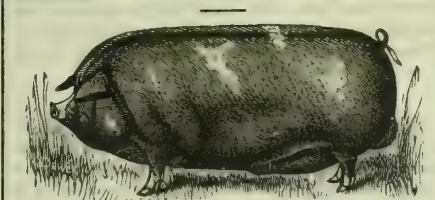
AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$80.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Boss, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls,

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2½ Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address **G. G. WICKSON**, 319 Market St., S. F.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address **PACIFIC RURAL PRESS** of fce, San Francisco. January, 1882.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Hens and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebouncing Hammer. **Choke Bored Like the Famous Parker Gun.** Every breech-loader has a record of its shooting 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Sent for circular and mention this paper. **E. T. ALLEN**, Sole Agent, Importer of Fire arms and Sporting Goods, 414 Market Street, San Francisco, Cal.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHbred



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, **E. W. WOOLSEY & SON**, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to **CHAS. DUISENBERG & CO.**, Sole Agents, 314 Sacramento St., San Francisco.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, **E. W. PEET**, Manager, Haywards, Alameda Co., Cal. Box 1164.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to **FALKNER, BELL & CO.**, San Francisco

RAMS FOR SALE.

350 THOROUGHbred

And Graded

SPANISH MERINO

Rams For Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1854. Thoroughbred and High-Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, **MRS. E. MCCONNELL WILSON**, Elk Grove, Sacramento Co., Cal.

ONE HUNDRED

SPANISH MERINO BUCKS

For sale in lots to suit at low prices.

J. H. SCHNEIDER.

Cornwall Station, Contra Costa County.

BUCKS FOR SALE.

Spanish Merino, French Merino, LEICESTER.

Apply **SHOEBERT & BEALE**, 405 Montgomery St., San Francisco.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

SEVENTEENTH

Industrial Exhibition

OF THE

MECHANICS' INSTITUTE

WILL OPEN TO THE PUBLIC ON

Tuesday, August 15th, 1882,

AT THE

NEW PAVILION,

Larkin, Hayes, Polk and Grove Sts.,

AND CONTINUE UNTIL SEPTEMBER 16.

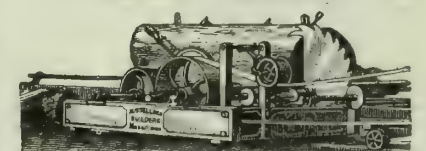
PREMIUMS of Gold, Silver and Bronze Medals, Diplomas and Cash, will be awarded to meritorious exhibits in Art, Manufactures and Natural Products.

Full information will be given or sent by applying at the office, 27 Post street.

P. B. CORNWALL, Pres't. **J. H. CULVER**, Sec'y.
J. H. GILMORE, Sup't.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. (Name this paper.)

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO., Agents for the Pacific Coast.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - - Proprietors.

Office—318 California Street, Room 8.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

M. COOKE **R. J. COOKE**

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to. **COOKE & SONS**, Successors to **COOKE & GREGORY**

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

SAN FRANCISCO MARKET REPORT.

(Continued from Page 137.)

WHEAT—There is about 5c per ct between views of sellers and buyers. The former generally ask \$1.70 for No. 1. Sales are few. At the Grain Exchange the sales included 100 tons No. 1 spot, \$1.69; 100 do September, \$1.69; 1,000 do No. 2 September, \$1.64; 100 do No. 2 October, \$1.64; 100 do November, \$1.65; 100 do, \$1.65; 200 do, \$1.65 & cti.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Aug. 23, 1882.	
BEANS & PEAS.	
Bayo, ct., doz.	2 30 @ 2 30
Butter, doz.	3 75 @ 3 75
Castor, doz.	3 50 @ 3 50
Pea, doz.	3 50 @ 3 50
Red, doz.	3 30 @ 3 30
Pink, doz.	3 20 @ 3 20
Large White, doz.	2 50 @ 2 50
Small White, doz.	2 50 @ 2 50
Lima, doz.	4 00 @ 4 00
Black, doz.	5 00 @ 5 00
do, green, doz.	2 50 @ 2 50

BROOM CORN.	
Southern, doz.	3 00 @ 3 00
Northern, doz.	4 00 @ 4 00

CHICKEN.	
California, doz.	4 00 @ 4 00
German, doz.	4 00 @ 4 00

DAIRY PRODUCE, ETC.	
Butter, doz.	3 00 @ 3 00
Cal. Fancy Brand, doz.	3 00 @ 3 00
Pickle Roll, doz.	3 00 @ 3 00
Pink, doz.	3 00 @ 3 00
Eastern, doz.	3 00 @ 3 00
New York, doz.	3 00 @ 3 00

CHEESE.	
Cal. Fresh, doz.	29 @ 31
Ducks, doz.	29 @ 31
Urgon, doz.	29 @ 31
Eastern, by exp's, doz.	29 @ 31
Pickled here, doz.	29 @ 31
Utah, doz.	29 @ 31

FEED.	
Bran, ton, doz.	16 @ 17 50
Corn Meal, doz.	10 @ 11 00
Hay, doz.	10 @ 11 00
Middlings, doz.	10 @ 11 00
Oil Cake Meal, doz.	10 @ 11 00
Straw, bale, doz.	70 @ 75

FLOUR.	
Extra, City Mills, 50 @ 62	
do, Country Mills, 47 @ 58	
do, Oregon, 47 @ 58	
do, Walla Walla, 47 @ 58	
Superfine, 35 @ 47 50	

FRESH MEAT.	
Beef, 1st quality, lb.	7 1/2 @ 8
Second, lb.	6 1/2 @ 7
Third, lb.	5 1/2 @ 6
Mutton, lb.	6 1/2 @ 7
Spring Lamb, lb.	6 1/2 @ 7
Pork, unseasoned, lb.	10 1/2 @ 11
Dressed, lb.	10 1/2 @ 11
Veal, lb.	6 1/2 @ 7
Milk Calves, lb.	6 1/2 @ 7
do, choice, lb.	6 1/2 @ 7

GRAIN.	
Barley, feed, ct., doz.	1 70 @ 1 70
do, New, ct., doz.	1 25 @ 1 25
do, Brewing, ct., doz.	2 12 @ 2 12
do, New, ct., doz.	1 30 @ 1 30
Chevalier, ct., doz.	1 27 @ 1 27
Buckwheat, ct., doz.	1 35 @ 1 35
Yellow, ct., doz.	1 70 @ 1 70
Small Round, ct., doz.	1 00 @ 1 00
Oats, ct., doz.	1 00 @ 1 00
Milling, ct., doz.	2 00 @ 2 00
Rye, ct., doz.	1 67 @ 1 67
Wheat, No. 1, ct., doz.	1 67 @ 1 67
do, No. 2, ct., doz.	1 50 @ 1 50
do, No. 3, ct., doz.	1 50 @ 1 50
Choice Milling, ct., doz.	1 75 @ 1 75

HIDES.	
Hides, dry, doz.	19 @ 19
Wet salted, doz.	9 @ 9

HONEY, ETC.	
Beeswax, lb., doz.	23 @ 25
Honey in comb, lb., doz.	12 @ 12
Extracted, light, lb., doz.	8 @ 8
do, dark, lb., doz.	7 @ 7

HOPS.	
Oregon, lb., doz.	40 @ 42
California, lb., doz.	45 @ 46
Wash. Ter., lb., doz.	40 @ 42
Old Hops, lb., doz.	40 @ 42

NUTS.	
Walnuts, Cal., lb., doz.	11 @ 12
do, Chile, lb., doz.	11 @ 12
Almonds, hd shd, lb., doz.	15 @ 17
Soft shell, lb., doz.	10 @ 12
Brazil, lb., doz.	10 @ 12
Pecans, lb., doz.	14 @ 16

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Aug. 23, 1882.	
FRUIT MARKET.	
Apples, bx., doz.	35 @ 1 00
do, Basket, doz.	40 @ 60
Apricots, bx., doz.	50 @ 60
Bananas, bunch, doz.	2 50 @ 4 00
Blackberries, lb., doz.	4 00 @ 5 00
Cante oranges, ct., doz.	50 @ 75
Cherries, chst., 110 @ 120	
Cherry Plum, lb., doz.	25 @ 75
Cocacnuts, 100, 60 @ 70	
Cranberries, bx., doz.	12 @ 50
Currants, chst., 40 @ 50	
Figs, box, doz.	4 00 @ 5 00
Gooseberries, lb., doz.	4 @ 8
Grapes, lb., doz.	50 @ 80
do, Rose, lb., doz.	60 @ 80
do, Muscat, lb., doz.	60 @ 80
do, H. Hamburg, lb., doz.	60 @ 80
Limes, Mex., 130 @ 140	
do, Cal, box, 75 @ 80	
Lemons, Cal, bx 1 00 @ 2 00	
Nectarines, lb., doz.	5 @ 10
Oranges, Cal, bx 4 50 @ 5 00	
do, Tahiti M., 40 @ 50	
do, Mexican, 150 @ 170	
do, Lorote, 40 @ 50	
Peaches, box, 4 @ 75	
do, Crawford, 6 @ 75	
Pears, bx., 65 @ 75	
do, Bartlett, 1 00 @ 1 25	
do, do, 50 @ 75	
Pineapples, doz 6 00 @ 8 00	
Plums, 10 @ 30	
Raspberries, ch, 13 @ 15	
Strawberries, 10 @ 12	
Watson, 10 @ 12	

DRIED FRUIT.	
Apples, sliced, lb., doz.	4 @ 8
do, evaporated, 3 @ 11	
do, quartered, 5 @ 11	
Apricots, 11 @ 12	
Blackberries, 14 @ 16	

VEGETABLES.	
Citron, doz.	28 @ 30
Dates, doz.	9 @ 10
Figs, pressed, 4 @ 7	
do, loose, 3 @ 4	
Nectarines, 14 @ 15	
Peaches, 5 @ 6	
do, pared, 13 @ 15	
Pears, sliced, 7 @ 8	
do, whole, 6 @ 7	
Plums, 9 @ 11	
Pitted, 10 @ 11	
Prunes, 10 @ 11	
Raisins, Cal, bx., 2 @ 250	
do, Halves, 2 @ 250	
do, Quarters, 2 @ 300	
do, Eighths, 2 @ 325	
Zante Currants, 8 @ 10	

LEGUMES.	
Artichokes, ct., 25 @ 50	
Asparagus, box, 75 @ 100	
Beets, ct., 75 @ 100	
Cabbage, 100 lb., 87 @ 1 00	
Carrots, ct., 50 @ 65	
Cauliflower, doz 1 00 @ 1 25	
Cucumbers, lb., 20 @ 30	
Eggplant, box, 1 @ 25	
Garlic, lb., 1 @ 2	
do, poor, 1 @ 1 1/2	
Lettuce, doz, 10 @ 11	
High, doz, 10 @ 11	
Kale, green, lb., 6 @ 10	
Kale, green, lb., 6 @ 10	
Peas, green, lb., 2 @ 3	
do, sweet, 2 @ 3	
Parsnips, lb., 2 @ 2	
Peppers, lb., 50 @ 75	
do, Chile, 25 @ 75	
Squash, Marrow, 1 @ 1 00	
do, fat, ton, 60 @ 1 00	
String Beans, 1 @ 1 1/2	
do, wax, 2 @ 4	
Summer Squash, 25 @ 40	
Tomatoes, box, 25 @ 40	
Turnips, cal., 75 @ 1 00	

Gold, Legal Tenders, Exchange, Etc.

(Corrected Weekly by SUTRO & Co.)

SAN FRANCISCO, AUG. 23, P. M.

SILVER, 1. GOLD BARS, 890 @ 910. SILVER BARS, 106 @ 18 cent. discount.

EXCHANGE ON NEW YORK 5 premium; London, 49 @ 48; Paris, 6 1/2 francs @ dollar; Mexican dollars, 91 @ 2; NEW YORK (4 per cent), 119.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 262 Market St., S. F.

FOR THE WEEK ENDING AUGUST 8, 1882.

262,273.—TWO-WHEELED VEHICLE—John A. Bilz, Pleasanton, Cal.

262,307.—WINDOW—M. B. Burk, Dayton, W. T.

262,407.—INCUBATOR—Jas. M. Halsted, Oakland, Cal.

262,227.—STEAM ACTUATED VALVE—Wm. D. Hooker, Oakland, Cal.

262,228.—PUMPING ENGINE—Wm. D. Hooker, Oakland, Cal.

262,488.—VEHICLE BRAKE—Dyas Shelton, Santa Rosa, Cal.

262,254.—ANCHOR—R. R. Spedden, Astoria, Oregon.

262,328.—TANAS PAD—Jos. S. Staron, S. F.

262,110.—TONGUE SUPPORT—Tiffin & Smith, Redding, Cal.

262,259.—CANISTER—John H. Tingman, S. F.

262,262.—HEADER BAR—Geo. B. Vroman, Oakdale, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

VEHICLE.—John A. Bilz, Pleasanton, Cal.

No. 262,273. Aug. 8, 1882. The object of this invention is to overcome the particular disadvantages attending vehicles of the two-wheeled class; namely, the communication of the joggling motion of the horse to the seat, and to render the vehicle, by suitable construction, an easy and pleasant mode of conveyance. The several connections between the shafts and axle, shafts and body, and the body and springs, are none of them rigid. An independent movement may be had by each. The consequence is, that the shafts, which primarily receive the joggling motion of the horse, do not communicate it, to any great extent, to the axle, and the latter does not affect the body, neither giving to it what ever motions it might receive from the shafts, nor its own joggling motion; nor do the shafts affect the body in front, as the springs within certain tubes yield sufficiently to counteract it, this being rendered possible because of the rocking of the body upon the cross-rod between the springs. The body has not only the advantage of the springs, but also of the hinged connection between its supporting rod and the springs.

SULKY HARROW.—John W. Rush, Stockton, No. 261,386. Dated July 18th, 1882: This invention has relation to that class of wheeled harrows in which the teeth are secured to rocking shafts or bars, by the movement of which the teeth are thrown out or in the ground. The improvements of this invention consist in a convenient and simple manner of journalizing the rocking bars and in their location with regard to the frame of the harrow. A second improvement is in the construction of the rocking bars, they being made of two parallel-spaced strips, between which the teeth are suitably secured. This construction affords a simple and efficient means for securing the teeth which are set at an angle, and which may be easily removed when necessary. The simplicity and cheapness, together with the effectiveness of the whole device, constitute its merits.

HEADER BAR.—Geo. B. Vroman, Oakdale, No. 262,262. Dated August 8, 1882. This is a new and useful header bar for harvesters, and it consists in a means for receiving the fingers, whereby they may be easily inserted or removed. More particularly, these means consist in the combination with a horizontal projecting top plate of an underlying channel-shaped plate, provided with notches on its edges through which the shafts of the fingers are inserted. The lower plate is drawn to the upper by means of bolts passing through both. This secures the fingers between the two easily and effectively; the object is to provide a means for securing the header bar in such a manner that they may be easily inserted and as readily removed.

INCUBATOR.—James M. Halsted, assignor to Kate K. Halsted, Oakland. No. 262,407. Dated Aug. 8, 1882. This covers certain improvements in the construction and arrangement of the entire device, having in view its simplicity and economy.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.

M. P. OWEN—Santa Cruz county.

J. W. A. WRIGHT—Merced, Tulare and Kern counties.

JARED C. HOAG—California.

B. W. CROWELL—San Luis Obispo and Santa Barbara counties.

T. E. THORNTON—Sonoma Co.

Wm. M. HOWES—Amador Co.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers, who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chetumal, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co. 506 Battery street, S. F.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Enterprise Windmills.

It is with pleasure that we refer to the Horton & Kennedy "Enterprise" Windmill. This mill is well made of best Eastern material, strong and durable, truly self-regulating. We know of its use on the Pacific coast for 12 years, and are credibly informed that many of the oldest of them have not yet cost anything for repairs, and are doing their work as regularly as at first, while many others have long since either worn out or been abandoned on account of the continual cost and annoyance of keeping in repair. Horton & Kennedy sell the genuine article, and will be pleased to give further information. Their address is Livermore, Alameda Co., Cal. San Francisco agency, Linforth, Rice & Co., 323 and 325 Market St., S. F.

FRENCH HORSES.—WHAT THE ENGLISH SAY.—The British Quarterly Journal of Agriculture says: "The horses of Normandy are a capital race for hard work and scanty fare. Have never elsewhere seen such horses at the collar. Under the diligence, post-carriage, or cumbersome cabriolet, or on the farm, they are enduring and energetic beyond description. With their necks cut to the bone they flinch not. They keep their condition when other horses would die of neglect and hard treatment." The superiority of French stallions for crossing on the common mares of America is established. This fact has caused the development of the largest importing and breeding establishment in the world, M. W. Dunham, of Wayne, Ill., having imported and bred nearly 1,000, and has now on hand some 400.

Try the Rural Press for 25 Cts. a Month.

Tell your friends that they can have the PACIFIC RURAL PRESS mailed to them one month on trial for 25 cents. Four back Nos. will be added on receipt of 10 cents additional—making eight copies for 35 cents. It is a handsomely printed and illustrated home journal. Mail it to friends abroad.

Commission Merchants.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

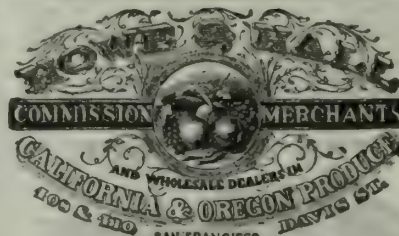
Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

SEND YOUR CONSIGNMENTS TO



DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REPRESENTS.—Tradersmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

California's Exposition for 1882

Sacramento, Cal.,

Opens Monday, September 11th; Closes Saturday, September 16th. A Holiday Week of Recreation and Sport.

\$40,000 in Cash

To be Awarded in Premiums.

The Premium List is full and complete, and is divided into Seven Departments: The Society's Gold Medal, (valued at \$100) will be awarded to the most meritorious display in each department. The exhibition of Live Stock promises to be large and fully up to the standard in each class. The latest and newest designs in Agricultural Implements will be upon exhibition. The Products of the Soil, representing California's greatest interest, will be fully shown. The Speed Programme (for entries see small bills) is within itself a distinct exhibition, wherein the produce of California's Breeding Establishments will be shown in their respective classes. Wing Shooting, Ladies' Equestrianism, and other sports will be held daily at the Park during the Fair.

The C. P. R. B. Co., will transport articles to and from the Fair free of charge. Wells, Fargo & Co. will deliver packages free not weighing over 20 lbs. Application for space, both at Park and Pavilion, should be made at once to the Secretary.

Season Tickets, admitting self and family.....\$5.00
Single Admissions......50

HUGH M. LARUE, President.

EDWIN F. SMITH, Sec'y.

NEARLY 1,000
Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois,

24 miles West of Chicago, on C. & N. W. Ry.

250 OF THE FINEST

Imported from France

by him

THIS YEAR.



NEARLY 400 NOW ON HAND,

The Largest and Most Select Stud ever collected, and making it possible to

SEE MORE FINE SPECIMENS IN A DAY than one could see in their native country in months.

Come and see for yourselves. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn. Send for Catalogue

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

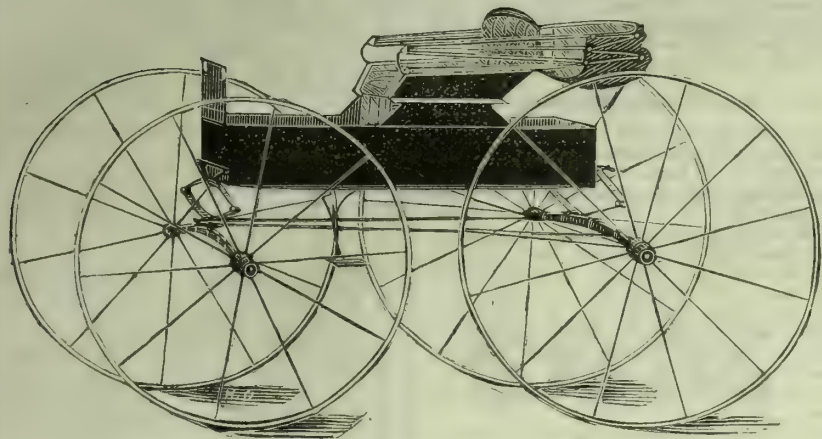
LINFORTH, RICE & CO.,

325 Market Street, S. F.

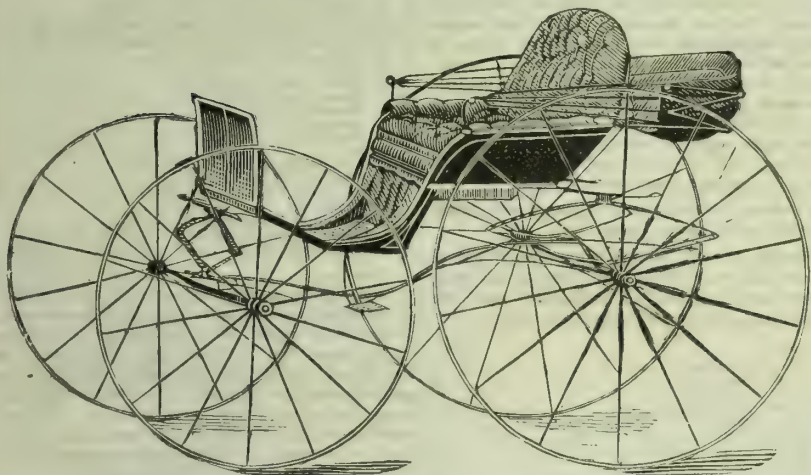
Or

NEWTON FARM WAGONS,

Briggs & Co. Carriages, Buggies, Etc., Hortop Two-Wheeled Phaetons, California Made Four-Spring and Business Wagons,
At 117 and 119 Market Street, San Francisco.

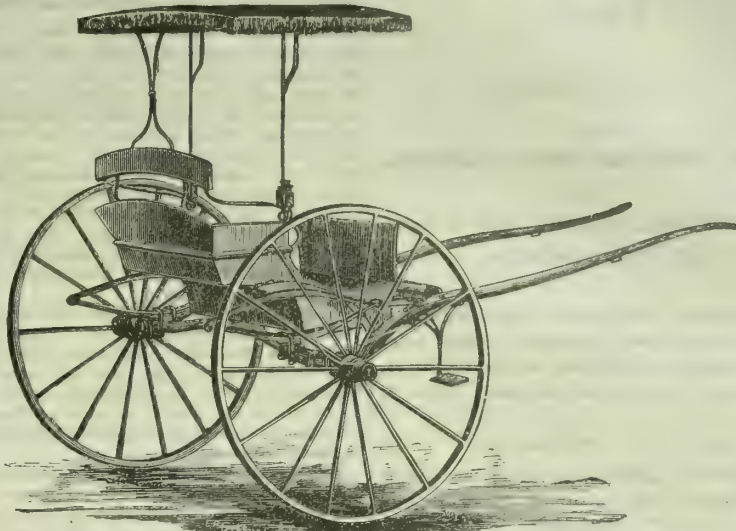


PIANO TOP BUGGY—FULL LEATHER FINISH.



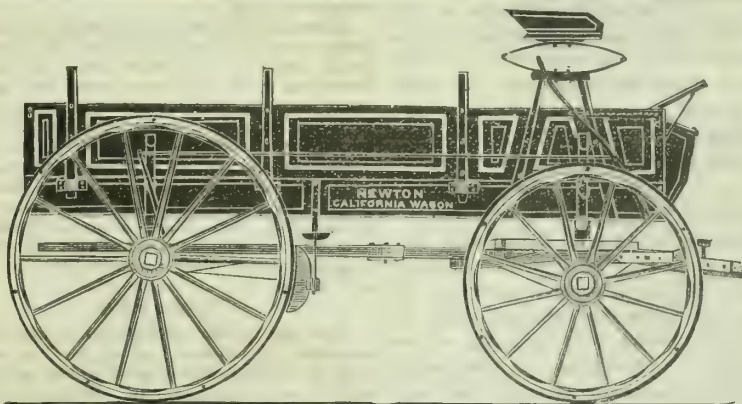
BREWSTER PHAETON—LEATHER LINED.

Not a BREAKING CART but a
FINE FINISHED PHAETON.
See it before you buy any other.



HORTOP C PHAETON.

The Strongest, Neatest and Easiest Riding. Have different styles, from a cheap cart to a finely finished Phaeton.



STAKE RACK BED AND BRAKE.

HAVE THREE DIFFERENT QUALITIES & FINISH
With or Without Canopy.

DAVID N. HAWLEY, Agent.

BUY
SEWING MACHINES
AT
HEADQUARTERS.

900 Machines in Stock.

PRICES FROM \$25 TO \$80.

Packed and Shipped Free upon Receipt of Price.

SEVEN LEADING MAKES TO SELECT FROM, VIZ:

"DAVIS," "HOUSEHOLD,"
"QUEEN," "HOWE," "SPRINGFIELD,"
"STEWART" and "SINGER."

Every Machine Warranted Perfect.

NEEDLES, OIL AND ALL SUPPLIES, BEST AND CHEAPEST.

MARK SHELDON, Nos. 9, 11 and 13 First Street,
SAN FRANCISCO, CAL.

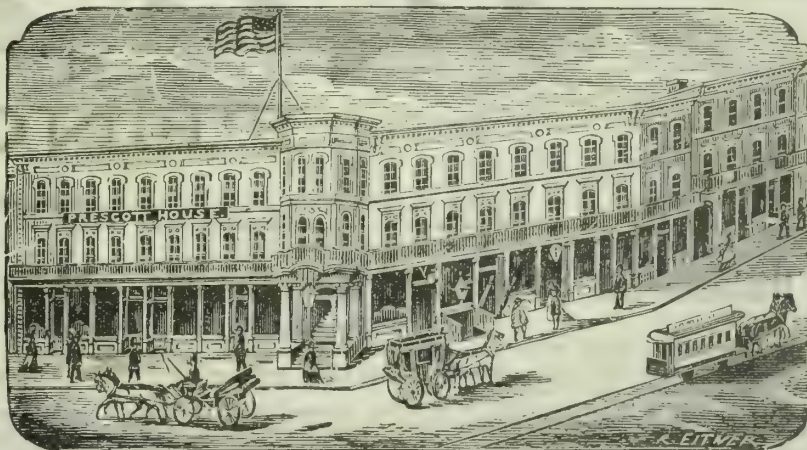
PETER MEYER. LOUIS MEYER.
MEYER BROS. & CO.,
—IMPORTERS AND—
Wholesale Grocers,
—AND DEALERS IN—
TOBACCO AND CIGARS.
412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco
Special attention given to country traders.
P. O. Box 1940.

HATCH & BARCLAY,
Commission Merchants,
(Members of San Francisco Produce Exchange.)
20 California Street, San Francisco.

MOORE, FERGUSON & CO.,
COMMISSION MERCHANTS
Grain, Flour, Wool, Etc.
(Members of the San Francisco Produce Exchange)
211 and 213 Clay St., S. F.
Liberal advances made on Consignments.

ESTABLISHED 1860.
P. STEINHAGEN & CO.,
(Successors to J. W. GALE & CO.)
Fruit and General Commission Merchants,
And Wholesale Dealers in California and Oregon Produce,
Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs,
Butter and Honey.
Brick Stores: No. 402 Davis Street, and
120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

Grangers' Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. — SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE,
Dried Fruit, Live Stock, Etc., solicited, and liberal
advances made on the same.
Careful and prompt attention paid to orders for the
purchasing of Grain and Wool Sacks, Wagons, Agricultural
implements, Provisions, Merchandise and Supplies
of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR
SALE ON CONSIGNMENT. Insurance effected and liberal
advances made at lowest rates. Farmers may rely on
their grain being closely and carefully weighed, and on
having their other interests faithfully attended to.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
**Special Attention Paid to Patent
Law.**

N. B.—Mr. J. L. Boone, of the above firm, has been con-
nected with the patent business for over 15 years, and de-
votes himself almost exclusively to patent litigation and
kindred branches.

THE CHORAL CHOIR.

A NEW CHURCH MUSIC BOOK,

By W. O. PERKINS.

DITSON & CO. take pleasure in introducing to the pub-
lic their new Choral Book for 1882-1883. Not only a Choral
Book, but a Singing Class and Convention Book. Not
only these, but a capital collection of easy Glee and Song
music, of Hymn-tune and Anthem music easy, pleasing
and thoroughly musical. **Just out.**
It would be well to send early for a copy for examina-
tion.

PRICE, \$1.00.

THE PEERLESS.

A New Singing School and Convention Book.

By W. O. PERKINS.

While the Choral Choir is one of the best of Singing
Class Books, it seems necessary to provide for the wants
of those who prefer to use a cheaper, lighter and smaller
book. The **Peerless** is similar in arrangement and
quality to its larger companion, differing only in its size,
and in the number of pieces of a kind which it contains.
Beginners cannot but be delighted at the large number of
very easy and very pretty exercises and songs. **PRICE,**
75 CENTS. Send early for specimen copy.
Mailed to any address for above prices.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the Riverside Press, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kidder, Redlands.....	10
J. F. Welsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Israel Beal, Redlands.....	10
C. E. Tusdell, Redlands.....	20
R. B. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. E. Seymour, Redlands.....	20
P. R. Brown, Redlands.....	20
A. G. Simms, Redlands.....	10
Simon Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassidy, Redlands.....	10
Orsen Van Leiven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
A. S. White, Redlands.....	20
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
G. W. Boggs, Riverside.....	10
A. W. Boggs, Riverside.....	20
S. R. Weir, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Annabel, Riverside.....	20
J. P. Greeves, Riverside.....	10
D. U. Findlay, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. B. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10
B. E. Allen, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. H. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	10
Mrs. Sarah J. Morey, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	30
F. F. Morrison.....	25
A. T. Dewey, San Francisco.....	12
W. B. Ewer, San Francisco.....	12
B. F. Watrous.....	10
H. L. Rutgers.....	20
J. W. Bashford.....	5
S. Comey.....	5
Mrs. E. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cutts, Carson City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20

Total sold.....1,004

Judson & Brown (San Bernardino, P.O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

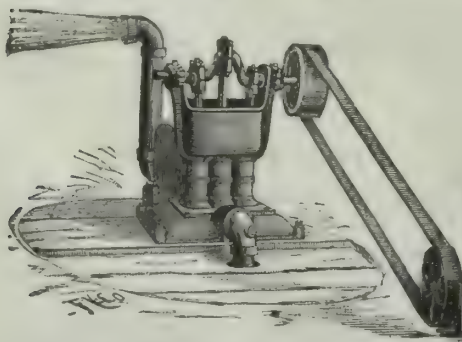
IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice. AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself. The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required. THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.



TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE-POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These Pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.

F. W. KROGH & CO.,

Manufacturers

And Sole Proprietors,

No. 51 Beale Street,

SAN FRANCISCO.

CHEAP CASH GROCERIES

— AT —

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —

1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality.

Orders most respectfully solicited.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

Silos Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE. RANSOME, 402 Montgomery St., S. F. Send for circular.

Engraving Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MUNKS AND SCIENTIFIC PRESS, San Francisco, at favorable rates

Remittances to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet. 10c. Clinton Bros., Clintonville, Co

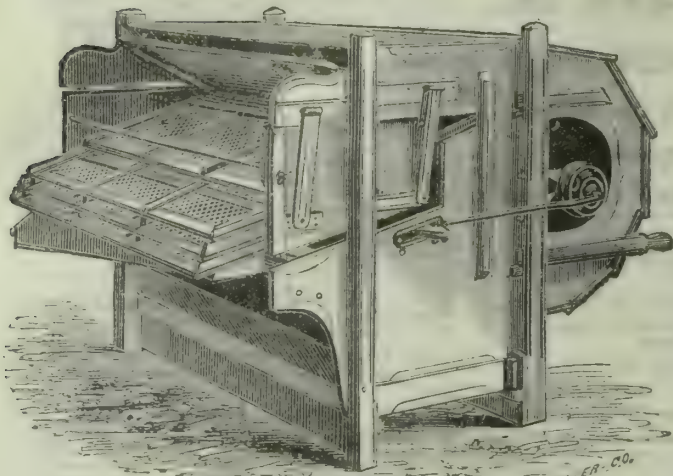
HAWLEY BROS.' HARDWARE CO.,

Successors to

MARCUS C. HAWLEY & CO.,

Sole Agents for the CELEBRATED

NORDYKE & MARMON CO.'S PLANTATION CORN & FEED MILLS.



The "Champion" Fan Mill, or "Chicago Board of Trade" Mill.

The Nordyke & Marmon Co.'s Mills, which, for lack of space, we are enabled to illustrate only two kinds, are the best made, the most practicable and efficient mills manufactured for the general use of millers and plantations. The Burr Stones used in these Mills are of a quality not liable to glaze, and, when handled judiciously, give as fine results in flouring as many of the roller mills now in use.

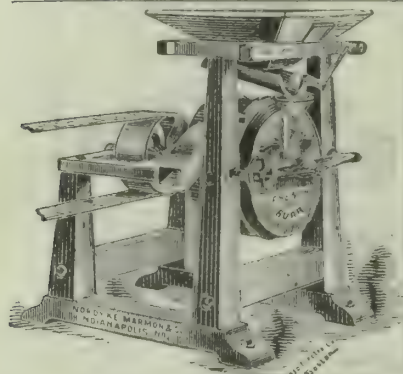
To prevent deception, we will here mention that there are those claiming to furnish a mill of this class which is made to imitate it in appearance as near as possible, but is in direct conflict with our patent improvements. And those purchasing any such mill not manufactured by the Nordyke & Marmon Co. not only are liable to have to pay for using, but are grossly deceived in finding the mill a poor investment. **EVERY MILL WARRANTED.** Send for Special Catalogue.

THE "CHAMPION" FAN MILL,

Or as it is universally known throughout the Northwest, "THE CHICAGO BOARD OF TRADE MILL," on account of its having received the \$500 premium awarded by that organization to the best mill, in competition with 13 other leading mills from several States, is conceded on all hands to be the best in use for separating oats, chess, rat balls, black seed, cockle, etc.



Nordyke & Marmon's 20-inch "New Era" Mill.



Nordyke & Marmon's Plantation Feed Mill for Grinding Grain.

We are Sole Agents for the Following Implements:

**DEERE'S MOLINE GANG AND SINGLE PLOWS,
SOUTH BEND CHILLED PLOWS,**

"Buckeye" Gang Plows, "Buckeye" Seed Drills, and "Buckeye" Broadcast Seeders,
GILPIN SULKY PLOWS,

Perkins' Windmills, "Regulator" Windmills, Corbin's Disc Harrows, "Keystone" Corn Planters,
Sandwich Corn Shellers, Rumsey & Co.'s Pumps, Rice's Straw-Burner Engines, Etc.

Also, have the largest assortment of Harrows, Cultivators, Cider Presses and all kinds of implements and Hardware of any house on the Pacific Coast.



The "Challenge" Feed Mill. Fastest grinding, easiest running and cheapest Portable Mill made.

HAWLEY BROS.' HARDWARE COMPANY, San Francisco, Cal.

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,
5 to 9 California, and 108 to 112 Market Streets, San Francisco.
BAGS. TENTS. HOSE. TWINES.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.
201 AND 203 EL DORADO STREET, STOCKTON, CAL.

PATENT STEEL WIRE BALE TIES.



Why do you waste Time making Ties in the field when you can buy them Ready Made Almost as Cheap as the Wire in the Coil?

We have on hand a large quantity of steel wire bale ties ready for immediate delivery which we will sell at the prices named in the following table:

No. 15 wire, 8 ft. 6 inches long.....	\$18.00 per 1,000
No. 14 wire, 8 ft. 6 inches long.....	22.40 per 1,000
No. 14 wire, 9 ft. long.....	23.50 per 1,000
For Dederick Presses, 17x22 bale, use ties 8 1/2 ft. long, No. 14 for heavy work, No. 15 for light. For Dederick Presses, 14x18 bale, use No. 15 wire, 8 ft. 6 inches long.	
For the California Chief and Economy Presses use No. 14 wire, 9 ft. long.	
For the Price or Petaluma Press use No. 15 wire, 9 ft. long. For all other upright presses use No. 15 wire of such length as may be required by the size of the bale.	

Advantages of Adjustable Steel Ties.

1. They are adjustable, hence sure, and no delay.
2. When secured, they stay, and never come loose.
3. They hold the bale closer, hence more hay in a car.
4. They require no needle to pass them through.
5. They require no stretcher.
6. Yet are the only tie adapted to the use of the stretcher.
7. They may be removed from the bale and used over again.
8. Hence will all be returned at low prices.
9. They may be worked with heavy gloves without inconvenience.

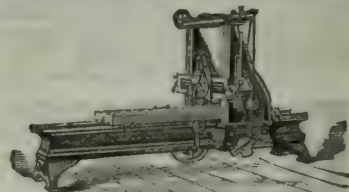
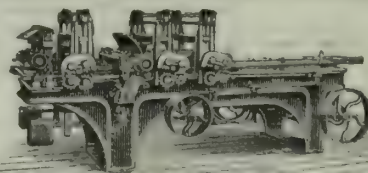
Comparative Cost of Coil Wire and Prepared Bale Ties.

Experience will teach that the same number of tons of hay can be more safely secured, and at less cost by our prepared ties, than by the use of coil wire. In the use of coil wire one or two sizes larger is required, and then, the wire is not reliable at the fastening; add to this, the bother and loss of time in its use, the loss of wire, oat of repressing and loss of hay in transit and in the market by reason of broken bales, and we are certain coil wire cannot be economically used.

JACKSON & TRUMAN,

Cor. Sixth & Bluxome Sts., S. F.

JACOB PRICE,
San Leandro, Cal.



Berry & Place Machine Company,
PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

**Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,**

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

TO VINE GROWERS.

Advertisers wish to form connection with shippers of produce suitable for the German market. Please address, C. K. 974, care of Rudolf Mosse, Hanover, Germany.



Volume XXIV.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 2, 1882.

Number 10

Hop Growing.

EDITORS PRESS:—Please tell us something about the practice of hop growing.—NEW SUBSCRIBER, Galena, Nevada.

We have had a good deal about hop growing on the Pacific coast during the last few months, and expect to have more, as hop growing is now a popular theme, and a good demand for roots may be expected this winter. We refer our new subscriber to former articles, and at this time introduce some points from a sketch of a hop ranch in Mendocino county, which we find in the Ukiah Press of last week:

The hop harvest season is at its height in Mendocino. The hop fields of this valley are peopled with pickers, and the dry-houses are operated night and day in the drying process. The very remunerative prices which are assured this year adds to the anxiety of the grower, for every acre represents several hundred dollars profit. Constant supervision and watchfulness and expert handling are required to produce and put a good article upon the market. A visit to Bartlett's place, where growing, picking and curing are conducted upon a large scale, enables us to give our readers a sketch of the workings of one of our representative plantations. The Bartletts (comprising the mother and seven sons, James, Nathan, Robert, Alexander, Charles, Zachary and Claibourne), have a 30 acre field about two miles southeast of town. The hops are planted in hills six feet apart each way. The yield is rather small the first year—say about 500 lbs. to the acre; but from that time on it increases every year without replanting. There are some plantations here nine years old that have not been replanted, and the harvest is now better than ever. Each spring the ground around the vines is plowed, the roots are pruned, and the superfluities cut away. Next, the poles are set, one to a hill; then the tops of the poles are "twined," that is, twine or rope is stretched from pole to pole, right and left. When the vines are two or three ft. high, they are "trained," by being wound around the poles and tied with light twine. Next the hops are "suckered," by cutting away the young shoots or suckers, leaving four of the strongest vines to the pole. When these have reached the top of the pole, one of them is turned to either point of the compass on the top cords, thus forming a perfect network over the field. This ends manipulation until curing. The plants are henceforth left to bloom, and the blooms to ripen. Hops must be picked in a certain stage of ripeness. If picking commences too early, or if it is delayed too long, a good commercial article will not be produced. The curing must also be done promptly and well. The blooms deteriorate if too much time intervenes between picking and curing. Therefore the operations must keep pace with each other.

After picking, the hops are sacked and taken to the kiln, a short distance south. The sacks are loaded on a car and taken up the tramway to the door of the drying room. This floor is covered to the depth of 18 inches; the furnace fire is started, and hot air is conducted under the dry-room floor in pipes. After 12 hours of roasting, during which season a proper heat has been maintained, the cured hops are thrown into the cooling room, where they remain until ready for baling. The kiln will turn out 1,200 lbs. of cured hops at one operation. Twelve hours are required to do the work of transforming 4,200 lbs. of fresh blossoms into 1,200 lbs. of cured hops. Two floors in 24 hours is close work, and at that rate, 8,400 lbs. from the field would be worked. One hundred and thirty Indians were camped about the fields, and in the orchard were several white families. They receive 1½ cents per pound for picking, and make good wages at it. Men, women and children work, making 50 to 75 cents each, and the elders from \$1.50 to \$2 per day.

This briefly is the hop business. The operations noted all require expertness, as every beginner at the business has learned. Large capital, great labor and constant attention are items in the investment of those who are largely in the business. A hop field is a pretty sight. Graceful pillars rise regularly, and spread their arms of foliage over intervening space. Millions of yellow blossoms droop gracefully from the snare of vines, above arbors that tempt one from the hot sun to their grateful shade.

Potatizing in Arizona—No. 2.

[Written for the RURAL PRESS by J. G. LEMMON.]

Native Potatoes of Arizona Again.

Every mail, lately, brings several applications for tubers of the native potatoes described in the RURAL for August 5th. I see that I shall have to secure a large supply, and I hope out of so many experiments as are being projected, some good practical results will be achieved. Now the plants look very promising, and they are just sending out subterranean shoots, on the ends of which will be formed the tubers. The plants often closely resemble the common cultivated potato, and more than once I've been led to surmise that they were escapes from gardens, but as they are botanically different in structure of leaf, flower and fruit, and as both of these native species are often found on the stream banks of the highest peaks, wherever an overflow of alluvium favors them, the idea of their being escapes from cultivation is at once dissipated.

A Natural Fern Conservatory.

A week ago, while clambering up a high, narrow and very rocky ravine, a turn in its course suddenly revealed just before me a half-open

played another strange fern. Sliding down with great peril, and several severe hurts, to a ledge about two-thirds the height of the gorge, by good chance I detected a side entrance from the west, a narrow, tortuous way often blocked with debris or guarded by a thorny bush, but still a passage along the face of the nearly vertical wall for 1,000 ft. to a place of safety.

Next day Mrs. L. was conducted to this wonderful conservatory, and admitted by the side entrance. At every inward turn of the winding way her exclamations of delight were uttered, but at the outward curves the sheer precipice of 1,000 ft. below and 500 above, with a narrow way of only one or two feet wide, often caused momentary hesitation. But the glories of the inner vestibule of ferns can always be seen from these outer curves, appearing nearer and nearer, and the sight is too enchanting for botanists to resist.

Premonitions of a sudden storm, such as are often experienced in the mountains of Arizona in August, now were heard, and the long rolls of thunder reverberated down the cavern's length in quick succession and increasing loudness; but a sweet-voiced little bird hopped along just a few feet ahead and seemed a siren to lure us on. Suffice it is to say the inner recesses of the conservatory were visited, more of their treasures secured, and then a quick re-



NETHERLAND PRINCE

volume of nature's great library. It stood on end, and was slightly inclined backward against a high mountain. Its sides were of syenite, limestone, granite and quartz in superposed layers, capped with slate.

I have since conducted an officer from the Post, experienced in measurements, to the place, and obtained his judgment as to distances. We estimate the height of the walls to be over 1500 ft., and the extent of spread and the depth to be each over 1,000 ft. Vertical furrows traverse each page of the book, also horizontal ones.

And the contents of the volume are on a par with its magnificence. Plants of the most robust form and brightest flowers cling to every ledge and peep out of every crevice. No sooner had I approached the bottom of the pages than I descried, for a marginal vignette, a beautiful shield fern not seen before west of Texas. Across the right hand page, near the bottom, proceeded a line of white-flowered shrubs, a new species of *leaphania*. Similarly along the left a new *draba*. A hundred feet higher the pages had for illustrations a large and rare *aspidium* on the left and a new species of *gym-nolomia* on the right.

Pulling myself up by the aid of trailing shrubs, I found, in the next narrow rift, two more strange ferns. At about a thousand feet elevation three more ferns appeared. The ascent was now almost vertical, but excitement steadied hand and foot. Grasping the depending bushes where possible, and after making a place for my fingers in the rock clefts with my pick, I struggled on and up, dripping with perspiration, but greatly elated by the ferns and flowers discovered. About 50 ft. from the top the slate capstone jutted out several feet and forbade escape over the top, but it also dis-

treast was made before a torrent dashed down that gorge, carrying large trees and boulders, and making a volume of sound that could be heard for miles.

This must be the richest natural conservatory of ferns in America, for in it we have collected 26 different species, many of which are new to Arizona, and perhaps some of them new to science. Specimens of all the doubtful ones have been sent on to Prof. Eaton, of Yale College, for determination.

Our address will be as before, Fort Huachuca, Arizona, until Nov. 1st; after that date and during winter, Lemmon Herbarium, Oakland, Cal.

Tanner's Canyon, Aug. 25, 1882.

HOW COAL IS FORMED.—SOME NEW IDEAS.—Prof. Reinsch, in a lecture lately delivered, gave the results of his researches regarding the manner in which coal had been formed. He had examined with the microscope not less than 2,500 sections of coal, and had come to the conclusion that coal had not been formed by the alteration of accumulated land plants, but that it consisted of microscopic forms of a lower order of protoplasm, and although he had carefully examined the cells and other remains of plants of a higher order, he computed that they have contributed only a fraction of the mass of coal veins, however numerous they may have been in some instances. He referred to the fact that Dr. Muck, of Bochum, held that algae have mainly contributed to the formation of coal, and that marine plants were rarely found in coal because of their tendency to decompose, and that calcareous remains of mollusks disappeared on account of the rapid formation of carbonic acid during the process of carbonization.

An Imported Holstein Bull.

We publish on this page a portrait of the Holstein bull Netherland Prince, of the celebrated herd of Holsteins owned by Smiths & Powell, Syracuse, N. Y. This animal was bred in the famous milk district of north Holland by one of the most noted breeders in that country, calved April 1, 1880, and weighed the day he was two years old, 1,440 lbs. He is very straight, square and fine, and gives plenty of evidence of his rare breeding, not only in his own appearance, but in his calves, also, which are as fine and handsome as we ever saw. His sire was Schimmel, a very fine, choice bull; dam, Lady Netherland, now of the same herd. He was imported by his present owners in October, 1880. The following records of members of the same family may be interesting, and will show how well bred he is: His dam gave, as a four-year-old, on grass alone, 73½ lbs. of milk in one day. His grandam, Gert-Miet, gave 71 lbs. of milk in one day when on grass. Netherland Prince is brother to Netherland Queen, whose two-year-old record of 58 lbs. 12 ozs. in one day, 1,670 lbs. 9 ozs. in one month, and 13,574 lbs. 3 ozs. in one year, has never been equaled, except by Aaggie 2d (out of Aaggie, of the same herd as Netherland Prince). Aaggie 2d has a two-year-old record of 61 lbs. 5 ozs. in one day, 1,700 lbs. 2 ozs. in 30 consecutive days, and 16,364 lbs. 8 ozs. in 11 months, and still milking over 40 lbs. per day. She is full sister to the Holstein bull Neptune. Netherland Queen has just finished her four-year-old record, and has given 76 lbs. in one day, 2,132 lbs. 6 ozs. in one month and 15,614 lbs. in one year. She took the first prize at N. Y. State fair in 1878 as a yearling heifer, first prize as a two-year-old at both N. Y. State fair and Onondaga county fair, in 1879, second prize at N. Y. State fair when three years old, in the class with mature cows. In 1880 she took the first prize at both N. Y. State fair and Onondaga county fair.

Netherland Prince is also brother to Netherland Princess, now making her three-year-old record. She has given in one day 55 lbs. 14 ozs. of milk, and in one month, 1,591 lbs. 12 ozs. She made, before she was three years old, 14 lbs. 4 ozs. of butter, and at three years old 14 lbs. 11½ ozs. in one week, on winter feed. She won second prize at N. Y. State fair in 1880. Netherland Prince was awarded the first prize at the N. Y. State fair in 1881.

A member of the firm of Smiths & Powell is now in Holland, where he has been selecting cattle since early last spring. He has shipped 200 head, and another shipment of about 120 head was expected by September 1, 1882. The advices from Mr. Smith are that the stock he is sending this season are the finest he ever bought. He has visited all the best herds, and bought all the young stock that came up to the standard of excellence demanded by the firm. He has several members each of the noted Aaggie, Netherland and Jannek families, and many prize animals.

THE CASSABA MELON.—Quite a large shipment of the Cassaba melon was received on Tuesday by Onesti & Connor from Gen. Bidwell's ranch at Chico, Butte county. The Cassaba is comparatively a new melon. Gen. John Bidwell received seeds of three or four varieties of melons from the Agricultural Department at Washington. One of these was the Cassaba, from Asia Minor. These seeds were planted, and in the course of cultivation became more or less mixed by cross fertilization, producing a variety somewhat resembling the original Cassaba, but in several respects superior to it. This variety has been cultivated for twelve years, and has finally developed into a very large thick-fleshed and delicious melon. For the first time it is now offered in the San Francisco market, and the fruit was being rapidly taken at twenty-five cents each at the time we made our investment. The Cassaba has been pretty widely distributed over the State, and is generally popular with growers. Our Kern county correspondent, Mr. Ramford, is laying up dried Cassaba for his "uncooked diet" exercises this winter, and says he is much pleased with the dried melon.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eps.

Montana—Her Mountains, Rivers and Valleys.

EDITORIAL PRESS.—Montana, as its name imports, is a country of mountains, this being also the meaning of its original Indian name, and the name is appropriate enough. Not that this region is, as a whole, greatly elevated (its mean altitude being less than 4,000 ft.), but because of the several long and lofty mountain chains that traverse various parts of it. First, we have the main ridge of the Rocky mountains running across the western portion of the Territory a north, northwestern direction, with the Clear D'Alene and Bitter Root ranges still further to the west, and forming the boundary between Idaho and Montana. In the northern part of the Territory are the Bear Paw and the Little Rocky chains; in the central, the Snow, Judith and Bull mountains, and in the south and southeast the Big Horn, Wolf and the Powder River ranges. While these constitute the principal mountains in the Territory, varying in height from 7,000 to 11,000 ft., there are many others of less altitude and length. Of the entire area of Montana, amounting to about 100,000,000 acres, fully one-fifth consists of mountains, some of them rugged and precipitous, while others are of such gentle acclivity that wagons can be taken over them without much trouble.

Through the disposition of these mountain ranges there is formed a series of great depressions or natural basins, four of which, omitting others of less extent, lie to the east and one to the west of the main Rocky mountains. These basins, which are covered with bunch grass and a scattering of wild sage, contain much good farming land, especially along the numerous creeks that, descending from the neighboring mountains, supply them with an abundance of water for irrigation and other purposes. Here the farmers and the stock raisers have their homes—horses, sheep and cattle feeding by thousands on the natural pasturage that covers the foothills and valleys alike.

Course centrally through these broad plain-like valleys are large streams formed from innumerable mountain tributaries, all flowing northward and eastward into the Yellowstone and the Missouri, or westward into the Columbia, Montana having no direct drainage towards the south. Her hydrographic system has no connection with that of Utah and Nevada, which drains wholly to the south, or collects its waters into lakes having no outlets. Montana never having been covered by the great interior sea that during Pliocene times submerged her southern neighbors, is now without those sinks, alkali flats and other salines formed from the subsiding waters of this ancient sea. While these her neighbors, Idaho and Wyoming included, are without a mile of navigable rivers, the Missouri and its branches open navigable channels for nearly 2,000 miles within the boundaries of Montana, the Yellowstone being also navigable for several hundred miles. While there are many small lakes in the Territory, there are none of large size, the Flat Head, the most extensive, being only about 30 miles long and 10 or 12 wide. Taken as a whole, however, Montana may be considered one of the best watered countries in the far West; but, while such is the case, it is by no means a rainy country, like Oregon and northern California. So far as actual rainfall is concerned,

The Climate

May, in fact, be considered rather a dry one. The annual precipitation is abundant, equivalent to 23 inches of water, but it occurs mostly in the form of snow, which, falling to a great depth on the higher mountains, keeps the streams well replenished throughout the summer. In the month of June some rain falls, enough usually to keep the grass and grain growing, and greatly diminish the need for irrigation. While the mercury, at all considerable altitudes, falls pretty low in the winter, the cold here is not so intense as would generally be inferred from the geographical position of the Territory, situate between 44° and 49° north. But, as before stated, the mean altitude of the country is not very great, the more thickly-settled valleys, and even some of the mining districts, being only between 2,000 and 3,000 ft. above sea level.

But, as is well known, there are other conditions besides elevation and latitude that exert a modifying influence on climate, such as nature of soils, prevailing winds, atmospheric currents, hot springs, etc., and the effects of some of which are clearly felt here in Montana. The waters of the Pacific that, heated under the equator, pass in a warm stream by Japan, and, sweeping east, strike the west coast of the continent, carry the isothermal lines for a thousand miles inland far to the north, this flow of heated air crossing Washington and Oregon and spreading all over Montana, raising the mean temperature of the atmosphere several degrees. Then there are many warm springs and great geysers spouting hot water high into the air, either within or close upon the borders of the Territory, all of which tend to warm the earth and soften the surrounding atmosphere. As a

result, the Montana winters are more tolerable than those of New York, lying further south and at a much lower altitude. Owing to the dryness and rarity of the atmosphere, the same degree of cold is not so much felt here as in countries east of the Rocky mountains, with their piercing winds and excessive dampness. So, on the other hand, the summers here, though warm, are not sultry, nor does the heat oppress and debilitate one as in the East, its effects being counteracted by the cool nights that everywhere prevail. The mean annual temperature at Virginia City, 2,824 ft. high, where signal service observations have been taken for the past nine years, has, during that time, varied but little from 40°. The mercury here hardly ever goes above 80°, nor does it in the winter ever fall much below zero, though at Butte City, and in other elevated localities, it drops every winter as low as 30° below zero, and so remains for days at a time. But, as the ground freezes hard and stays so all winter, and there is but little snow, this extreme cold weather does not much interfere with business—mining, lumbering, building and other out-door operations being as actively prosecuted during this season as any other, except in districts lying at a considerable altitude.

At intervals during the winter there occurs a warm wind from the west, in local parlance called the "chinook," and which, blowing for several days at a time, carries off any snow there may be on the ground, though it rarely ever spoils the roads by extracting the frost for more than an inch or two below the surface. In the valleys of Montana there is but little cloudy, misty or stormy weather, there being, on an average, nearly 300 fair and over 250 days of perfect sunshine in the course of the year, against 170 fair days in Buffalo and Chicago. The June rains come in the shape of gentle showers rather than violent or protracted storms. Thunder and lightning are of rare occurrence, the latter seldom doing any harm. Cyclones, hurricanes and cloud-bursts are little known in this Territory; the sand-storm that visits more southern countries being a stranger here. Montana is a healthy country, there being nowhere within its borders any swampy or malarial land, while it has about the proper altitude to insure an invigorating climate. Notwithstanding the many fatal accidents incident to mining operations, the annual death rate does not exceed 12 to 1,000. It is a good climate for consumptives, as pulmonary diseases, while they do not originate, are often cured here. The complaints most common to the country are rheumatism and mountain fever—the latter not at all prevalent.

If, deferring for the present any notice of Montana's mineral wealth, we consider for a moment

Her Agricultural and Grazing Resources.

These, it will be seen, are of no mean order. As a stock-raising country, she is probably the best on the continent—certainly the best in the whole Rocky Mountain region. For this reason stock men began to drive their flocks and herds as much as 10 or 12 years ago, bringing in first horses, bought in southern California. These thriving so well, sheep and neat cattle were next tried, and with equally good results. Although these first experiments were conducted on a small scale, Montana, it is estimated, contains now not less than 60,000 head of horses, 300,000 head of cattle, and about an equal number of sheep. Domestic animals of all kinds are easily kept here, except swine—which require to be fed—as there are but few roots and little mast in the country. The great advantage of this, as a stock-raising country, consists in the fact that horses, sheep and cattle are able to subsist, and, for the most part, keep in good condition on the native grasses, none but work animals ever receiving either fodder or shelter. It is true much stock is lost under this system; but the owners keeping large herds find it more economical, or at least less troublesome, to lose from 10% to 20% of them every few years than to provide fodder to save them from starvation.

As the animals are healthy, increase rapidly and require so little care, stock raising has been found here a profitable business, the number of neat cattle exported from the Territory last year amounting to about 35,000, of the aggregate value of \$900,000; the wool exported amounting to 1,500,000 lbs. Great numbers of cattle, sheep and hogs are slaughtered for home use. Much butter and cheese are also made, these, too, being wholly consumed in the country. Dairying can be carried on here to advantage, the nutritious grasses affording an abundance of rich milk, while the pure cold water, nearly everywhere obtainable, greatly assists in butter making. While the products of the dairy are dearer, fresh meats of all kinds are cheaper here than in California, the quality of these latter being generally good.

Fruits, Vegetables and Grain

Can be raised here, but all require irrigation, fruit trees, of course, only till they get well rooted. With the exception of the harder kinds, fruits, also grapes, are a precarious crop, on account of the early or otherwise unseasonable frosts. Vegetables, especially potatoes, are apt to be good and not very dear. With irrigation, the cereal crops produce well, even under indifferent tillage; wheat and barley yielding, on an average, 30, and oats about 35 bushels to the acre, the annual product of these several grains being about as follows: Wheat, 450,000; oats, 650,000; and barley, 60,000 bushels. As corn, owing to the cool nights, does not readily mature, but little of this grain

is grown. Over 500,000 bushels of vegetables are raised, and some 70,000 tons of hay made every year, the value of agricultural products aggregating nearly \$4,000,000 per year.

Montana contains not less than 12,000,000 acres of choice farming land, with half as much more of a poorer quality. The rest of her territory may be divided into 40,000,000 acres good grazing and an equal extent of forest lands, mostly mountainous, but containing some pasturage, there being but little absolutely barren land in the Territory. There occur here none of those arid and treeless deserts, such as occupy the whole of southeastern California and cover large portions of Arizona, southern Idaho, Utah and Nevada; and which, though they contain some grass, have a generally poor soil and very little water.

The troubles against which the Montana farmer and stockman have most to contend are the long, cold winters, unseasonable frosts and occasional visits from the grasshopper, which, attacking a certain district, remains there for three or four successive years and then disappears for a like period, transferring its depredations to some other section of the country. The untimely frosts, like the ravages of these insects, are apt to be periodical and local.

H. D.

Butte City, Montana, Aug. 5, 1882.

HORTICULTURE.

Meeting of the State Horticultural Society.

The August meeting of the State Horticultural Society, held in this city on the 25th ult., was largely attended and spirited. The society is evidently growing rapidly in popular esteem, for the horticulturists are coming from afar. At the last meeting fruit growers were present from Los Angeles county on the south to Mendocino on the north. All those interested in fruit and plant growth should remember that the society meets on the last Friday of each month, and if they are in the city on that day, let them attend and be welcome. The society desires to draw out the experience of all.

President Hilgard occupied the chair at the last meeting. The first transaction was the reading of the following essay by James Shinn: Peach Growing in California.

Perhaps no subject connected with the productive industry of this State is more interesting, or occupies a greater share of public attention, at this time, than that of the culture of fruit. The exceptionally favorable conditions of climate and the recent adoption of improved methods of preserving fruit, have given a great impetus to the business of growing fruit of all kinds, until it may be said that this interest is fast becoming one of the most important of our industries.

The State Horticultural Society is at once the outgrowth and the exponent of this revival of interest in the production of fruit, and now occupies a position of much responsibility. It is much to be desired that the discussions here had upon topics relating to this great industry may be such as to enlighten those just entering upon the business of fruit growing, and help in the solution of the difficult problems connected with it.

One of the subjects for consideration at this meeting is the culture of the peach, and it has fallen to my lot to open the discussion. The history of the peach, from its earliest introduction as a cultivated fruit, would be interesting, but I pass it over with the single remark that wherever this delicious fruit has been known, it has been a favorite with all classes. Even before the Christian era, and during the reigns of the Caesars, the peach was grown in great perfection in Italy. And so on down through the ages even to the present, this fruit has maintained its place in the very front rank among the fruits of temperate latitudes.

How Propagated.

The intelligent fruit grower need not be told that the peach is easily propagated. The seedling plants are grown from pits, and during the first summer are budded to such varieties as are desired. Known varieties are thus perpetuated and increased in number of trees to any desired extent. New varieties are produced by what is called cross-fertilization. The pollen of a blossom of one variety is brought into contact with the stigmas of a blossom of another variety. This process is frequently brought about by bees and other insects passing from one blossom to another just at the favorable moment when impregnation is practicable.

The pits of fruit so produced will produce new varieties. Dr. Kirtland, of Ohio, some years ago planted various sorts of cherry trees so near together that their branches interlaced, so that when in bloom, cross-fertilization was sure to occur in many instances. From the fruit of these intermingled branches he obtained a large number of new varieties of cherries, some of them of great excellence. I will here remark that, although our list of varieties of the peach is very long, yet of truly desirable sorts we have but comparatively few, and it is certainly desirable that well-directed efforts should be made to increase the list of our first-class peaches by the introduction of new varieties.

The peach, as compared with other fruit trees,

is rather short-lived. On the sandy soils of New Jersey from three to five crops of peaches is all that can be obtained; on this coast the tree may be kept in full bearing about 20 years. On strong loam soils, where all the conditions are favorable, it is said the peach tree may be kept in full vigor to the age of 40 years, or even more.

Classification.

Although the general appearance of peach trees in outline, foliage and growth is very similar in all varieties, yet pomologists have been able to arrange them into classes and sub-classes, which enable the grower to distinguish varieties.

First.—Peaches may be classed as pale, or white-fleshed, or as yellow-fleshed. This constitutes a very important distinction. White-fleshed peaches as a rule are less firm than the yellow, and consequently do not bear removal as well, neither are they so profitable for drying. It must also be said that they are more subject to the leaf-curl than the yellow varieties. There are, however, exceptions to the above rule.

Second.—Peaches are classed as free or clingstones. This also is a very important distinction, and one that is probably to exercise a material influence upon the peach production in this State. The clingstone peach is especially suitable for drying, and will probably be largely grown for that purpose in the near future.

Still another classification or subdivision is founded upon the peculiar formation of the leaves. The leaves of some varieties are deeply notched or "serrated," and have no glands or knobs on the foot-stalk or leaf. Others have leaves much less deeply notched, and have glands on the foot-stalk. Some varieties have round or "globose" glands, and some have kidney-shaped or "reniform" glands. This last subdivision, as founded upon the formation of the leaves and foot-stalks, is important, because it has been fully demonstrated that those varieties which have serrate, glandless leaves are lacking in constitutional stamina, and are especially liable to become mildewed.

Diseases.

The peach tree in this State has thus far been subject to very few diseases. The leaf-curl and the mildew constitute the principal if not the entire list. In some portions of our State the leaf-curl does not much affect this fruit, but in all the middle and northern counties it prevails to such an extent as to greatly curtail the product of some seasons. The causes which produce this disease are not fully known, but may probably be chargeable to sudden changes of weather at about the time of the formation of first leaves.

A very remarkable circumstance connected with this disease, is the fact that it does not attack all peach trees indiscriminately, though they may be standing near together in the same orchard. Certain varieties are more or less affected every year, and often fail to produce fruit from this cause, while other varieties are so nearly proof against this disease as to be practically free from it, and always bear full crops. The proper remedy, then, for the leaf-curl must be apparent to all, viz: reject all leaf-curling varieties, and plant only those that are comparatively proof against the disease.

The mildew is a light fungus substance that gathers upon the leaves and twigs of peach trees that lack vigor of constitution, and consequently do not make strong growth. The application of sulphur, or the sprinkling of the parts with a solution of nitre, may somewhat check the spread of the disease, but the only safe remedy consists in the destruction of all the serrate, glandless varieties, and in the high culture of your trees, so that they are kept in vigorous and healthy growth.

And now I come to consider the subject of peach culture with reference to the all important

Question of Profit.

If we go on increasing the number of our peach trees by hundreds of thousands annually, how shall we profitably dispose of the fruit? It must be admitted that this is a somewhat difficult problem.

The produce of our peach orchards will probably be quadrupled within the next four or five years. When it is considered that the peach is perishable and can only be kept in a fresh condition for a few days at most, the idea of handling so great a crop seems absolutely startling. It is certain that not one-tenth of the peaches that will be produced in the near future can be consumed in the fresh state. It is evident, then, that a large proportion of the crop must be preserved and put into such form as will admit of its being put upon the markets of the world for gradual consumption throughout the year. One of the methods used for preserving peaches and other fruits is by hermetically sealed cans. By this process the fruit is preserved in nearly its fresh and natural state, and can be sent in this form to any market far or near. I have ascertained from reliable sources that over 4,000,000 of cans of fruit were put up during the season of 1881, and that about two-thirds of these were peaches. Also, I learn that this fruit was sent to Europe, Australia, New Zealand, China and Japan, also to Mexico and other parts of this continent. These are important facts and figures, and go far towards the solution of the problem under consideration.

But we are not limited to the one method of preparing our peach crop so as to fit it for transportation to outside markets. Peaches can be dried as well as canned. By recent

improved processes for drying fruit, peaches may be so preserved as to be very inviting in appearance and very palatable. The simplicity of the drying process brings it within the reach of all fruit growers, and it has also this great recommendation, that it so greatly lessens the bulk and the weight of the fresh fruit, that it costs far less for transportation to market.

While on the subject of drying peaches, I would remind all growers that if they would derive any profit by it, they must peel the fruit. Our markets are everywhere overstocked with unpeeled dry peaches, and the prices are unremunerative; but for peeled fruit there is little danger of any lack of a good market. The clingstone peaches are especially valuable for peeling, and should be cultivated largely for that purpose.

Varieties.

Having incidentally spoken somewhat of varieties, I will only add that, as the peach season is short, it is very desirable, especially for large growers who would preserve their fruit by drying or canning, that the season, from the first ripening to the last, should be lengthened. To this end, as before hinted, efforts ought to be used to obtain new varieties, and especially earlier varieties of good, firm fruit suitable for preserving. In the selection of varieties for planting, careful regard should be had to the time of ripening, so as to secure a regular succession of fruit throughout the entire season. If we consider the many forms in which this fruit is used, the ease with which it may be grown, the universal taste of the people in its favor, together with the fact that it is easily and readily preserved, so as to be kept for use throughout the year, we shall have all the factors needed to enable us to solve the problem of how far it is safe to extend the production of the peach in this State.

Discussion.

A. T. Hatch: Some years ago, I used ashes around old peach trees, and found it of great benefit. The leaves of those trees were green and rank, while the leaves on the other trees, not so served, were yellow and red. The fruit on them was of very good size and flavor, and in every way good peaches. And furthermore, a gentleman of my acquaintance, no longer ago than yesterday, told me something in regard to the peach which I had not heard. In regard to renewing the life and health of old trees, he said, that somewhere that he had lived in the East a man had bought some very fine peach trees. They bore well at first, but afterward decreased in size and quality, as they always do. He dug about the tree and put quite a quantity of charcoal about each one. The result was, the following season he took to a little local fair a lot of those peaches, and sold them at auction at 50 cents apiece, which demonstrates that there was some great superiority in those peaches, and undoubtedly from the treatment he had given them. His wife told me that in preserving them she had to use candy jars with large mouths, to get the peaches in.

R. J. Trumbull: I would like to ask (the fact being known that the plum is now largely propagated on the peach stock) if the ashes have the same effect on the plum.

Mr. Shinn: It is as good for that as anything.

C. H. Dwinelle: To answer Mr. Trumbull's question I would ask another, and that is, whether anyone present has applied wood ashes to any member of the rose family without marked improvement—or charcoal either. I would say that I have repeatedly read of peach and apple trees, and also plum trees, that have been wonderfully renovated by wood ashes. The reason is that the ashes furnish potash. I was in hopes the matter of feeding the peach trees—the proper treatment of the soil—would come up to-day. I begin to think that proper pruning is either not understood, or is utterly neglected in this State. I am happy to say that I have heard, on good authority (very likely the gentleman who told me the fact is present), that there are peach trees in one of the foothill mining towns to-day which were planted early in the fifties, that are to-day as healthy and profitable as any trees in the State, because they have been annually and properly pruned, and have been properly manured. I know this, that in the East, some years ago, a man bought a place for a residence that had some old, worn out peaches on it. As a matter of experiment, he cut them back and used wood ashes and iron scraps, and the result was a complete renovation of the trees—good, healthy trees and the finest fruit. In regard to iron, it has been repeatedly experimented with as a tonic for the peach with admirable success. I was told positively this spring that a lady tried this as a cure for the curled leaf with trees that had curled for several years. The result was no curled leaf. The easiest way to get the iron is to go to the country blacksmith and get the sweepings, and particularly are they good, because you get more or less hoof parings, which furnish ammonia.

I had a conversation, some two or three years ago, with a gentleman who was trying to raise the almond. He had great success with it at first, but it soon began to fail. He thought that the climate was changing. I demurred to that a little. He said he had got some new trees set out. I asked him what made him think the climate had changed. He said, because his trees had failed which were good at first. I said, perhaps the trees needed nourishment that they didn't get, or were getting so old they needed pruning. No; he had got young trees, and they did not bear. What did you have on that ground before? Peach trees. Why

did you root them up? He had exhausted the ground of that food which nourishes the peach trees, and then he had pulled out the peach trees and put in the almond, and was astonished that the climate had changed.

I must say, I think the popular idea that the peach tree is short-lived is entirely erroneous and unprofitable. Treat it as the French do in the main; that is, prune it properly and fertilize it, and it will live and flourish for a long period.

Prof. Hilgard: It is quite certain that lime is more especially favorable to all fruits of the rose family, for they naturally frequent limey soils everywhere. Ashes always exercise action largely through the lime they contain. As ashes are scarce in California, I suggest that lime is the more available article, especially in the shape of marls.

Mr. Trumbull: I think the idea suggested by Prof. Dwinelle should be elaborated—intensified. There is no question but the peach will live longer in California than it is doing in the East, and longer and better in California than it has hitherto done. Now and then we see peach trees, and on inquiry, we find they are 25 or 30 years old. They were very profitable bearers then, though they had been neglected. I know of an owner of some property who had just come into possession. There were some old trees on the place which he had a notion to cut down. They are too old, he said. He said the fruit was very good. I asked him, have you any better on the younger trees? He said, no. He cut those trees back, and there is no question but that he will have a good crop next year. We can renew the growth of the peach by renewing and fertilizing the soil. That is one of the most important questions in connection with this subject. Pruning with cultivation—we will have to use both. Fertilize the soil and use the knife. The question is a very important one. Mr. Smith has one of the most flourishing peach orchards in the State. His orchard is to-day young. What will it be 15 years hence?

Milton Thomas: I have trees in my orchard 26 or 27 years old. They are doing nicely and bearing well to-day.

Mr. Shinn: I repeat, I only understood I was to open the subject. When I was preparing my paper, I looked up some authorities with regard to what would be the proper fertilizers for the peach tree according to the analysis which had been made. The one given as the best was lime, phosphates and wood ashes. I think, Mr. President, that the great point to-day, with regard to peach culture, is not quite so much the best method of preserving the trees we have, but should we go on and buy hundreds and thousands of trees, and go and buy more next spring, and so on, what are we going to do with the product? Can we preserve them in this State?

A. T. Hatch: I would like to ask Mr. Jessup if he used iron about his peaches.

W. H. Jessup: I tried iron filings and drillings, principally among the apple and cherry trees; but I used it too late in the spring to have much effect. I think, from the indications I see, they will be benefited by it. I used 4,000 lbs. last year on 10 to 15 acres of land. The iron filings are fine, and I sowed it like wheat. I have an old peach tree 25 years old on my place, but there is not a tree in my orchard that bears a finer crop than that one does. It is true it is an old, decrepit-looking tree, but for all that I pruned it regularly. That is the great secret in the cultivation of the peach here. I would go so far as to say it is more important than the fertilizing.

Dr. Kellogg: In confirmation of my friend Shinn's remarks on the age which the peach tree may attain, I will say that one which I remember was 90 years old when I lived in the same locality, and that was 25 or 30 years ago; but this peach tree was in good bearing condition. In my grandfather's place, I recollect very well, we had peach trees a foot to 18 inches in diameter, and as large as an ordinary apple tree; but they were still bearing.

Mr. Trumbull: Is bone dust used as a fertilizer for peach and fruit trees in general?

Prof. Hilgard: It is generally valuable.

Mr. Trumbull: Last summer, or earlier than this, perhaps in July, a man that I had employed conceived the idea of using a mulch of coarse manure. It was spread around pretty freely, and allowed to remain until midwinter, and then dug under. It changed its character but little, and even now has not rotted. I think such application of manure is of little use.

Mr. Wagoner: As far as the peach in our country is concerned, I have planted there, in the last few years, some 500 or 600, and they are not a success. We have had what is called the blight, or gum disease, so much that we shall have scarcely a crop. For myself, I have commenced grafting my trees over to plums. I am grafting the north side of each tree, and I am satisfied I shall make a success. Two years ago last spring I planted 250 peach trees—17 varieties—which came from Mr. Shinn's nurseries. This spring they had quite a number of peaches on, but the May frost killed all of those. On the place there are some plum trees, which have been there 20 or 21 years, and they fruit profusely. I cut some of my trees back, and I find they are sprouting up nicely—new shoots, new wood—and they will make healthy trees. A few years ago I was on the foothills of the Sierras, and saw a peach grower who had cut his trees back two or three years before. They had sprouted up and were bearing heavily. They had been there about 15 or 20 years.

Mr. Jessup: I think in putting those fertilizers around the trees, a great many make a great mistake. I have seen parties put those fertilizers all around the stock of the tree. I think the proper place is to put it where the root feeders are—over a circle of ground at a distance from the trunk.

Mr. Shaw: Is gumming caused by frost? I have some peach trees that last spring gummed very badly. I thought perhaps it was caused by frost.

Dried Peaches.

Mr. Hixson: I would like to second Mr. Shinn's ideas in regard to drying fruit and peeling the peach. Why, we are getting circulars every week from the East. The latest Chicago prices are 18 to 20 cents for sun-dried peeled peaches; 33 to 35 cents for evaporated peeled peaches. The sun-dried unpeeled, are abundant at five cents, while peeled sun-dried are worth from 17 to 20 cents. There is no very great advantage between evaporating with the peelings on and sun-drying. I think there is every inducement in the world for people to peel their peaches. There is a mistake about New Jersey being the peach country. The crop has almost given out in New Jersey. Delaware and Maryland are the peach States. In regard to dried fruit, the quantity produced East does not have much effect upon our markets here.

Mr. Trumbull: I wish to ask two questions. Is it possible for us to overdo the growing of the peach, and is there any discrimination with regard to variety when dried?

Mr. Hixson: If we cut them down to 15 cents a pound I think we can sell a very great many of them. I wouldn't pretend to say how much when we get fruit as desirable as peeled peaches. They will go into competition with prunes and a great many other things.

In regard to the varieties, as yet we know nothing but a dried peach. It is peeled dried peaches or unpeeled dried peaches. There is no discrimination in varieties. My idea is that the cling peach would be much more desirable than the Crawford as a dried peach. The Morris White and some few varieties that are sweet might do very well. Mr. Hixson said he did not know of any dried peaches being shipped to Europe from here.

Prof. Dwinelle: While speaking about the prospective competition of the Southwest, and the amount of unpeeled peaches coming from there, I am reminded of a conversation with a man from there, who said that the peach grows there almost like a weed. Most peaches are grown without any cultivation whatever, like a wild thing. They are largely used to feed swine and for distilling. Setting out an orchard of peach trees is a thing, over a very large part of the Southwest, not thought of. May we not expect that the different forms of evaporators may be carried down there and the product be greatly improved.

Mr. Blowers: If we plant plenty of trees, are we going to have plenty of labor? In the future, the question is a little dark. We can hire Chinamen at 80 cents a day, 10 hours work. What can we do with labor at more than twice that price.

Mrs. Blowers: I would call attention to the mistake often made of attempting to make good dried fruit from the cullings of the pickers. First-class dried fruit requires good fruit to start with. It is also worthy of remark that if one determines to dry peaches unpeeled, the fuzz of the peach should be rubbed off with a brush or cloth before cutting.

Mr. Shinn: About varieties; it is clear that the white-fleshed peaches are not so suitable for drying as the yellow, as a rule. The white-fleshed will not look so well; they will be dark. It won't do to spread them out in the sun. Any good peach of good size will make a good dried peach.

Mr. Jessup: I don't believe that there is enough fruit land in California to produce more dried fruit than we can sell, if the same care is taken in preparing the fruit for the market that the farmer takes in preparing his grain. The time is coming when our orchards will go down, or we have got to put good, clean dried fruit on the market. It must be cured and put up so it can be eaten. It is true we have got to cultivate a taste in some varieties. We must have good fruit prepared with great care. If that is done, we will have no difficulty in cultivating a taste for it. When we can see the difference in the price of peaches, we shall find the expense that is allowed for the extra labor of peeling them is more than the entire value of the other peaches.

Plum Growing.

Mr. Webster: The plum question is one of great interest to this State. According to a recent English author, there are now some 274 varieties of plums. American authors place the number of varieties below that number. The fruit is now produced in almost every country in the world. It was the pride of old Damascus centuries ago, and has grown in favor ever since. The principal plum orchards of the world are in France, and we are using them in this market very largely to-day.

The question of supply and demand is one that concerns California directly. The soil and climate of this State are well adapted to almost every kind of plum and prune; in fact, I think, according to all accounts, the best country in the world. In the Eastern and Western States, of late years, they have not proved profitable, because of disease or insects which infested them, especially the curculio. In this State we have had nothing very serious yet, but what the future may develop is a question.

We have in California, in the production of plums, evidently no competition in the United States, and we ought to be able to supply the demand of the United States, at least. In the matter of dried fruit and canning, which must in the future enter largely in the methods of consumption, there is no question but what there will be a very large business. The Washington is possibly the best in the method of drying. That kind, with other varieties resembling it, are sought after more for drying than any other varieties. They can be largely used, and they will be extensively shipped.

The current price for imported prunes, buying large lots, is from six to seven cents. They sell in this market at 10 cents. They have to pay a duty of \$20 per ton.

This being in our favor to the extent of this duty, and having a better country, it ought to be sufficiently in our favor to run French prunes out of the United States, and furnish largely for Europe. We have many competitors in the production of peaches in countries where the labor is cheaper than here; consequently, we have many more obstacles to overcome in order to make the work of peach drying profitable. With plums, I am satisfied they can be dried in this State at six or seven cents a pound.

With such a price as that, we should have a market for all we can produce. My impression is that the fruits of this coast which will be most profitable are apricots and prunes, and such plums as may be dried conveniently and profitably, because we have few competitors for those fruits. With apricots, prunes and plums, we will be able to supply three-fourths of the world.

Yield of Dried Plums.

W. H. Jessup, Haywards: I will give the result of my experiments to ascertain the amount of dried fruit obtained from green fruit, on the basis of 100 lbs. of the green or fresh fruit, as far as I have gone:

Yellow Egg Plums.—One hundred pounds, 6 to the pound; loss in pitting, 4 lbs.; loss in drying, 7 lbs.; total loss, 81 lbs.; net result, 19 lbs.

Columbia Plums.—One hundred pounds, 6 to the pound; loss in pitting, 6½ lbs.; loss in drying, 65 lbs.; total loss, 71½ lbs.; net result, 28½ lbs.

Washington Plums.—One hundred pounds, 11 to the pound; loss in pitting, 6 lbs.; loss in drying, 7½ lbs.; total loss, 80½ lbs.; net result, 19½ lbs.

Bradshaw Plums.—One hundred pounds, 7 to the pound; loss in pitting, 8 lbs.; loss in drying, 77 lbs.; total loss, 85 lbs.; net result, 15 lbs.

The Bulgarian Prune.—One hundred pounds, 14 to the pound; dried whole; loss in drying, 65 lbs.; net result, 35 lbs.

The Victoria Plum or Prune.—One hundred pounds, 8 to the pound; loss in drying, 66½ lbs.; net result, 33½ lbs. The same fruit pitted—100 lbs.—loss in pitting and drying, 79 lbs.; net result, 21 lbs.

Apricots, the Hemskirk.—One hundred pounds, 8 to the pound; loss in pitting, 8 lbs.; loss in drying, 70 lbs.; total loss, 78 lbs.; net result, 22 lbs.

The Death of Mr. Redding.

Mr. Trumbull: I suppose all members are aware of the death of B. B. Redding. He was one of our first members, and was formerly quite constant in his attendance. He has always taken the warmest interest in the prosperity of this society. He felt that this society had much to do for California. I move that a committee be appointed to prepare a suitable expression of regret at his death and respect to his memory.

The motion was carried. The President appointed Mr. Trumbull, Mr. Shinn and Prof. Dwinelle a committee to draw up resolutions of respect to the memory of the late B. B. Redding. The following report of the committee was unanimously adopted:

Resolved, That we, as members of the State Horticultural Society, hear with deep sorrow the announcement of the death of Hon. B. B. Redding, one of the organizers of our society, and for two years a member of our Board of Directors; that we desire to bear witness to the zeal and devotion of our deceased associate in the promotion of the work of the society and in all efforts calculated to advance the horticultural interest of California; that we remember with admiration his intelligent researches concerning the adaptation of our State for the introduction of new cultures, and his constant search for promising varieties of plants and fruits in foreign lands; that we regard his death as a severe loss to our horticulture; and that while we deeply regret our own deprivation of his companionship and counsels, we do not forget that there are others, his afflicted family, whose bereavement is beyond expression, and to whom we extend our heartfelt sympathy, with the assurance that we join with them in sincere honors to his memory.—R. J. TRUMBULL, C. H. DWINELLE, JAS. SHINN.

Fruit Exhibits.

Mr. Shinn: Nichols, Orange Cling, Susquehanna, Orange Free, Jones' Seedling, and Sellers' Cling peaches. Dr. Strentzel: Peen-to, or Chinese peach. Mr. Clough, of Niles: Petit prune, grafted on almond; fine yellow peach resembling the Crawford. Its characteristic is that it is never affected by curled leaf. Prof. Hilgard: Moorpark apricot and Hungarian prune. O. B. Shaw: Variety of plum and pear for identification. Harrison Barto, of Santa Clara, sent a handsome sample of Foster peaches, which, with him, are superior to the Yellow Crawford; also some Prince Engelbert and French prunes.

After a long and interesting meeting the society adjourned. The subject for discussion at the September meeting will be, "What Fruits are Best to Plant for Profit?" and all members are expected to bring forward their best judgment about it.

THE HORSE IN EARLY TIMES.—The most ancient monuments of Mesopotamia and Egypt contained no mention of the horse, while the creature represented in Assyrian monuments had the tail of an ass. The first literary mention of the horse in Egypt belonged to a period of about 18 centuries before Christ. From that time notices of horses in Egypt were frequent and common.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 7.

Sunday Law.

The subject of Sunday law is a matter of grave importance to every individual, family, State and nation. If we would have happy homes and peaceful lands, something must be done to check the destroying hand of the liquor-traffic and saloon-keeper and the over-mastering appetite for stimulants which is taking possession of many of our people. The question of how shall we allay this evil is attracting the attention of the thinking people, who can see what its influence will be upon the world's future. Reports come in from all quarters of the globe of here and there a place where prohibition prevails and Sunday laws are enforced with good effects; statistics show these places to be quiet and healthy, having few poor and empty jails. "No saloons, no intemperance and no crime."

Prohibition, local option and Sunday law have become State laws in many of the States of the Union, and the results have been good. Now we find it entering into the politics of our own favored State. Politicians may be using it to serve their own selfish ends; but no matter, if officers are elected who will sustain it and see the law enforced as one of the statutes of the land.

Our State Grange is up to the times in this, as in all other things pertaining to the best welfare of humanity, as is clearly demonstrated by the resolution passed at its session last year, expressing the opinions of all good Patrons in these words: *Resolved*, "That it is the sense of this Grange that all drinking saloons within the State of California should be compelled to comply with the law, which requires their closing on the Sabbath day." If the drinking saloons are compelled to comply with the law, very many of the evils which may be traced to their influence will be remedied. Bro. Webster makes some very excellent remarks upon this resolution in the issue of the *Patron* of August 12th, but thinks that part of the law objectionable "which requires all departments of business and professions to refrain from following their avocations on the Christian Sabbath. The most un-Christian spirit in the world is the spirit that is disposed to compel all other sects and opinions to bow to its conceptions of propriety. That the children of the human family should have one day in seven for a rest-day, seems to me to be a necessity, and a law of humanity as well as of Christianity."

If we force our minds and bodies to work in the same groove from week to week, and from year to year, without any respite whatever, they will be worn out and useless long before we have run our three score and ten. What excuse do we hear given for this ceaseless toil? Nothing but greedy gain of filthy lucre. It would not be so bad if those who desire to wear away their lives for the sake of gold were the only ones injured, but those in their employ must work for their profit, and are often compelled to do so or lose the positions which they can not afford to lose. In some places only a few of the employees are required to spend their Sundays for the benefit of the employer in repairing machinery or writing up books, that the business of the week may not be interrupted.

The calm and peaceful mind, which comes to the one who puts away all business worries, and yields to the restful, strengthening influences of a Christian Sabbath, fortifies him with new vigor, energy and courage for the next week's trials and anxieties. Many say they prefer to close their places of business on Sunday, but if their neighbors keep their places open, they must do so also, as there are many who can make their purchases only on that day. If the law should be enforced, all would be required to close their doors on Sunday, and the Sunday purchasers would readily find other time for supplying their wants, and all would find themselves enriched instead of impoverished. Dr. Leonard W. Bacon, who has made a study of the subject, both in this country and in Europe, says: "The workingman who may work on Sunday when work is wanted, has got to work on Sunday. For the liberty of rest for each one depends on a law of rest for all."

Many think they are getting Sunday rest by picnicing, reveling and going on excursions. While they are enjoying their fancied rest, do they ever think that they are compelling others to work hard to accommodate them. Employees upon railroads and steamboats are required to labor more on Sunday than on any other day. Sunday rest is unknown to them. The Sunday revelers find themselves more worn out Sunday night than they were on Saturday evening, and Monday morning they go about their various avocations with a lagging footstep. They say it is the only time they have, and they tell the truth, as their employers require every moment of their time. How much better it would be for all concerned if the firms would give them a holiday once or twice a year, and all spend a day among the beauties of nature.

It would be well if every citizen could read the lecture given by Dr. Robert Patterson, at

Pacific Grove Retreat, Monterey, and published in the *Pacific* of Aug. 23d, the subject being "The Workingman's Right to Rest on the Sabbath." He gives some very good reasons for the existence of a Sunday law, showing us that men of science recognize the fact that "Sabbath rest" is as necessary to life "as ventilation, or bread, or sleep." He proves this assertion by the "great law of periodicity (a law now recognized by all scientists as world-wide and eternal)." He proves that nature has laws requiring a period of rest in all her workings, from the time of the geological formations of the earth to the mineral and vegetable kingdoms of to-day. Trees and plants have seasons of rest, and science has demonstrated that the particles of iron in the axles of railway trains in constant use need to be "thoroughly cooled once in eight days" to prevent their breaking. He goes on to prove the necessity of rest to the continuance of human life by saying that "the fever heat of the working days cools down on the Sabbath." He also speaks of the example set by the Pilgrim Fathers, who "landed on Plymouth Rock on Friday, the 2d of December, 1620," and although Saturday night found them without defense against an inroad from the hostile Indians and no houses for shelter, they rested on Sunday "according to the commandment, and gave to their country the blessed Sabbath, consecrated by their heroic example."

A glance at the following figures, taken from the *Pacific* of Aug. 9th, will convince anyone of the terrible power which the tyrant rum is gaining over the children of men in the United States: "Religion.—Clergy in the United States, \$3,637; church members, 11,459,954; Sunday-schools, 78,045; teachers, 853,100; Sunday-school scholars, 6,504,054; total contributed for the support of religion, \$47,635,495.

Rum.—Retail liquor sellers in the United States, 166,000; men, women and children in the United States who drink liquors, 18,000,000; number per annum killed by rum, 65,000; retailed in the United States in 1878, \$715,575,000; total contributed for the support of religion, \$47,635,495; rum over religion, \$607,639,505."

Stockton Grange Harvest Feast.

[Written for RURAL PRESS by MRS. W. D. ASHLEY.]

Stockton Grange honored the closing ceremonies (performed by W. M., S. G. Flint) of receiving a class of 13 young people by a grand harvest feast on the 19th, at which 150 partook. The beauty of the whole thing was that it was all on time, though the session lasted till five. Strong hands helped to carry, dextrous hands to arrange, while kind inquiries, good humored sallies, shafts of wit, childhood's light laugh and step all enlivened the halls. A committee of young ladies and gentlemen decorated the hall with good taste. The inviting tables were scenes of gayety and fun. I fear our good Dr. Gratton ate six chickens, but that they didn't kill him was proved by his excellent speech, telling how other people live, how productive the reclaimed mining lands are, how much more valuable they are for tillage than ores. Hydraulic mining must stop. Good men opposed to it, opposed to railroad extortion and intemperance, must be elected.

Visitors pronounced the class a fine one to look at. Bro. and Sister Johnston and Hancock from Sacramento, and members from Lodi, Woodbridge, Elliott and Washington Granges honored us with their presence. Three members were elected; three sent applications. We have eight more to come in at least. Our ranks are swelling in numbers and courage. People see that our purposes are good for country and city—for improvement in every way. Perhaps the State Grange meeting is a leaven to raise us some; anyway we intend to have a rousing meeting in October, and mean to get board and fare down as low as possible, and remember that

"True friendship's laws are by this rule expressed: Welcome the coming, speed the parting guest."

W. M. Flint's graphic account of how he had to start the speaking at each meeting he addressed, whether he was ready or not, amused us. Everybody could talk if they had to; he had to, and had learned to do it. We regretted that it was at pecuniary cost that he was present to help us, it being the season of hop-drying, a very delicate and difficult operation—such watchfulness as to keep him up till 11 or 12 o'clock for many nights. He exhorted the young to take hold of the Grange work with their youthful vigor; soon we would be gone and they left to fill our places.

Bro. Johnston tersely told the success of the State prisoners in the State Grange plan of making bags; \$25,000 of the appropriation had been paid back this year; sacks could be made for 4¢ or 5 cents apiece, but taxes lowered there, had to be raised to protect other districts from debris, still coming down. A firm stand must be taken. One great purpose of the Order was to keep the young on the farm; give them a school in which to recreate and improve. If children left the farm, parents were to blame for the slow, stupid thing they made of farming; to blame for holding professions above farming. What profession was greater than that which furnished seven-eighths of the wealth of the world and brought man closer to nature than any other, and required more learning. Bro. Hancock complimented the new class. People could learn to talk as well as to walk; all ought to take part. Good and pure men should be

upheld for officers—men alive to our needs; was glad to see the improvement in the Granges; spoke feelingly of the pleasure he had in the Order; hoped to see a grand meeting here in October.

Master Ennis gave an account of the unlooked-for prosperity of the co-operative store at Lodi; three years they had tried; relying on themselves, they are doing a fine business.

Sister Johnston greeted the class with womanly words of cheer. She was so glad to see the young enter the Grange fold and walk in pure paths.

Sister Overhiser happily thanked the visitors for their kindly presence; hoped they and all of the brothers and sisters would be sure to meet us at the State Grange.

Energetic Bro. Wolf was ill, but he would respond, if it was not very smart. If young people were allowed more voice in farm matters they would like the farm better; make partners of them more. When they took loads of grain to market, the buyer had all of the say about price, they had no voice; this was wrong. They must be treated with respect.

News of bereavement kept Bro. Ketchum from speaking. Bro. Overhiser's ringing voice invited all to the State Grange. Work ought to be thought, planned, got ready, so that the session should be a productive one. He had had a good time; thanked the visitors for it. Our M., Marsh, thanked the Patrons for their presence; he was "no speaker." We know that he is a worker. Some private work was done and other good things said.

Good Templar hall fronts on Main street, between American and California, is in Austin Bro's. building, fitted up with social dining hall, kitchen, closets, with modern improvements; 300, even 500, can be seated in it. We think the State Grange will be pleased with this beautiful new hall when they meet on Oct. 3d. Our Grange Committee will report soon on the rates of board and fare to the RURAL PRESS and Patron. Let us have a rousing turnout from all over the State.

I do hope to see P. M. Spillman's fatherly face there, likewise the editors of the excellent RURAL PRESS.

Stockton, Aug. 23d.

Nominating Convention.

We have received copies of documents from which we condense the following information: After gaining the approval of influential farmers in different parts of the State, Bro. J. V. Webster has furnished a circular and blank form to be signed by farmers, calling county conventions of the signers of the blanks to meet between the hours of two and four o'clock p. m. on Saturday, September 30th, to select delegates to a State convention to meet at Stockton at 10 o'clock a. m. on Saturday, October 7th, to nominate three anti-monopoly candidates for Railroad Commissioners; two Supreme Judges, and members of the State Board of Equalization; the names of such candidates to be selected from tickets already nominated, provided satisfactory names can be found on tickets previously nominated, otherwise new names are to be put forward. This is a new feature in our political history. Bro. Webster is it downright earnest in this forward undertaking. Those who wish the fullest information and blanks for assisting in this movement will receive the same by addressing J. V. Webster, No. 40 California St., S. F.

FOR THE STATE GRANGE.—Wm. Cyrus, Master of the State Grange of Oregon, is expected (by his brother-in-law, D. G. Heald, of Cloverdale), to attend the State Grange at Stockton. Bro. Cyrus is well known to some of our Patrons as a stanch Granger, and his visit, representative of the fraternal feeling of our neighboring State, will be hailed with pleasure, and no doubt to the profit of the many. We hope nothing will prevent his coming. Bro. Heald hints at the probability of an overland camping trip of Patrons from Cloverdale to Stockton, and we advise Bro. Overhiser, as champion of the camping cause, to be ready for any emergency in that line.

THE SACKETT SCHOOL.—We are pleased to learn that the Sackett School, for boys, in Oakland is opening the year very prosperously. The attendance has been very large, testifying to the popularity of the institution far better than mere verbal or written endorsement. In addition to the excellent advantages heretofore afforded, provision has been made by the principal whereby pupils in the primary department may be taught free-hand drawing during the entire year free of charge. In the academic department writing lessons will be given during the year free, the teacher being Prof. D. C. Taylor, whose well-known reputation as an instructor in the art of penmanship is a sufficient guaranty that these pupils will be greatly benefited in this important branch of their studies.

Value of the "Rural" to Beginners.

EDITORS PRESS.—I bought a small place in the Carpinteria about a year and a half ago, and am engaged in fruit culture. I at once subscribed for the RURAL for six months, through H. A. C. McPhail, news dealer, and liked it so well, and got so many valuable suggestions from it, that when the time expired, I renewed my subscription, and have continued ever since. CLARENCE C. KNIGHT, Santa Barbara, Cal.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

THE BEST PRIZES.—Alameda Reporter, Aug. 26: According to the published notice, the farmers who grow beets for the sugar mill at Alvarado met Saturday, August 12th, and chose two judges, and the company a third judge, to award the prizes offered. The fields of competitors were viewed, and the following award made: We, the undersigned committee, appointed by a farmers' meeting, held at the Standard Sugar Refinery's office, Alvarado, August 12, 1882, to award prizes to persons having the best growing crop of sugar beets, as per circular issued January 1, 1882, find that: E. H. Dyer has the best 100 acres—prize, \$200; J. Lawrie, best 75 acres—prize, \$150; J. Lawrie, best 50 acres—prize, \$100; J. M. Ingalls, best 25 acres—prize, \$50; L. L. King, best 10 acres—prize, \$20; E. H. Dyer, best 5 acres—prize, \$10.—Signed, JOHN C. WHIPPLE, SAMUEL I. MARSTON, W. F. EMERY.

CURRENT WINE.—Haywards Journal: Some of our fruit growers have turned their attention this year to the manufacture, on a small scale, of currant wine, more as an experiment than as a source of revenue. So far their efforts have met with greater success than could have been hoped for, and there is a probability that the experiment may be an initiatory step toward laying the foundation for an industry that will prove very remunerative to those who may embark in it.

BUTTE.

FARMING LANDS IN BUTTE COUNTY.—Oroville Mercury: Recently, while across the plains east of Feather river and north of the Honcut, our attention was called to the rapid increase in the value of the land. From '49 to '67, a farmer who settled upon this red land was considered out of his senses. It was said nothing would grow upon it; it was worthless for stock, except a short portion of the year; and as for grain, that was not to be thought of. Summer-fallowing was tried about '66, and it was at once seen that this was the true method of farming this land. Before this the value of the land was nominal. Some amusing instances were related by Mr. G. W. Hutchins, illustrating at what prices the land was held. In speaking of these values, we of course have to take into account the fact that since then parties have obtained a title to their land. In some instances the cost of a Government title was \$1.25 an acre, and in others, \$2.50. Railroad land varied from \$6 to \$15 an acre. Fencing and other improvements must be added; but notwithstanding these, the value of the land has increased 100%. The John Harriger farm, called for many years "Hole in the Ground," because the old fellow who owned it lived in a sort of underground cabin, was sold in 1866 for \$1,200. It cannot be bought today short of \$6,000. A quarter section of the John Pollock ranch was sold for \$40. This was not considered a particularly good bargain until it was known that the purchaser had obtained with it a shanty worth \$12 and a stove worth \$20. This same land to-day is held at from \$30 to \$40 an acre. Seven years ago railroad land on the Seely place was graded at \$15 per acre. This was considered an outrageous price, but to-day the land is worth \$25 an acre. Land then graded at \$6 cannot be bought for \$12 now. Just below the Honcut, the Petrie ranch was bought for \$4 an acre. After Mr. Danville cut wood enough from the land to pay for the place, he sold it for \$11 an acre. It is now worth \$30. In Butte county this tract of red land of this class covers from 35 to 40 square miles. During the past six years it has increased 100%. In time, if timber is planted, these farms will be as desirable as one could wish.

BLOOD'S CANNERY.—Record, Aug. 26: About 30,000 cans of pears will be put up at A. F. Blood's cannery. That number of apricots were canned and nearly that number of cherries and blackberries. There being a scarcity of peaches this year, not much of that fruit has been put up. They do not pay much attention to vegetables at the cannery, but Mr. Blood said that he may put up a large amount of tomatoes this fall. The establishment is kept neat and clean—in "apple pie order," every pan, can and box being white and shining. The Chico cannery was started on a small scale, but during the short time it has been in operation it has grown to gigantic proportions.

COLUSA.

COLUSA AS A FRUIT DISTRICT.—Sun, Aug. 26: The time is not far distant when Colusa will take a place in the front ranks of fruit-growing counties. We have seen this summer fruit of almost all varieties, grown in Colusa county, which are not excelled by any that we have seen from the lower counties. The dry, gravelly soil of the plains and foothills produces grapes unsurpassed in size and quality. John Miller, of Pleasant valley, Solano county, an old fruit grower, has a ranch near Arbuckle, upon which, we are informed, he raised this year vegetables seven days earlier than Pleasant or Yuba valleys. It is his design to make there a fruit and vegetable farm.

EL DORADO.

THE FAIR.—El Dorado District Agricultural Association has made excellent arrangements for the annual fair, which is to open at Placerville on the 5th of September, and continue five days. The district comprises the counties of

Amador, El Dorado, Placer, Nevada, Alpine and Mono, but El Dorado receives but little assistance, generally, from the other counties. Some \$3,000 will be distributed in premiums, and in addition to the usual attractions at the park, there will this year be several new and novel features. No part of the State can make a better horticultural display than El Dorado, and in this respect her fairs are always successful. The forthcoming exhibition promises to be a great local attraction.

LAKE.

THE EARLY FROST.—*Bee-Democrat*, Aug. 25: The report reaches us that there was a heavy frost in Cobb valley on Friday night last—so heavy that one could scrape it in quantities from the fence boards. Seems like that was cooling off right suddenly; after all, considering its elevation, it is not much to be wondered at. The more tender fruits and vegetables find it a "scratch" to mature under such climatic difficulties. That same night a light frost was also noted in Scott's valley, not sufficiently hard to do much damage to fruit or garden truck.

LOS ANGELES.

PEAR PRICES.—*Herald*, Aug. 26: Mr. H. J. Crow the other day sold the whole product of his pear orchard at 2½ cents a pound, a bigger price than that at which pears are now being peddled about our streets at retail. We have heretofore spoken of Mr. Crow's splendid orchard of the temperate zone fruits, at the base of the Verdugo canyon. He obtained such a large price because of an active competition, the successful bidder having made arrangements to ship the fruit East. Mr. Crow's pear orchard is young, but the yield this year was full 50 tons, or 100,000 lbs., which gave our enterprising fruiterer \$2,750 for his pears only. The business of raising the temperate zone fruits, which Mr. Crow fearlessly embarked in, will doubtless experience a marked impetus from this splendid pecuniary outcome of this enterprising Verdugo fruit farm. The pear is but a single one of his specialties.

A LARGE RANCH.—The Laguna ranch will soon be the scene of very thorough agricultural operations, and on a colossal scale at that. The gentlemen who have leased this splendid ranch from Col. R. S. Baker, for eight years and a half, at a yearly rental of \$19,000, are starting in to farm on a grand scale. They propose to invest \$80,000 in their preliminary operations, and have sent down 120 mules, or a very superior grade, to inaugurate on the Laguna the era of the plow. They propose to sow this royal domain in grain, and even one wet year will reimburse them for the first cost of the enterprise. Amongst those interested in the undertaking are Mr. C. H. Simpkins, of the gas company, Mr. Denker, of the Cosmopolitan hotel, and a number of capitalists of San Francisco. During the eight years to come, the Laguna will be the center of very productive and remunerative farming operations.

MONTEREY.

SALINAS VALLEY NOTES.—*Democrat*, Aug. 26: Harvesting in this valley is approaching the end, which will virtually be reached about the 15th of next month. During the present week a large quantity of wheat has been sold for exportation, one party, Mr. H. S. Ball, filling orders for 5,000 tons at \$1.50 the cental. Barley of good quality has been quotable here this week at \$1.10 to \$1.12 the cental. In our valley, this season will go upon the record as a good one, in respect to amount of yield, quality (which has been exceptionally good, wheat ranking as No. 1), and price; these results being directly attributable to the long, cool spring and entire absence of desiccating winds.

NAPA.

CORK OAKS.—*Reporter*, Aug. 25: Some 25 years ago thousands of cork oak acorns were sent out by the Patent Office to California for experimental purposes. They were contained in sealed cans, and were very generally planted, more from being an exotic plant than with the expectation of cultivating them as an industrial experiment. Very few of the acorns germinated and produced plants, whether owing to the germ being dead or to the lack of knowledge as to the proper methods of cultivation; and perhaps there is not to be found in the State a dozen cork trees growing as the fruits of this Patent Office venture. There is one cork tree growing vigorously near Sonoma City, and we have heard of one or two in Napa valley, while in the southern part of the State they are not infrequent. These trees have attained considerable size, and show a fine quality of bark. In view of the fact that there is no substitute yet discovered in art or nature for bottle corks, a large and constant demand will exist for cork oak bark. The native habitat of the cork oak is Spain, Portugal, Italy and Morocco, where the tree is cultivated on sterile, rocky slopes given over especially to its growth. A wine-growing country like California should be a cork oak country also, and the utility of producing here the stoppers for the bottles that are to be filled with our native wines cannot be questioned. On the slopes of California foothills where the white oak and live oak form so distinctive features of the landscape, the true Spanish cork oak would probably thrive; and its acorns should be planted by the thousand and ten thousand in the autumn where they are to remain. The acorns are properly procured direct from Spain in boxes or barrels, packed in charcoal. They should be shipped thence as soon as they are ripe in the autumn, and planted

here as soon as they arrive. A few can be had by mail for experiments. It is highly probable that on the lava soils of the mountains of upper Napa valley and Lake county the cork oak would thrive as vigorously as the chestnut oak, and as these lands are stripped of their trees for tan bark, it would be a wise policy to substitute the cork oak tree in their place. Under present conditions, these lands are being stripped of their timber, and are worthless, so far as is known, when that is cut off.

VINE PRUNINGS.—In Napa county most of the vineyardists prepare a fertilizer by returning the prunings to the soil. A person (a boy will answer) precedes the pruner, and with a pair of pruning shears cuts the canes into small pieces—lengths of two, four and six inches, back to within a certain number of buds from the trunk. The wood thus cut into short lengths is left on the ground. The pruner follows up and cuts off as much more as his judgment prompts. The wood from the vines serves for a fertilizer, proving a great benefit, which is quite natural, for the reason that the soil is thus given back some of the elements absorbed from it by the vine, and a regular fertilization is thus kept up. Common sense tells us that such a plan is better than to cut away the cane and remove it from the vineyard. Another, and the most important of all plans followed in Napa, in the matter of young vineyards especially, is to put no extra crop on the same land with the vines.

SACRAMENTO.

NATOMA ORCHARDS.—*Folsom Telegraph* Aug. 26: The generous yield of fruit that has for the past month required the constant labor and attention of nearly 100 men in the orchard of the Natoma Co., has finally all been picked, shipped or dried, and the next fruit in order that will claim attention will be the grapes that are now fast ripening. These will mostly be shipped East; some manufactured into wine that ever finds a ready market.

SAN BERNARDINO.

BIG APPLE.—*Times*, Aug. 26: Mr. H. H. Whaley brought to our office this morning the boss apple of the season. It weighed 1½ lbs. and measured 5½ inches in diameter. It was grown on his place at Old San Bernardino, and sets itself up as the champion heavy weight of the coast.

SAN JOAQUIN.

CORN ITEMS.—*Stockton Independent*, Aug. 26: S. H. Childs, who resides on the Mokelumne, planted 50 acres of corn on the sandy upland near Lodi, which yielded a handsome return. Some of the stalks were prolific bearers, two of which were presented by Mr. Childs to Mr. Peyton. One, of the Yellow Dent variety, bears one large ear, but from that ear radiate 18 other perfect ears, making 19 ears in one bunch, the shortest of which measures four inches in length. The other stalk is of the common white variety, and has one ear, from which radiate 11 other perfect ears. Peyton says these stalks have been crossed with a grape vine. A. Herman has 28 acres of corn on the Cherokee Lane road, which has produced heavily this season. He found one stalk which bore five large ears, each a foot in length. He was telling this story to one of his friends, who remarked: "I'll bet you five dollars you can't show me a stalk of corn with five separate and perfect ears growing thereon." The bet was accepted, and the prolific cornstalk produced, and Mr. Herman pocketed the coin, while his opponent "acknowledged the corn."

SAN LUIS OBISPO.

THRASHING.—*Tribune*, Aug. 25: On the Nipomo ranch, last Saturday, the thrashing machine of Charles Yarks, of Hanford, Tulare county, thrashed 1,657 sacks of wheat. During the day there were four moves and one breakage, consuming three-quarters of an hour. The highest rate of speed attained by the machine during the day was four sacks a minute. Has anybody's thrasher excelled that day's work in this county this season?

SANTA CLARA.

GRAIN AND FRUIT.—*Mercury*, Aug. 24: The harvest of cereals this year is proving far more satisfactory than was anticipated. For a dry year the result is certainly extraordinarily good. Wheat is generally of fair quality, and at least two-thirds of the land seeded has turned out average crops. Barley is plump and bright, and commands a good price. Most of it is being stored, in the expectation that still higher prices will rule. The crop of hay was rather light, but the high prices prevailing have compensated for any falling off in the yield. Fruit is coming in such quantities that the canneries have great difficulty in handling it. Prunes will be ripe in nearly all the orchards before the 1st of September, and as this fruit is eagerly sought for by canning men, being the most profitable of all fruits for canning or drying, there will be a lively competition among buyers. Several orchards in the Willows have already been sold, the buyers to do the picking. There is at present a scarcity of hands at the canneries. The Golden Gate packing company advertises for 100 hands, who can find work immediately.

SONOMA.

A LARGE VINE.—*Flag*: There is an immense grape vine at Mr. Pritchett's place, on Dry creek, covering an arbor 70 feet long, and running 50 feet one way and 20 feet the other. The vine is 13 years old, and it is estimated, will bear one ton of grapes this season.

DRIED PLUMS.—A gentleman near Healds-

burg has 30 plum trees from which he got 1,500 lbs. of dried fruit this season, and for which he is offered 10 cents per lb.; or, in other words, the trees have each produced \$5 worth of fruit when dried.

SUTTER.

GRAIN YIELD.—*Record-Union*: A farmer, who lives near Nicolaus, thrashed 2,094 bushels of large, plump wheat from a 30 acre tract, an average of nearly 70 bushels to the acre, and which would be called a large yield in any county.

THE CROP.—*Farmer*, Aug. 26: This year's crop of Sutter county is worth more to the county in dollars and cents than the crop of any other year in the history of the county. The wheat crop is, in our judgment, equal in the aggregate to that of any other year. The barley and hay crop was also good, and the fruit and vegetable crop is equally good, and all our products are bringing good prices. A larger percentage of our wheat than usual at this time has been sold, bringing from \$1.50 to \$1.60 per 100 lbs. The result is that money is flowing into the county at a rate never before experienced. Mr. Lee, County Recorder, tells us that never in his many years' acquaintance with county records were there so many mortgages cancelled as at present. This is the surest index of the prosperity of the county. We know of many farmers who were borrowers for many years, who have now a large balance left, after satisfying every claim against them. We have never known such a prosperous year for our people, and we have been intimately acquainted with this section for more than 25 years. We do not hesitate to say that Sutter county to-day is the most productive and prosperous county in the State. Remove this sickens cloud and it will always remain so.

Lake County Notes.

EDITORS PRESS:—It is somewhat interesting in passing along the country roads to note the piles of baled hay on each side. Almost invariably piled up in the hottest sun, they bid fair to lose some from "baler's weight" before they are sold. It seems to be the general practice among farmers to let hay sun itself plenty before they take it up. One of my neighbors has had his hay laying out in shock for over two months. Hay should be hauled as soon as perfectly cured. After that exposure to the hot sun entails loss in quantity and quality. The chemical action of the sunlight bleaches it, and renders it but little more nutritious than straw. There is such a thing as error on the other side, as many farmers find to their cost who attempt to haul while yet too green. The result is heat, mildew, or absolute rot; and a still further result is disease of the stock fed with such trash.

Considerable hay is being cut in Lake county this year, and prices so far rule high. When hay starts off at \$10 and \$12 baled, here, we may reasonably expect \$18 to \$20 before spring. Our market is a local one only. Isolated as we are from the outside world, we consume our own produce, excepting about 1,500 tons of grain each year and a few hogs. And we raise hogs like most Californians; sell them afoot and buy bacon; so much trouble saved. We just let the hog-buyer drive them off at an average of 4½ cents, all cash, and then we buy our San Francisco bacon at about 15 cents; no trouble in killing and curing, you see. In grain, many of us adopt the same labor-saving plan. The Jew merchants get the grain at their figures in part payment for store bills, and then flour at the stores takes cash or more account.

Speaking of grain, we expect a good price this year. Some have sold for \$1.07, but we rich ones, who can afford to hold till January, look for \$1.25. The merchants give these prices, and then ship it to San Francisco.

Highland Springs, Aug. 20, 1882. Vox.

A RIVAL FOR SUGAR, POSSIBLY.—At a recent meeting of the German Technical Society, Dr. Constantine Fahlberg read an interesting paper describing a scientific research, which had resulted in his discovery of a new body, possessing to an eminent degree the property of sweetness. The new substance would be called, in chemical language, "anhydro-sulphaminobenzoic acid." It is a white crystalline substance, very soluble in alcohol, but sparingly soluble in water, and has the property of sweetness to such an eminent degree that the merest trace of the alcoholic solution in water suffices to impart a distinctly sweet taste to it. The discoverer estimates that it has from 20 to 30 times the sweetness of cane sugar. The new substance may come in time to have important technical uses.

An expedition is going into the Olympic or Coast range of mountains, W. T. The expedition will be commanded by Colonel Chambers, and will leave Fort Townsend this week. Its route will be via Port Discovery bay. One endeavor will be to find the headwaters of the Duwamish river, and another to find an immense plateau said to be situated somewhere in that region, and which has never been trodden by the foot of the white man. Thirty or 40 men will comprise the party.

News in Brief.

At a city in Hungary over 100 women are on trial for poisoning their husbands.

The bond indebtedness of the Sutro Tunnel company is \$1,000,000, and there are 1,000,000 shares out.

The Atlantic and Pacific railroad track is completed to Pitman valley, A. T., 80 miles from Prescott.

Eastern manufacturing centers are the only points making a good exhibit in the Clearing House statistics.

The Commissioner of Indian Affairs has ordered an investigation of the Pine Ridge agency, Nebraska.

General Sherman will ask to be placed on the retired list in November, 1883. He would be compulsorily retired in 1884.

The British Association for the Advancement of Science has decided to meet at Southport in 1883, and Montreal, Canada, in 1884.

The Union Pacific Railroad Co. has abolished the office of General Superintendent, and divided the track into general divisions.

DONNER LAKE is lower at the present time than it has been known for years. Not a particle of water now flows out at the outlet.

LORD DUFFERIN, the British Ambassador, has promised that pilgrims to Mecca will be permitted to traverse the Suez canal as usual.

It is denied in the Treasury Department at Washington that there are irregularities in the accounts of the Superintendent of the Carson Mint.

In Omaha the citizens gave a banquet to Gen. George Crook, late in command of the Department of the Platte, prior to his departure for Arizona.

AMONG the incidents of the recent fire at Red Bluff, the *People's Cause* notices that five saloons were burned, and yet the price of gin remained the same.

MAYOR HARRISON, of Chicago, recommends that the streets of that city be narrowed, in order to save paving expenses and to lessen the cost of keeping them in repair.

MAJOR SUMNER, of the Fifth United States cavalry, stationed at Fort Robinson, Neb., advises the War Department to send out additional troops to overawe the Sioux.

The Idaho Telephone Co. expects to have the Wood River towns connected by telephone lines this fall, and will also run a line along the Wood River branch of the Oregon Short Line.

PROF. WALCOTT has shipped over two tons of fossils from Eureka to Washington, which he and his party have collected in White Pine county. He says they comprise over 400 different species.

DICK LITTLE, who gave information against the James gang, to which he at one time belonged, has been arrested for complicity in the robbery of a United States paymaster at Mussel Shoals, Ala., in March, 1881.

COMMISSIONER OF PENSIONS DUDLEY has given Dr. Mary Walker a clerkship in his bureau without the conditions imposed by a former Secretary of the Treasury, that she should don the regulation attire of women.

The total assessment on all property in the city of Oakland, exclusive of personal property not a lien on real estate, is \$19,994,569. The railroads in the city are assessed at \$294,500. The mortgages on city real estate amount to \$5,299,932.

SECRETARY FOLGER has decided to issue a call for bonds. It will embrace all continued sixes remaining uncalled and which have not been surrendered for exchange for new threes. It is estimated that there are about \$4,000,000 of this class.

LATELY the country along the Texas-Pacific road, from Abilene west for nearly 300 miles, was for three days and nights drenched by rain, the fall being estimated at six feet. Thousands of prairie dogs were drowned in sight of the railway track.

THE Hillsdale crew returned to Hammersmith on Saturday, all well. They will begin training for their race with the crew of the Thames Rowing club, which is to be rowed on September 14th. The Hillsdales start for home on September 20th.

ON the line between Fish Creek and Whitehall, M. T., over 100 yards of wire was melted during a recent severe thunder and lightning storm, rendering it useless for any purpose. A telegraph repairer named Humphrey, whose station was at Red Rock, was struck by lightning and killed.

ACTING TREASURER GOVEN has sent instructions for the transfer to the Mint at Philadelphia, for re-coining, of all uncurrent subsidiary silver held at different depositories throughout the country. There are about 500,000 of these coins at the various offices, including three-cent, five-cent and twenty-five cent silver pieces, and other uncurrent silver.

AT Salt Lake the Utah Commissioners adopted rules for the registration of voters in the November election for delegates to Congress. Supervisors of registration are to be appointed for each county, and the lists now in the hands of the County Clerks will be taken, and each person whose name appears on the list will have to take an ironclad oath that he is not in polygamous relations. Failing to do this, his name is stricken off the register. They have power, also, to strike the names of polygamists off arbitrarily.



Grandmother's Garden

Grandmother's garden was brave to see,
Gorgeous with old-time plants and blooms,
All too common and cheap to be
Grown in modern parterres or rooms;
Old traditional herbs and flowers,
Some for pleasure and some for need;
Gifted, haply, with wondrous powers,
Bud or petal or bark or seed.

All old fashions of leaf and root
Grew there, cherished for show or use;
Currant bushes with clustered fruit
Red as garnets and full of juice,
Tiger-lilies with beaded stalks,
Balm and basil and bitter rue,
Gay nasturtiums and four o'clocks—
Grandmother's garden was fair to view.

Pinks—how rich in their stately prime!—
Filled the air with a rare delight;
Lavender, mingled with sage and thyme;
Lilies, purple and milky-white,
Met and mingled and bloomed as one
Over the path—they grew so tall—
And tulip-torches, in wind and sun,
Flamed and flared by the southern wall.

Periwinkles with trailing vines,
Lordly lilies with creamy tint,
Bachelor's buttons and columbines,
Proud sweet-williams and odoriferous mint—
Heavy peonies, burning red,
Wonders of lush, redundant bloom,
Longed for a wider space to spread,
And flushed the redder for lack of room.

Brilliant asters their prim heads tossed—
Dark blue monkshood and hollyhocks,
Smiling fearless at autumn's frost,
Waved and nodded along the walks.
Love-lies-bleeding forever drooped—
Disks of sunflowers, bright and broad,
Watched like sentries; and fennel stooped
Over immortal Aaron's rod.

Cumfrey, dropping its waxen flowers;
Purple gooseberries, over-ripe;
Lady-cress, that I searched for hours,
Vainly trying to match a stripe;
Pansies, bordering all the beds—
Ladies' delights for the children's sake—
Poppies nodding their sleepy heads,
And yellow marigolds wide awake.

Morning glories, whose trumpets rung
Resonant with the ruffling bees;
Daffodils, born when spring was young;
Vain narcissus, and gay sweet peas,
Clinging close, but with bright wings spread
Wide, like butterflies just alight;
Gauze-flowers fragile, to sunrise wed,
And bashful primrose that bloomed at night.

Rich syringas, all honey-sweet,
Trim carnations of tenderest pink;
Blue-bells, spite of the noonday heat,
Holding dew for the birds to drink.
Marjoram, hyssop, and caraway,
Damask roses and mignonette;
Ah! sometime at this distant day,
I can fancy I smell them yet.

I have a garden of prouder claims,
Full of novelties bright and rare,
Modern flowers with stately names
Flaunt their wonderful beauty there.
Yet, in threading its brilliant maze,
Oft my heart, with a home-sick thrill,
Whispers—dreaming of early days—
"Grandmother's garden was fairer still!"

Gran'ma's Dream.

[Written for RURAL PRESS by JULIA M. GOODLETT.]

One night in midwinter, as Vivia and Irene
Vane sat near a blazing fire, their merry faces
reflecting the happiness which shone within
their young hearts, Vivia suddenly exclaimed,
"Ah, life is like a happy dream!" "Yes, a
bright and happy dream," replied Irene. They
soon fell into a reverie upon the joys which
their inexperienced hearts whispered were in
store for them. They were aroused from these
pleasant reflections by the entrance of their
grandmother, who, having seated herself in her
own comfortable chair, thus addressed them:
"My children, I overheard your remarks, and
cannot refrain from relating an incident in my
experience which they recalled most vividly to
mind, and on which I hope you will ponder." So
soon they were all attention, for gran'ma never
told them anything which was not both inter-
esting and instructive. In low, silvery tones
she began:

"On a clear morning in the last week of April,
in all the beauty of youth and merry joy of
happy, careless girlhood, I went forth for my
usual walk, with my eyes beaming, my face
flushed by the rosy light of the bright morning,
while my elastic step said plainly, 'With me
abide health and joy.' I walked on and on,
admiring the beautiful world, listening to the
graceful warblers that darted around me
hither and thither, and in their songs seemed to
say, 'Joy, joy! life is a happy dream.' And
ever and anon I stooped to gather some lovely
but unassuming flower that bloomed at my feet
and looked up at me with pleading glance,
which said: 'My life is but a happy dream:
break not the thread which binds me to it.'"

"I continued my ramble until I entered a tiny
valley, within which lay a huge gray rock, over
which a beautiful species of green and golden
moss trailed at will. The spot was well suited
to reverie, and I gladly took my seat upon the

soft moss and began to arrange my flowers
into a garland for my flowing curls, thinking all
the while of the beauty which lavish nature had
bestowed upon the surrounding scene, and of
the joy which was my constant companion. I
finished the garland and, placing it upon my
brow, exclaimed in ecstasy, life is a long dream
of joyous beauty. A glad song burst from my
lips. I continued reflecting upon the joys with
which I fondly imagined my pathway would be
strewn.

"Suddenly a hand was gently laid upon my
head, and looking up I beheld a vision of en-
trancing glory. Beside me stood my dear father,
his eyes bent upon me with an expression of
anxious tenderness. Just before me was my
mother; once more I beheld her gentle face. I
became lost in its loveliness. I saw my mother."
(and the thin lips quivered, the low voice fal-
tered as she thought of that angel mother and
of the time when she would see her again, but
not in a vision). She continued: "When I
could remove my gaze from mother's bright
face, I saw bending over me my loved
sister Anna, while just above, on wings of pur-
est white, soared little Willie.

"While I gazed enchanted, I was startled by
hearing my father say, as he placed his hand
upon the wreath which encircled my brow,
'My daughter, listen to me. I have trod the
path of life which you deem so joyous; flowers
will not always bloom. There, clouds will
darken the now bright horizon, and thorns may
in after years press thy young brow. Life is
more than a bright dream; prepare for its trials;
be up, and seek to know and to do thy duty.'

"As mother pressed her lips to my smooth
brow, where as yet no cankering care had left
its trace, she repeated, 'Life means duty, not
dreams.' Sister Anna softly whispered, 'Do
not dream your life away, sister, but love God,
do your duty, and then come and live with us
in heaven.' And little Willie, as he pressed his
soft, dimpled cheek to mine, whispered, 'Love
God.' Leaving me with a loving kiss, they
winged their way to their home of bliss, and I
awoke.

"My wreath lay crushed at my feet; the sun
had withered the fresh flowers which, an hour
before, had been scattered around me so lav-
ishly; their dream of life had vanished. The
birds had hushed their glad songs; from every-
thing seemed to rise this solemn chant: 'Roses
and garlands wither, and beautiful dreams pass
as the vapors of the morning—vanish with the
advance of day. Life means duty; life means
duty.'

"These words came to me for many days, yet I
heeded them not, and in my light, youthful
heart continued to regard life as a long, bright
dream, which would at last melt into a calm
eternity. Years went by, as happy years always
go, with great rapidity. Ever basking in the
joys which beauty, health and wealth afford, I
sometimes paused to think of that heavenly
vision, yet heeded not its voice of warning until
Time, in his unceasing flight, brought with him
care after care. Each one whispered: 'Rouse
up! do thy duty. Work!' 'Do thy duty'
came so often, borne upon the wings of some
new sorrow, that, at last, when none of all my
loved ones, save you, were left, and I had passed
the prime of my life, I learned that life does
not consist in flattering dreams of joy, but in
duties done. For years I have striven to per-
form them all, and often have the words, 'Do
thy duty, and it shall be well with thee,' been
most vividly impressed upon my mind. This
does not mean that if we do our duty no trials
will be ours, for—

"It were as vain a thing
To ask of nature one perpetual spring,
As to evade those sad autumnal showers,
Or deem thy path shall bloom all flowers."

"But ever and anon, even amid trials severe
and long, sweet rays of comfort have crept and
helped to illumine my way to my heavenly home.
"My children, while we should accept with
grateful hearts those bright rays of light which
so encourage and help us on our life way, we
should ever strive to remember its duties, ever
feeling that we are earnestly invited to 'cast all
our cares upon Him, for He careth for us.' Nor
need we be in doubt as to those duties, but
humbly ask our Father's guidance, and He will
ever make the way plain.

"God grant that you may never have to be so
severely chastened ere you learn that—

"Life is not formed of flattering dreams,
But duties which rouse up the soul,
While here and there, there shoot star gleams,
To light the laborer to his goal."

San Bernardino.

VULGAR HABITS.—Asking questions private
and personal is a vulgar habit, and telling your
own business, which no one wants to hear, is
another. Asking the cost of a present that has
been made to you, loud talking in public, hard
staring at table, insolent disrespect to husband,
wife, sister or brother, showing temper in tri-
fles, and making scenes in public, showing an
embarrassing amount of fondness, and making
love in public, covert sneers, of which people
can see the animus, if they do not always under-
stand the drift; persistent egotism, which talks
forever of itself, and cannot even feign the
most passing interest in another, detraction of
friends, and it may be of relatives, a husband
telling of his unpleasantnesses, a wife com-
plaining of her husband's faults, the bold as-
sumption of superiority, and the servile con-
fession of infinite unworthiness—all these are
signs and evidences of vulgarity—vulgarity of
a far worse type than that which eats its fish
with a steel knife, and says "You was," and
"Each of the men were."

A Reminiscence.

EDITORS PRESS:—The last number of Har-
per's Weekly contains a brief notice of Col. John
C. Hamilton, the recently deceased son of that
eminent statesman who fell a victim to the
code duello by the pistol of Aaron Burr. The
excellent portrait which accompanies the bio-
graphical fragment recalls an almost forgotten
episode of travel which I am tempted to share
with the readers of the RURAL PRESS.

On a journey to Philadelphia during the
autumn which followed Gen. Taylor's election
to the Presidency, we were joined in New
York by a relative who lived in Washington,
and with whom I was to spend the holidays.

As we waited at the ferry boat to cross over
to the Jersey side, we noticed a party alighting
at the wharf, one of whom we instantly recog-
nized as Henry Clay from the resemblance to
his pictures. The tall, spare figure, clad in the
long cloak then in fashion, that large mouth
and magnetic eye, could not be mistaken. A
gentleman accompanied Mr. Clay, far more dis-
tinguished in face and bearing, whose likeness
to some of the public men of the country we
strove in vain to recall. Mr. Clay's colored
servant, who always attended him in his jour-
neys, was also along.

We traveled by the Camden and Amboy
route, part of the way by steamer, and were so
placed as to become pleased listeners to a very
animated conversation on public affairs.

Arrived in Philadelphia, where Dr. Carr was
on duty as professor in a medical college, we
were again thrown in company with Mr. Clay,
who stopped over at our hotel to attend the
wedding of a Cabinet Minister's daughter. We
could not help observing that Mr. Clay's com-
panion everywhere commanded peculiar atten-
tion and respect by a certain indescribable fin-
eness of bearing and breeding not always seen in
public men. By some other fortunate happen-
ing we soon became acquainted with Col. Ham-
ilton, our unknown fellow traveler, the friend
who introduced us to him telling us much of
his early life, of his passionate childish attach-
ment to his illustrious father, and how, in the ter-
rible bereavement, he devoted himself to the noble
mother, who, through 50 years of widowhood,
lived as became Gen. Philip Schuyler's daughter
and the wife of Alexander Hamilton. She died
in Washington at the advanced age of 97 years.

I was then an enthusiastic student of our
national history, and everything pertaining to
the Burr-Hamilton tragedy, to the trial of Burr
and the story of the Blennerhassett, had a keen
interest for me. Perceiving which, Col. Ham-
ilton kindly promised to take me to see his ven-
erable mother, an honor far greater in my eyes
than a presentation at the court of St. James.

We journeyed on to Washington together,
my aunt under Mr. Clay's escort, and I, more
fortunate, with the gentleman who has ever
seemed the best representative of the old-time
courtesy. Those were days of comparatively
slow traveling, and I remember being detained
at Havre de Grace, where several members of
Congress came to meet Mr. Clay. Col. Ham-
ilton kept his promise, and our visit to the old-
fashioned mansion where Mrs. Hamilton lived
so long, the close-clipped edgings of box in the
garden, the portraits on the walls, came vividly
to mind as I looked at the wood-cut in Harper's.
Other days there were, spent at Mt. Vernon, in
the treasury of national history—Peter Force's
library. I saw the great men of the nation in
the Senate chamber, "and there were giants in
those days." Then Webster's dark, statuesque
head rose above his peers, and there was Ben-
ton. John Quincy Adams had lately died at his
post.

And while I am telling this story, why not
tell another. There was an old Vermont
in Washington, whose historical pupil and lov-
ing disciple I was, Henry Stevens by name.
He took me to the White House, the President
always received him, for Lieut. Stevens, my
friend's brave son, had fallen in Mexico at Gen.
Taylor's side. We saw the home of many mas-
ters, but "Old Whitey," Gen. Taylor's favorite
horse, interested me more than anything else,
as he complacently nibbled the turf no biped
was allowed to tread. Dr. W., whose guest
I then was, was one of the medical attendants
of President Taylor during his last illness.

That was the last but one of Mr. Clay's jour-
neys; his seat in the Senate, which he had held
for 43 years, was soon to be vacant. That
winter the struggle took place for the admission
of California into the Union. How little we
thought of California then! Mr. Breckenridge
said of Henry Clay, "If I were to write his
epitaph, it should be this: 'Here lies a man
who was in public service for 50 years, and who
never attempted to deceive his countrymen.'"

And if I were to write the epitaph of Col.
Hamilton, whose 80 years were crystal clear
from an unworthy act or aim, whom filial affec-
tion had taught the worth and worthlessness of
public position, however high, whose society
great men courted, who made all the walks of
private life beautiful with useful work quietly
performed, I would put only the word "gentle-
man" after his name. It is a word of precious
significance, and I wish our young men could re-
alize its worth as I do to-night with this pleas-
ant remembrance in my mind.

JEANNE C. CARR.

Pasadena, Aug. 15, 1882.

A Tale of Two Farms.

No one but a farmer's wife can have any but
a faint idea of the duties belonging to her posi-
tion, for the requirements are numberless; the
demand upon her time, her skill, her strength
and patience, incessant. Her kitchen, where
so many hours of the day must of necessity be
spent, should be a sunny room and convenient.
In too many farmhouses it is the living-room of the
family. Here may be seen, on one side, a table
covered with utensils for cooking, butter mak-
ing, and, perhaps, some soiled linen, awaiting
like the cleansing operations so long delayed;
underneath it the boots of the farmer and his
sons, flanked by the dish in which the dog, the
cat, or both, receive the remnants from the table.
The sink, partly filled with milk-cans and dishes,
is on the other side, and the water-pail is in a
ledge beside it. The stove, red from long use,
and unacquainted with polish, is covered with
the marks of boiled-over dinners and careless
frying, and the ashes are on the hearth. Wood
and chips are scattered about the floor. The
horn sounds for dinner. The men, heated, hun-
gry, come tramping in to a meal of half-boiled
pork and sodden potatoes, with heavy bread, to
be washed down with copious drafts of sloppy
tea, or, perhaps, cider. The wife is slipshod,
frowsy, and always in a hurry; the children,
copies of their mother. And, as the influence
of woman, in whatever direction it may be ex-
erted, is magical and potent, it is no wonder
that about the premises everything partakes of
the same general character. The dooryard is
cumbered with broken sleds and debilitated
cart wheels. The mowing machine, which they
will need to use next week, stands under the
poplar tree by the gate, just where it stood
when the farmer loosened his horses from it last
year. They cannot find the hoes, or shovels, or
rakes, or forks, because they lay rusting under
the wall by the pasture, where they were laid
last fall until a convenient time for carrying
them home. Such farmers tell us that farming
does not pay. They have no ambition save for
the rest each night brings after the day's toil.
Their sons go away as early as possible, to find
a more congenial occupation. Their daughters,
if they marry, follow the example of their early
life and duplicate its miseries and ugliness.

But another farm has a different atmosphere.
The grounds about the house are prettily ar-
ranged and carefully attended; climbing vines
and roses are about the door, and the back fence
is hidden by hollyhocks and the æsthetic sun-
flower; the farming tools are all in their proper
storehouses; the kitchen has all necessary ap-
pointments for convenience; the table is heaped
up indeed, but with loaves of light, delicious
bread, or, perhaps, piles of shining pans just in
from the airing. The men come in to their
meals quietly, performing their ablutions in the
place set apart for them. The dinner table,
covered with a snowy cloth, is set in a cool
room, and the food, though simple, is abundant,
well cooked and appetizing. In the dairy, the
rolls of golden butter show that here the wife is
also a skillful dairy woman. At even, the dust
of toil is shaken off, the evidence of the daily
labor is put out of sight, and they gather in the
family room. The farmer and his sons read
aloud by turns, or they have a little music—for
the daughters play the piano pleasantly, if not
well—the blessing of God is asked, and all seek
the rest which such preparation makes refresh-
ing. That farmer makes farming pay. His
sons may leave the farm—not all of them will—
because it is too small for all. His daughters
bless other homes, patterns of tidy, quiet, meth-
odical little women they call mother.—Mrs. E.
V. Gage.

FORBEARANCE.—It is in our daily associations
with other people, whether in society, in busi-
ness, or at home, that we are in the deepest
need. We are irritated at countless things,
and seem goaded on to utter bitter words, or
epitaph allusion, or stinging repartees. We
see error so plainly that we long to crush it
out by violent means, or we see faults in others
which seem to merit our severest rebuke. Or
we are suffering under some real or fancied un-
kindness or injustice which we burn to resent,
and which appears to us to warrant the sternest
indignation. The forbearance which, while
enduring these heart-burnings, can enforce
silence on the lips until the hot emotions have
had time to cool, and have been brought to the
bar of reason and judgment, commands our
respect and admiration.

A NATURAL DESIRE.—To desire the appro-
bation, good will and esteem of others is a nat-
ural and perfectly legitimate feeling, and one
which largely conduces to the welfare and
morality of every community. It is folly to
try to banish it as a motive power, to depre-
ciate it as being an unworthy source of action,
to despise those who are influenced by it; all
this is simply fighting against nature, and in
every such battle defeat is certain. While men
and women are woven together in the web of
social relations, and dependent upon one an-
other for happiness, and even their very exist-
ence, so long will the desire of enjoying the
esteem of one another continue to form a strong
and a valuable influence in their lives.

FRIENDSHIP does not seek pleasure for itself.
It does not shun pain or inconvenience. When
friends cherished and long held come to grief,
it does not seek some dark way by which it
may avoid a dividend of sorrow or suffering, and
if need be, shame. True friendship is eager to
give—to give all; for in the soul's commerce he
who gives all keeps all.

Chaff.

THEY were speaking of a miser, just deceased: "Did he leave anything?" asked Smith. "He had to," was the laconic answer of Fogg.

A "SIGN" OF GENIUS.—Waiter (to eminent artist, who is stopping at the hotel): "We had a harts' stoppin' ere once, sir, and he cut with-out payin' 'is bill." E. A.: "Indeed! But are you sure he was an artist?" Waiter: "Oh, yes, sir; quite sure. In fact, 'e painted our sign."

AN actress in Paris sent word that she could not play, on account of the death of her mother. A day or two afterwards the manager met her, dressed in flaming colors. "Ah!" he exclaimed, "how's this—not in mourning?" "It is not the custom to wear mourning for distant relatives." "And you call your mother so?" "Oh, yes; she died in America."

A SAN FRANCISCO jury has awarded a book canvasser \$150 for being kicked out-doors. This is a mighty bad precedent. A book agent will only need one book to carry under his arm, and a brick in his coat-tail pocket, and he will make more money than by canvassing.

"Is the neighborhood much bothered with cats?" asked a gentleman who was negotiating for the lease of a house. "It used to be," frankly answered the landlord, "but since a restaurant was opened around the corner there hasn't been one seen."

Two ladies exchanging notes on how they spend the day: "You see, I always get up at ten and ring for my maid and get dressed." "How long does that take?" "Oh, ever so long. You see, the girl takes a full hour to do my hair." "A full hour? Mercy! What do you do while she is fixing it?" "I go out in the garden and take my morning walk."

AN eccentric old gentleman placed in a field on his estate a board with the following generous offer painted thereon: "I will give this field to any man who is contented." It was not long before he had an applicant. "Well, my man, are you a contented fellow?" "Yes, sir, very." "Then why do you want my field?" The applicant did not wait to reply.

STANDING AND SITTING.—The London *Daily Telegraph* says: "Nature, while she specially built the human form to stand erect, has specially decreed that men and women should occasionally rest themselves by assuming a sedentary position. Almost every medical authority on the deformities of the human body has drawn attention to the fact that standing too long operates in a vicious direction, which, by elongating certain muscles, weakens them; that from the necessity of changing position, in order to rest the muscles, it occurs that when people are standing they alternately balance themselves first on one leg and then on the other, but most frequently on the left; and that a girl with a weak spine, after standing upright for some time, generally does not keep her feet in line, but places one above the other. Curvature of the spine, albeit temporary, is the result. The habit of standing on one leg, a habit almost unavoidable in standing too long, induces the shoulders to lose their horizontal level. The one opposite to the projecting hip becomes higher than the other, and the spine becomes deformed laterally at this part."

ADMIRATION.—"No nobler feeling than that of admiration for one higher than himself dwells in the breast of man. It is to this hour, and at all hours, the vivifying influence in man's life." So says Carlyle; and, whether the world at large consciously agrees with him or not, at all events its actions are such as to justify the belief that it holds the capacity for admiration in considerable esteem, since it may be generally remarked that those who possess that quality receive a far larger share of love and trust than those who are destitute of it. People do not, as a rule, appear drawn to consign more than they can help of their affections, secrets or reputations to the tender mercies of any kind of virtue, talent, ability or excellence that is not so nearly allied to his own as to give him a reflective share in the praises bestowed thereupon.

SPONTANEOUS COMBUSTION OF COTTON.—During one of the hot days of June, a Connecticut lady thought she smelled something burning upstairs. In searching for the fire she entered a small, close garret room used for storage. She opened a window and instantly a bag of carpet rags hanging there burst into flame. The rags had been hanging there all winter. The fire was promptly smothered, and when the bag was opened, it was found that only balls of cotton rags were burned. Whether the rags had been dyed is not stated.

MINERALS IN THE STOMACH.—A curious result of the use of bismuth as a medicine has just been noticed in a hospital in Modena. A deep fissure was observed along the greater curvature of the stomach, which was filled with a gray, semi-solid mass. On examination it was found to be oxide of bismuth, agglutinated together with mucus. As the patient had taken no bismuth for some time, she must have carried it for several weeks, at least.

NEAR the end of last month snow appeared in the English channel off the coast of Kent. A steamer on her way from Hamburg to Havre passed into and through a veritable snow-storm there, about 10 o'clock in the morning. It remained 10 minutes in the storm. The ship was 20 miles out to sea.

YOUNG FOLKS' COLUMN.

Our Puzzle Box.

Cross-word Enigma.

My first is in street, but not in road;
My second is in cart, but not in load;
My third is in lamp, but not in light;
My fourth is in wrong, but not in right;
My fifth is in cold, but not in hot;
My sixth is in kettle, but not in pot;
My seventh is in yes, but not in not;
My whole is the name of a celebrated explorer.

MARK.

Hidden Word Square.

1. Jerry cut a halter which he found into several pieces.
2. Iota means a small part.
3. There was a name neatly cut upon the slab.
4. The procession then slowly advanced.

NETTIE.

Decapitations.

1. Behead to pant and leave a serpent.
2. Behead a wooden case and leave a domestic animal.
3. Behead insects of a certain species and leave a disease of children.
4. Behead a stream of water and leave a bird.

Fractional Puzzle.

Two-fifths of table, three-fifths of smoke, one-sixth of carpet, one-fifth of chair, one-fifth of stove, two-fifths of paper, combined, forms a gaseous substance found in every part of the globe.

JERRY.

Transpositions.

1. Transpose an animal and make the rise of water.
2. Transpose an irregular verb and make a tool.
3. Transpose a masculine name and make the abode of a wild beast.
4. Transpose a drinking vessel and make a resinous substance.
5. Transpose depraved and make to abide.

JAMES.

Answers to Last Puzzles.

NUMERICAL ENIGMA.—Truth and justice conquer.
SYLLABLE PUZZLES.—1. Ohio (oh-high-o). 2. Arabia (a-ray-be-a).
DOUBLE ACROSTIC.—

G eno A
Y enese I
S an O
E ntr Y
S ea L

HIDDEN AMERICAN NAMES.—1. Paine. 2. Tilden. 3. Longfellow.

SYNOPSIS.—1. Whit, hit. 2. Wing, wig. 3. Vise, vie. 4. Trow, tow. 5. Sport, sort.

Mrs. Blacknose.

Mrs. Blacknose was the mother of a family of five kittens. They were handsome and playful little things, and Mrs. Blacknose took great pains to bring up her family properly.

As soon as they were old enough, she taught them that in the morning, when they awoke, they must wash themselves nice and clean; also brush their fur smooth and glossy by licking it briskly with their little rough tongues. Then, when the children would come and play with them, she told them as long as they were not too cruel, to nestle up close to them and purr, and if they tossed a ball, or put a string to a spool, they should play catch it, and roll it, to make the children laugh.

All this the kittens did very nicely, and Mother Blacknose would sit up perfectly erect, and watch them with a look which meant to say, "Now, don't you think I make an excellent mother?"

But all play will not do; so Mother Blacknose undertook to teach her children what work they must learn to do.

She began by showing them that on the underside of their paws they had soft velvet cushions, and under these cushions were sharp nails.

"Now," said Mother Blacknose, "you have velvet cushions on your paws, so that you can walk very quietly—so quietly that a mouse or rat, which is prowling about, cannot hear you. Then you go up very quietly to her, and when you are quite near, you stretch out your paws, and then fasten the mouse or rat down with your sharp nails."

After the kittens had learned this lesson they nestled up close to their mother on the rug before the fire, and took a nap.

Soon after, Johnny came into the room with a trap in his hand, in which there was a big old mouse.

John called, "Puss, puss!" Puss picked up her ears, and quickly called her children. This, she thought, would be an excellent time for their second lesson, and, taking them up to the trap, she explained that it was a mouse, and that she wanted them to catch it.

The poor mouse was very much frightened, and thought that surely all these cats would kill her, and wished that if she only could get out how she would run to her hole.

Mrs. Blacknose got on the top, and put her paw on the trap. John gently raised the wire door. The instant it was opened, out ran the mouse as fast as she could, and all the kittens after her. But the mouse was too quick for them. All they saw of her was a long, thin tail disappearing down a dark hole. Mrs. Blacknose was disappointed to think her children did not do better, and said that when night came on they would all go down in the cellar, and then try to catch her.

We heard a person, not long ago, ridiculing a boy for collecting postage stamps. If, in collecting stamps, one does it only to see how many he can get, very little benefit comes from it. If the collecting of stamps of little-known countries leads to the reading about those places, etc., then something useful may come of it. But why should boys and girls who live in the country collect postage stamps when they can do so much better? Let them collect specimens of all the woods that grow upon the farm, not only of trees, but of shrubs.

GOOD HEALTH.

The Proper Time for Work.

The habit of writing and reading late in the day and far into the night, "for the sake of quiet," is one of the most mischievous to which a man of mind can addict himself. The feeling of tranquillity which comes over the busy and active man about 10:30 or 11 o'clock ought not to be regarded as an incentive to work. It is, in fact, the effect of a lowering of vitality consequent on the exhaustion of the physical sense. Nature wants and calls for physiological rest. Instead of complying with her reasonable demand, the night worker hails the "feeling" of mental quiescence, mistakes it for clearness and acuteness, and whips the jaded organism with the will until it goes on working. What is the result? Immediately the accomplishment of a task fairly well, but not half so well as if it had been performed with the vigor of a refreshed brain working in health from proper sleep. Remotely, or later on, comes the penalty to be paid for unnatural exertion—that is, energy wrung from exhausted or weary nerve centers under pressure. This penalty takes the form of nervousness, perhaps sleeplessness, almost certainly some loss or depreciation of function of one or more of the great organs concerned in nutrition. To relieve these maladies—springing from this unexpected cause—the brain worker very likely has recourse to the use of stimulants, possibly alcoholic, or it may be simply tea or coffee. The sequel need not be followed. Night work during student life and in after years is the fruitful cause of much unexplained, though by no means inexplicable, sufferings, for which it is difficult, if not impossible, to find a remedy. Surely morning is the time for work, when the whole body is rested, the brain relieved from its tension, and mind power at its best.—*Manufacturer and Builder.*

VINEGAR FOR THE SICK ROOM.—There is a French legend connected with the preparation called *vinagre a guaire voleurs*. During the plague at Marseilles a band of robbers plundered the dying and the dead without injury to themselves. They were imprisoned, tried and condemned to die, but were pardoned on condition of disclosing the secret whereby they could ransack houses infected with the terrible scourge. They gave the following recipe, which makes a delicious and refreshing wash for the sick room: Take of rosemary, wormwood, lavender, rue, sage and mint a large handful of each. Place in a stone jar, and turn over it one gallon of strong cider vinegar; cover closely, and keep near the fire for four days; then strain, and add one ounce of powdered camphor gum. Bottle and keep tightly corked. It is very aromatic, cooling and refreshing in the sick room, and is of great value to nurses.—*N. Y. Tribune.*

DOGS A CURE FOR CONSUMPTION.—The *Elmira, New York, Gazette* is responsible for the following, for which it vouches. The party is a well-known business man whose name could be given if desired: A prominent citizen of Genesee has been prolonging his own life at the expense of sundry dogs. Some two or three years ago, the gentleman, who was pronounced by his physicians in an advanced state of consumption, began the habit of taking his pet dog to bed with him. The dog soon exhibited unmistakable signs of lung disease, coughed incessantly, and finally died. Another was procured, which went the same way, and the gentleman has now a third one for a bedfellow, who, at the time the article was written, gave every indication that he would soon follow in the way of his predecessors, while the man is better than he has been for years. So much for dogs and consumption.

FASTING IN ACUTE RHEUMATISM.—Dr. Wood, professor of chemistry in the Medical Department of Bishop's College, Montreal, reports, in the *Canada Medical Record*, a number of cases in which acute articular rheumatism was cured by fasting, usually from four to eight days. In no case was it necessary to fast more than ten days. Less positive results were obtained in cases of chronic rheumatism. The patients were allowed to drink freely of cold water, or lemonade in moderate quantities if they preferred. No medicines were given. Dr. Wood says that from the quick and almost invariably good results obtained by simple abstinence from food in more than 40 cases in his own practice, he is inclined to believe that rheumatism is, after all, only a phase of indigestion, to be cured by giving complete and continued rest to all the viscera.

EPILEPSY AND FOOD.—Epileptics are, as a rule, enormous eaters. We have known a boy with this disease eat twice as much as was really necessary for his support. It is very difficult to prevent this, as they had about as soon die as not to gratify their appetite. Now, what is the result of this overeating? The stomach is taxed to its utmost to digest the food, and the powers of excretion are also gravely overtaxed. The blood becomes overloaded with urea, carbonic acid, bile and other excrementitious matters, and all these things bring on attacks of the disease much oftener than they would otherwise occur. The epileptic should therefore eat less.—*Herald of Health.*

DOMESTIC ECONOMY.

Care of Kitchen Floors.

I paint my kitchen floor each spring, and occasionally in the fall. I apply two coats, as follows: In the first place, we keep on hand a can of boiled linseed oil, a can of japan and a bottle of spirits of turpentine. I prefer the boiled oil, as it dries better and also gives the paint a gloss that is not attained in the use of raw oil. I take two quarts of this oil, a pint of japan and one-half teacupful of spirits of turpentine, and stir in three or four pounds of French, yellow ochre, making it just thick enough to spread with a brush. A 60-cent brush is good enough. After the work is done in the afternoon, the floor is mopped with weak soap-suds, in which is put a trifle of washing soda. After it dries for half an hour or so it is ready for the paint. The first coat is then spread on, and in the morning it will be quite hard. But I have a few strips of boards laid down, so as not to walk on it too much, and the children must be kept out for three or four days. The second afternoon another coat is spread on in like manner, and in less than a week the paint will be firmly set. Sometimes I have added a pound or two of white lead, but I have not been able to see much, if any, advantage in it. One year I used all white lead, and made it a dark, slate color by adding a little lampblack, but the floor never looked clean, and had a dingy appearance.

Painting the floor saves a large amount of work, for then if you spill grease on it all you have to do is to wash it off with warm, weak soap-suds, when it will look clean and neat. In case one does not use a carpet on the dining-room floor, it should be painted in the same manner. A kitchen floor kept well painted will last at least 20 years, if not more, while the same floor will not survive more than half a dozen under the ordinary scrubbing process.

With a floor thus painted, and the house grained and varnished, the labor of keeping it clean is but a trifle compared to the old plan of an unpainted kitchen.

OATMEAL DRINK.—Dr. D. G. F. McDonald writes: "In harvest time thin oatmeal gruel is the best, most nourishing and cheapest drink for the field laborer. It quenches thirst speedily and gives more strength and endurance than beer. It has been conclusively proved by experiments that non-alcoholic drinkers utterly beat alcoholic imbibers in hard work, especially when exposed to the heat of the sun. Beer drinkers go ahead at first, but their energies soon flag, and they are much more exhausted at the end of the day. Oatmeal drink is easily and simply made by putting the meal into cold water by degrees as it is strained through the fingers, stirring it all the while with a short stick to prevent 'knots,' until the mixture becomes homogeneous, in the proportion of a tablespoonful to a quart of water, adding a little sugar to suit the taste. Then boil thoroughly, and let it stand till cold. Whey, skimmed milk and cold tea are much better than beer, but none of these beverages equal the oatmeal drink. Where oatmeal cannot be got, other meal will do, but not so well."

RASPBERRY VINEGAR.—Put three pounds of very fine ripe raspberries in a bowl; bruise them well, and pour upon them a quart of the best cider vinegar; next day strain the liquor on a pound of fresh ripe raspberries; bruise them also, and the following day do the same, but do not squeeze the fruit, or it will make it ferment; only drain the liquor as dry as you can from it. The last time pass it through a canvas bag previously wet with the vinegar, to prevent waste. Put the juice into a stone jar, with a pound of sugar to every pint of juice—the sugar must be broken into lumps; stir it, and when melted put the jar into a pan of water; let it simmer a little and then skim it; when cold, bottle it. It will be fine and thick when cold, and a most excellent syrup for making a wholesome drink.

CHICKEN JELLY.—Chicken jelly for an invalid is easily digested and very nourishing. Dress and clean the chicken as usual, rinsing it well, but not allowing it to lie in cold water to soak; break the bones, and put bones and meat in a kettle with enough cold water to cover the chicken; heat slowly, and let it simmer gently until the meat is in little strings, and the water has boiled half away; skim it then and press it through a sieve; salt to suit your taste, put on the fire again, and let it simmer for 10 minutes, then take from the fire, and when it is perfectly cold, skim it; keep it in the refrigerator or some cold place. You can make sandwiches by using crackers or very thin slices of bread. Add pepper if the patient wishes it.

INDIGESTION is frequently said to make people fretful and ill-tempered, but the reverse is oftener the case; that ill-temper is the cause of the indigestion much more frequently than the result. Indeed, it is much more frequently the cause than over-eating, or even improper food, and far more injurious, for it is most apt to display itself at the domestic hearth. The best preventive for this species of indigestion is company. All men are more or less reserved in the presence of strangers, hence, in the daily turmoil of business, even ill-tempered men appear to be tranquil and serene, lest they be thought thin-skinned and weak.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for each month's delay in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES.	1 week.	1 month.	3 mos.	12 mos.
Per line.....	25	80	\$2.20	\$5.00
Half inch (1 square).	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

S. H. STRONG

SAN FRANCISCO:

Saturday, September 2, 1882.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Hop Growing; Botany in Arizona—No. 2; An Imported Holstein Bull; 149. The Week; The Cattle Commission at Work; The Golden Gate Fair, 156. Property Rights and the Debris Question; Death from Contact with Bloody Murrain, 157. Patents and Inventions; Notices of Recent Patents, 160.

ILLUSTRATIONS.—Netherland Prince, 149. Industrial Exposition Building, 157.

CORRESPONDENCE.—Montana—Her Mountains, Rivers and Valleys, 150.

HORTICULTURE.—Meeting of the State Horticultural Society, 153-1.

PATRONS OF HUSBANDRY.—Grange Leaflets, No. 7; Stockton Grange Harvest Feast, 152.

AGRICULTURAL NOTES, from the various counties of California and Nevada, 152-3.

HOME CIRCLE.—Grandfather's Garden (Poetry); Grandma's Dream; A Reminiscence; A Tale of Two Farms, 154. Chaff; Standing and Sitting; Admirable; Spontaneous Combustion of Cotton; Minerals in the Stomach, 155.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Mrs. Blacknose, 155.

GOOD HEALTH.—The Proper Time for Work; Vinegar for the Sick Room; Dogs a Cure for Consumption; Fastening in Acute Rheumatism; Epilepsy and Food, 155.

DOMESTIC ECONOMY.—Care of Kitchen Floors; Oatmeal Drink; Raspberry Vinegar; Chicken Jelly; Indigestion, 155.

QUERIES AND REPLIES.—Experience with Alfalfa Ensilage; Tulare Peaches; Eucalyptus for Posts; Sour Wine; Black Knob on Vines; Cracked Prunes; Poisoned Peaches for squirrels; The Willow Pest, 156.

ENTOMOLOGICAL.—New Leaf Insect, 156.

Business Announcements.

Household Sewing Machines, Mark Sheldon, S. F.
Price List for 1882, Montgomery Ward & Co., Chicago, Ill.

The Week.

The fair season is fairly under way this week. The exhibition of the rich Sonoma and Marin district, on the new grounds at Petaluma, is in progress as we write, and early reports indicate a good patronage and a successful exhibition. Next week the Golden Gate fair will open in Oakland, and the following week will be the State fair at Sacramento, the prospects of which are exceedingly bright. Already the demands for space and accommodations indicate great breadth and variety in the exhibits to be made. The other fairs will occur as stated in the table which we published last week, and we trust they may all be successful and enjoyable occasions.

Evidence accumulates that the present is a very satisfactory year for California, although the rainfall was rather scant and reduced the aggregate of cereals and fodder crops. Improved values have compensated for less amounts in many cases, and the diversity of productions has given a number of resources instead of the single one which formerly was relied on. California is advancing so fast that a partial drouth does not prevent her maintaining her proper place in the yearly progression of values produced from our fields, orchards, vineyards and gardens.

ACCORDING to a decision by Judge Field, all Chinese sailors who shipped before the passage of the Restriction bill have a right to land at American ports.

The Cattle Commission at Work.

In our issue of August 5th, we mentioned the organization of a new commission by the Department of Agriculture, the duties of which are to arrest the spread of contagious diseases among the livestock of the country. The commission seems to have been immediately set at work, for there is a threatened outbreak of the Texas cattle plague at the East. For several weeks past there have come reports of numerous outbreaks of the Texas cattle fever in Eastern States, principally in Virginia, Pennsylvania, and Ohio, and cattle men there have become much alarmed over the prospect before them. Western farmers and cattle dealers have been subjected to these trials so long that they have learned to take precaution, and no longer fear the disease as they used to. The Texan fever does not apparently affect the cattle from the State of Texas, because they have become adapted to it. They are apparently healthy cattle, but whenever they come in contact with Northern cattle the contagion spreads and proves fatal. Domestic cattle may contract this disease by actual contact with Texan cattle, by grazing in the trail over which they have passed, by being driven through streets and alleys shortly after Texan cattle have gone the same way, or by being shipped in cars they have been in. Western cattle men understand this, and are careful in no way to bring their domestic cattle in contact with those they bring from the South until after these have been one winter in the North. Two or three heavy frosts kill the germs of the disease, and there is then no danger.

Just before the adjournment of Congress, \$50,000 was appropriated to establish quarantine stations on the Atlantic coast, to guard the shipment of cattle from foreign countries into this, and to prevent the pleuro-pneumonia and other very troublesome and fatal diseases. Quarantine stations will be established at Portland, Me., Boston, Philadelphia, New York and Baltimore. There will then be no further need for those dealers who are careful about not bringing diseased cattle to this country shipping by the way of Canada, as they have for several years. About 75% of all cattle imported and sent to Western States has come by the way of Quebec, because of the quarantine station there, which refuses to allow diseased cattle to pass. All careful importers have taken that route. When the Cattle Commissioners have done their work, there will be no further necessity for this.

The Golden Gate Fair.

Preparations for the Golden Gate fair, which will open on the grounds near Shell Mound, Oakland, on next Monday, Sept. 4th, are now well along, and assure both the visitor and the exhibitor most excellent accommodations. The ease of reaching the grounds by rail, as the Berkeley trains stop almost at the entrance to the grounds, will enable throngs of people to enjoy a few days' rural sports and sight-seeing at slight cost. The excellence of the stock of all kinds which is promised by the breeders will attract all lovers of fine animals. The leading cattle herds and sheep flocks of the State will be represented, and swine of the purest blood and best form will be abundant. In horses the fair promises to be peerless. Governor Stanford has promised a large exhibit of his famous Palo Alto thoroughbred and trotting stud. Mr. Stanford shows much public spirit in taking these fine animals to the fair, where the public can view them, and as the first appearance will be at Oakland the horses will be at their best. Among the features of the horse exhibition will be the display of old Thad Stevens, the famous California running horse, now the property of R. P. Clement, and a large family of his colts. Aside from these, there will be, of course, a host of fine horses—both those entered for premiums and those taking part in the well-filled race programme. In the matter of racing events the Association claims to be able to make a better showing than any other on the Pacific coast. They have the privileges of the best race-track in the United States—the track preferred by horsemen above all others when speed is the *sine qua non*.

The ladies' equestrian tournament will be one of the best features of the fair, as it will simply include park riding and the equestrianism ordinarily displayed and necessary in the management of such animals as are usually managed by women. There will be no rough riding, no fox-hunting feats, and no racing. Furthermore, it is the intention of the directors that no objectionable characters shall enter as competitors, and that the whole affair shall be conducted in a decorous manner.

TROUT PONDS ON LONG ISLAND.—Mr. George W. Thompson, a farmer from Brooklyn township, Alameda county, Cal., has met with a rich success in trout raising at Noyac, near Sag Harbor, Long Island, N. Y. He has 60,000 gamey brook trout in his largest ponds. With other attractions, he has made his "Oak Grove trout ponds" one of the most beautiful and attractive places on the east end of Long Island, which district is noted for its fine places of resort for New Yorkers.

QUERIES AND REPLIES.

Experience with Alfalfa Ensilage.

EDITORS PRESS:—Being a reader of your paper and glad to read the experience of others, I give mine on ensilage. I constructed a silo by running a cut in a bluff bank and lining it with plank, and making, with inch boards, double, a door for the front. Filled it with first-cutting alfalfa in the hottest weather in June; opened it in about six weeks, and but little of it was spoiled. It looked and smelled much like tobacco. Cattle and sheep would eat it up clean. Horses and hogs eat but little of it, and stock of all kinds would leave it and go for hay. I also tried feeding it to my milk cows instead of alfalfa hay, and the result was my yield of milk fell off one-half in a few days. I conclude that there is little difficulty in keeping alfalfa grass by ensilage, and that it costs much more to preserve it in a silo than to make hay of it, and that it is comparatively worthless for fodder. This experiment was made in 1881, and I used the last of my ensilage in December.—I. W. S., Kernville, Cal.

We are glad to receive records of all kinds of experience, and the report of a failure is often worth as much to the public as the heralding of a success. It is just possible that our correspondent did not secure ensilage in its best condition. As we understand it, there was no pressure except the weight of the mass itself—perhaps, however, there was; our correspondent does not specify. Supposing there was pressure, it would not seem that there was enough to properly compact the mass, else the door of doubled boards would hardly have been strong enough to hold in the mass. Unless there is sufficient pressure to completely compact the mass and exclude the air, the probability is that the ensilage will not be in its best condition. Possibly the little amount which spoiled was due to the dryness of the climate, which carried away the moisture from the mass, so that no great amount of fermentation occurred. The description of the ensilage as "looking and smelling like tobacco" would seem to indicate that the material was dried rather than "ensilaged," and had an herby appearance and savor. Ensilage, properly made, is quite different. It has very little smell, and an insipid taste. It is possible, therefore, that our correspondent's ensilage was not in its best state, although this is but conjecture on our part, as we have seen none of it, nor the arrangements for making it.

The ease with which alfalfa hay is made in this State will remove a good part of the chance to ensilage to advantage. The chief claim which can be made for the silo is that it presents the material in a succulent condition, and thus maintains a large flow of milk, which is generally decreased when the animal comes upon a dry diet. How far this claim is justified by experience our experimenters should endeavor to ascertain accurately. There is a growing disposition to try the silo in this State. A Fresno reader called to see us the other day relative to experimenting with Egyptian corn fodder. We read in the *Oroville Express* that Mr. Hutchins, of the Central house, Oroville, is about to construct a silo of 100 tons capacity. All who have made tests of ensilage are invited to report them to the *RURAL* at any time.

Tulare Peaches.

EDITORS PRESS:—I send you to place on exhibition at the Mechanics' fair the three largest peaches that have been brought into Hanford this season. They are clings from the orchard of J. W. Thomas, five miles northeast of Hanford, on land adjoining the ranch of Major T. J. McQuiddy. The trees were planted by Major McQuiddy's son four or five years ago. Four of these peaches weighed, when fresh, 47 ozs., or an average of 113 ozs. Several measured 11 inches in circumference. The largest weighed 123 ozs., and measured 11 1/2 inches. Let us know, through the *RURAL PRESS*, if their size is surpassed by any others there. The young orchards of the Mussel Slough district are now producing the very best of fruit, proving that this is one of the best regions of California for all our "northern fruits."—J. W. A. WRIGHT, Hanford, Cal.

The peaches were received in good order, and placed on exhibition, as desired, and attracted much attention, being the largest on view. We print the above measurements, that any reader who desires may use the twine on his own fruit, and report the results.

Eucalyptus for Posts.

EDITORS PRESS:—Will you kindly inform me through the columns of your valuable paper whether the eucalyptus or blue gum is considered valuable for fence posts, or will it rot when put into the earth?—A SUBSCRIBER, Fresno, Cal.

The blue gum wood is usually considered of little use in exposed places, as it is prone to decay. Von Mueller says the timber will last nine years, but he probably refers to the well-matured wood of old trees, and not such wood as we have now in this State. We have no data for determining how long California Eucalyptus fence posts will last, but no doubt our readers have experience with them. Let us hear the results, for the subject is of importance to many.

Sour Wine.

EDITORS PRESS: I would be pleased through your columns and your numerous subscribers to ascertain if there is anything that we can put into wine to prevent it from becoming sour. My grapes are all of foreign varieties, and I irrigate them to make them nice for table use. All bunches that are not fit for table use are made into wine and vinegar, but in three or four months after it is made it begins to sour, and when 8 or 9 months old is too sour to drink without sugar. If somebody can give me any information on the matter, they will oblige me.—J. A. ELLIOTT, Newcastle, Placer Co.

Black Knot on Vines.

EDITORS PRESS:—I wish some of the contributors of the *RURAL PRESS* would give their experience with black knot on Muscat vine, and suggest a remedy for the benefit of a beginner?—SUBSCRIBER, Fresno, Cal.

We had full discussions of this subject in the *PRESS* last year, but perhaps another year's ob-

servation has led to new conclusions. We shall be pleased to hear from readers on the subject.

Cracked Prunes.

EDITORS PRESS:—What is the experience of fruit growers with the splitting of the *petite prune*? Mine are splitting badly this year.—HARRISON BARTO, Santa Clara.

This trouble is quite prevalent around the bay, and is thought to be owing to some climatic influences, but the cause is not demonstrated, so far as we are aware. Who has learned anything about it?

Poisoned Peaches for Squirrels.

EDITORS PRESS:—Advise the readers of the *PACIFIC RURAL PRESS* to use all their waste peaches to poison the squirrel with. Several ranches have been completely cleared here in this way. Twenty-five cents worth of strychnine will clear a ranch.—THOMAS NEMES, Pasadena, Los Angeles Co., Cal.

The Willow Pest.

EDITORS PRESS:—About white willow: I have to say that I have cut them and applied coal-oil on the fresh cut without success, and so I pull off all shoots as soon as they appear.—OSCAR ZSEHOKKE, Bakersfield, Cal.

ENTOMOLOGICAL.

New Leaf Insects.

According to the *Record-Union*, Mr. Cooke, Chief Horticultural Officer, is still kept busy by the inquiries and specimens sent him by the fruit growers. During the last six weeks letters have been received, accompanied by specimens, from several counties, especially specimens of leaves of grape vines, peach, plum, pear and almond trees, that were dried up and apparently the vegetable saps extracted. On examination the leaves were found to have been infested by several species of minute insects. Those from Fresno were infested by a small yellow mite, one-seventieth of an inch in length, oblong, ovate in form, body and legs covered with spines, two minute red marks on the back near the head, mouth parts formed for biting or sucking, and eight legs. This species somewhat resembles in form the red spider (or mite), but differs in color. For the present it may be named the yellow mite.

The leaves received from Vacaville were infested with a species of thrip. Mr. Cooke visited the section week before last and procured specimens of the species in all stages of its existence, larva, pupa and perfect insect, which are mounted for microscopic use. The larva has the appearance of a small louse, with elongated abdomen, color primrose yellow, with a transverse orange color bar at base and a similar bar at tip of abdomen; the antennae are five jointed, and length of larva one-thirtieth of an inch. This insect is active in the pupa state, therefore the transformation is incomplete. The adult, or perfect insect, color brownish-black, with a brown transverse bar on prothorax, and two yellowish bands across wings, antennae eight or nine jointed, length of insect one-twenty-eighth of an inch. Mr. Cooke states that some naturalists have doubts as to the thrips being vegetable feeders, especially Professor Wralsh, who stated they were predacious, and lived upon other species of insect life. Mr. Cooke says that he is satisfied that they live upon vegetable saps, as can be witnessed on examination of the leaves on trees and plants infested by them at Vacaville and Pleasant valleys, viz, pear, peach, plum and almond trees; also on the beans and sunflowers. He colonized some thrips on leaves infested by the red spider, but the thrips evidently preferred the sap of the leaves. This species, in all probability, belongs to the genus *Melanthrips*, which means black thrips. Leaves received from Mr. Groves, of Chico, were infested by the yellow mite, similar to specimens from Fresno, and also with thrips which, combined, had destroyed the leaves. The fine webs made by the mites appeared to be an excellent trap for the thrips.

All trees infested by these pests should be sprayed with soap and sulphur solutions (but it is now too late for this season). However, the leaves falling from infested trees should be raked together and burned, and the trees thoroughly washed with lye in the winter season.

DEATH OF E. J. HOOPER.—Edward J. Hooper, a veteran journalist and a highly respected citizen, died in this city last week, at the age of 80 years. His pen was chiefly employed, during the active portion of his life, upon agricultural topics, and he edited for many years with great success the *Western Farmer and Gardener*. Subsequently he was connected with Rev. Henry Ward Beecher in the publication of an agricultural paper in Indiana. He arrived on this coast in 1870, and became connected with the *California Horticulturist*, now merged in the *RURAL PRESS*. He was also an occasional contributor to our columns. Deceased was a native of England. He leaves one son, four daughters and a large number of grandchildren to lament his loss.

GEN. VALLEJO says the name "Yuba" is a corruption of the Spanish word "uva" (English, grape), which is pronounced "uba" by the Spaniards. The river was so called on account of the immense quantity of grapes that grew on its shores.

Property Rights and the Debris Question.

When the popular judgment falls on the right side, as it now clearly has on the debris question, it is gratifying to see how many things arise to make the right more and more evident. The broad principle that one should not pursue his pleasure or his labor to the detriment of another's toil or livelihood seemed to be enough to cover the injurious acts of hydraulic miners. But, as laws have not yet become commensurate with moral principles, the judges and the lawyers have insisted upon some narrower ledge upon which to rest their opinions. This has already been found, as shown by Judge Temple's decision, and it is valuable to find that other legal precedents are disclosing themselves which more and more strongly affirm the rights of the valley farmers to the undiminished fertility of their fields and purity of their streams.

We have just finished reading an article in the *North American Review* for September, which, to our unjudicial mind, seems to present still further weight in favor of a decision for the farmers. The question discussed is "Constitutional Protection of Property Rights," and the immediate occasion of the discussion is the great injury done to residents of certain streets in New York city by the building of the elevated railway tracks along the line of their upper windows, thus afflicting them with noise, noxious vapors, deprivation of sunlight, etc. The question is, is the property right of the residents invaded by these elevated railway companies. Mr. Sedgwick, who writes for the *Review*, takes firm ground that they are, and in collating precedents brings forward cases almost analogous to the ruin of our river farms by the debris. We shall present an extract which will indicate the position taken by the writer:

The constitution of the State of New York contains the provision common to all our State constitutions, that "when private property shall be taken for any public use by the State, the owner shall be compensated." Now, singular as it may seem, it has been decided by court after court that, to constitute a "taking" of property within the meaning of this clause, there must be some direct, actual, physical interference with land or chattels.

The Supreme Court of Pennsylvania, in construing a similar provision 30 years ago, said: "The constitutional provision for the case of private property taken for public use extends not to the case of property injured or destroyed." This may be said to have been the prevailing view of the American courts down to a very recent period, and it is plain that, under this interpretation, the claim of the owners of property diminished in value by the elevated railroads would have no standing whatever. Within the past few years, however, a new view of the subject has made its appearance, which has received the sanction of a court of high authority, and under which property owners would be materially better off. In the case of *Eaton vs. the Boston, Concord & Montreal Railroad*, the fact presented to the court were as follows: The corporation, claiming to act under Legislative authority, removed a natural barrier, situated north of the plaintiff's land, which had, down to the period of the construction of the road, completely protected his meadow land from the effects of floods and freshets in a neighboring river. In consequence of this, the waters of the river sometimes flowed over his meadows, carrying stones, sand and gravel upon them. Here there was nothing but injury, and no appropriation of land whatever. Nevertheless, the court held that this was a taking of the plaintiff's property within the meaning of the constitutional provision, and that the Legislature could not authorize any such injury without making provision for compensation. In reaching this conclusion, the court first states the commonly accepted interpretation as follows:

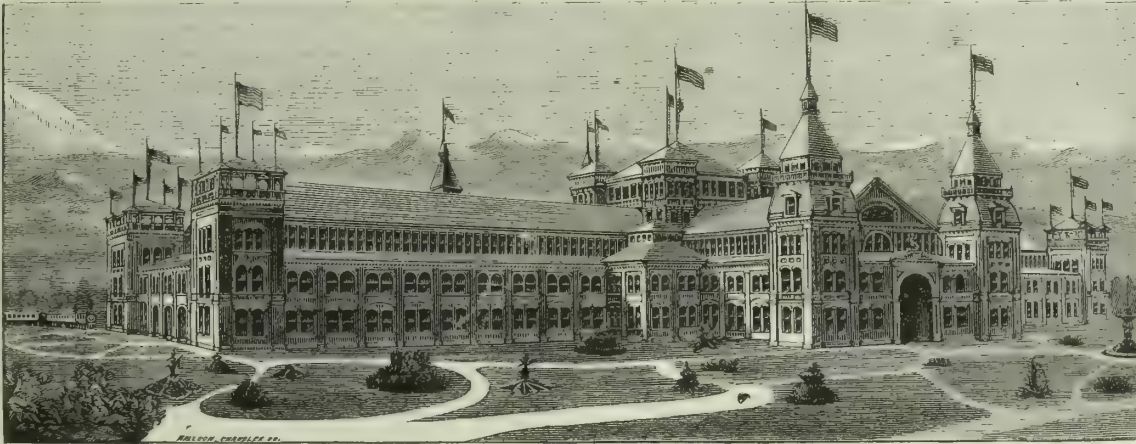
"The constitutional prohibition (which exists in most, or all, of the States) has received in some quarters a construction which renders it of comparatively little worth, being interpreted much as if it read, 'No person shall be divested of the formal title to property without compensation, but he may without compensation be deprived of all that makes the title valuable.' To constitute a 'taking' of the property, it seems to have sometimes been held necessary that there should be an exclusive appropriation, a total assumption of possession, a complete ouster, an absolute or total conversion of the entire property, a taking the property altogether. These views seem to be founded on a misconception of the term 'property,' as used in the various State constitutions."

In a strict legal sense, they continue, land is not "property," but the subject of property. The term property, although in common parlance frequently applied to a tract of land or a chattel, in its legal signification means only the rights of the owner in relation to it. Property is, in other words, the right to possess, use, enjoy, dispose of, rent, sell, give away, devise the thing owned; and anything which interferes with the beneficial enjoyment of all these rights substantially diminishes them, and consequently involves a "taking," *pro tanto*, of the property. The right of using indefinitely is an essential quality or attribute of absolute property, without which absolute property can have no legal existence. This right of using necessarily in-

cludes the right and power of excluding others from using the land. If the right of indefinite use is an essential element of absolute property or complete ownership, whatever physical interference annuls this right takes "property," although the owner may still have left him valuable rights of a more limited and circumscribed nature. He has not the same property that he formerly had. Then he had an unlimited right; now he has only a limited right. His absolute ownership has been reduced to a qualified ownership. Restricting A's unlimited right of using 100 acres of land to a limited right of using the same land, may work a far greater injury to A. than to take from him the title in fee simple to an acre, leaving him the unrestricted right of using the remaining 99 acres. Nobody doubts that the latter transaction would constitute a "taking of property." Why not the former?

The case of *Pumpelly vs. Green Bay Company*, decided by the Supreme Court of the United States, closely resembles the New Hampshire case. In that case it was held that the backing of water so as to overflow the land of an individual, or any other superinduced addition of water, earth, sand, or other material or artificial structure placed on land, if done under statutes authorizing it for the public benefit, was a taking of property within the meaning of the constitutional prohibition. The court said as to this:

"It would be a very curious and unsatisfactory result, if, in construing a provision of constitutional law, always understood to have been adopted for protection and security to the rights of the individual as against the Government, and which has received the commendation of jurists, statesmen and commentators as placing the just principles of the common law on that subject beyond the powers of ordinary legislation to change or control them, it shall be held that if the Government refrains from the absolute conversion of real property to the uses of the public, it can destroy its value entirely, can inflict irreparable and permanent injury to any extent; can, in effect, subject it to total destruction without making any compensation, because, in the narrow sense of that word, it is not taken for the public use. Such a construction would pervert the constitutional provision into a restriction upon the rights of the citizen, as these rights stood at the common law instead of the Government, and



INDUSTRIAL EXPOSITION BUILDING, DENVER, COLORADO.

make it an authority for invasion of private right under the pretext of the public good, which had no warrant in the law or practices of our ancestors."

This decision seems to treat the submerging of lands as equivalent to the "taking" of them. But, obviously, it is not the lands which are "taken" in such a case, in any true sense. The title to the lands is still the property of the owner; it is the beneficial use of them which is gone, so that, as a matter of fact, the difference between this and the New Hampshire case is only one of degree. The Supreme Court, in saying that the land is "taken" by overflowing, merely means precisely what the New Hampshire court means when it says that the "property" is taken by an occasional deposit of stones, sand, and gravel through an overflow or freshet. And the New Hampshire court itself says, after using the language we have quoted as to the meaning of the word "property" in the constitutional prohibition:

"If, on the other hand, the land itself be regarded as 'property,' the practical result is the same. The purpose of this constitutional prohibition cannot be ignored in its interpretation. The framers of the constitution intended to protect rights which are worth protecting; not mere empty titles, or barren insignia of ownership, which are of no substantial value. If the land, in its corporeal substance and entity, is 'property,' still, all that makes this property of any value is the aggregation of rights or qualities which the law assumes as incidents to the ownership of it. The constitutional prohibition must have been intended to protect all the essential elements of ownership which make 'property' valuable. Among these elements is fundamentally the right of user, including, of course, the corresponding right of excluding others from the use. * * * a physical interference with the land, which substantially abridges this right, takes the owner's 'property' to just so great an extent as he is thereby deprived of this right. To deprive one of the use of his land is depriving him of his land, for, as Lord Coke said: 'What is the land but the profits thereof?' * * * The private injury is thereby as completely effected as if the land itself was physically taken away."

Thus it appears that the miners have just as much right to enter upon the possession of the farmer's land as they have to discharge upon it material which reduces its value—that is, no right whatever to do either. That is just the end to which the issue must come, and it is fortunate that it is almost there already.

TRUCKEE has lost 16 fingers by buzz saws alone this season, and the Grass Valley *Union* says: These, with those lost by the gay and festive toy pistol, make quite a good showing for the county.

The Denver Industrial Exhibition.

There is now in progress an industrial exhibition which, though chiefly devoted to the display of matter relating to mines and mining, was also projected with a view to show agricultural products and to give an intimation of the agricultural resources of the great Rocky Mountain region of the United States. We learn from the local papers that the agricultural features of the exhibition are not well sustained, which we regard as unfortunate for Colorado and adjoining Territories, which are coming into prominence in several lines of agricultural production.

The California Commissioner to the Denver exposition is Mr. W. B. Ewer, one of the publishers of the *PRESS*, and he is contributing to the *Mining and Scientific Press* a series of interesting letters on the mineral and mechanical features of the display. The exposition building, as the engraving shows, is constructed in the Renaissance style of architecture, and presents a really beautiful appearance, with its flags of all nations flying from its numerous towers and minarets. It is in the form of a Grecian cross. The long arm of the cross is 500 ft. by 120 in width; the short arm 310 ft. long and of the same width, giving a floor space on the ground of 82,480 ft. To this should be added the gallery space of 34,290 ft., making in all a total of about 120,000 ft. of floor space. It has been constructed by an association, in a substantial and permanent manner, occupying, with its annexes now existing and to be constructed, the central position of a 40-acre lot, which will be fitted up as a park. Underground pipes have already been distributed thereabout the entire area for irrigation purposes.

It is proposed that the mineral exhibit shall be a permanent one, to be open all the year round, with special additions and a special show

during the months of August and September of each year. Most of the minerals, stands and cases now there will be left permanently in the building.

BROOM CORN.—A Grand Island correspondent of the *Sacramento Bee* gives some items on the growth of broom corn in his region. Near Kirksville, J. J. Ardrey has a large farm of broom corn under cultivation. In one piece there are 400 acres, and in another, 200 acres. On Grand Island he has 500 acres. It stands now in the field 16 to 20 ft. in height. Wm. Wood, a short distance to the south of the broom-corn plantation, has a force of Chinamen at work clearing off about 100 acres of undergrowth. He has corn on his place that will yield 10 barrels to the acre this season, and claims that there is no land in California or any other State that will produce like the land of the upper Sacramento. A correspondent of the *Visalia Delta* says that around Selma, in Fresno county, there is now being harvested a large crop of broom corn, which will pay well, as it is now worth \$90 per ton. All have planted the golden seed, which largely outyields the old or black variety. Much of the broom corn in California is short and brittle, but it is said that the quality produced in Fresno is good.

INVENTOR EDISON and his new electric light company are threatened with being brought to grief by a young man named Freeman, of Racine, Wisconsin, who claims to be the inventor of the incandescent light, and will prove in the courts that Edison incontinently appropriated the whole thing. Freeman is also supported by a powerful company, and the twain are about to try conclusions. The plaintiff will show that Freeman was the first to accomplish the wonder of incandescent light by means of a vacuum, which he exhibited to a considerable number of people a year prior to the time when Edison brought out his discovery; also, that Freeman sent one of his lamps to Edison for inspection, and that the latter immediately usurped the entire invention and procured patents thereon. Both parties have retained the ablest patent lawyers to be had for money, and a famous legal contest is in course of preparation.

Death from Contact with Bloody Murrain.

The Pacific coast is comparatively free from cattle diseases, and has enjoyed immunity from the grave contagions which have brought such great losses to Eastern stock growers. There are, however, sporadic cases of dangerous infections—maladies which are dangerous and grievous upon the localities in which they appear. Dr. Walter Lindley, President of the Los Angeles County Medical Society, sends us a copy of an article which he prepared for the *Los Angeles Express*, and which will be of deep interest to all stock growers:

In compliance with your request and the wishes of several farmers, I present the following in regard to the cases of bloody murrain that occurred on the ranch of Timothy Sullivan, between Los Angeles and Downey City: I saw Mr. Sullivan Saturday, August 12th. He had high temperature, weak, rapid pulse and profuse sweats. Eight days before one of his cows had been attacked with bloody discharge from bowels, kidneys and nostrils, and died in 24 hours. The next day he and one of his sons skinned the dead animal, and both got pricked with the knife. The father's wound was on his left thumb and the son's on the left wrist. Mr. Sullivan felt quite badly the following day, but as he had been "bilious" for two weeks, he attributed his ill feeling to that, and not to the wound. The wounded joint on his thumb became black and the thumb swollen. On Monday night, five days after he was wounded, he had a severe chill, followed by high fever. The following Saturday I saw him, as previously stated, and he died 48 hours later. The son's wrist became black, just as his father's, and the arm greatly swollen. The young man is now rapidly recovering.

The disease of the cow was a form of charbon, that attacks the internal organs and is very quickly fatal. This special form of disease is called bloody murrain, and is quite contagious both in man and stock. Three cows on this farm died about the same time. It is dangerous for a man to even handle stock that has died of charbon.

"Prof. Gross mentioned the history of three persons who were attacked by the disease after picking the feathers from a turkey buzzard which had fed on the carcass of an ox dead of murrain." On the appearance of any symptoms of this disease amongst cattle, the well should immediately be separated from the sick. When a death occurs, the dead animal should be deeply buried without delay. Although the disease is comparatively rare in Southern California, yet it would well repay every farmer to carefully read the symptoms in some reliable work on diseases of live stock, and thereby avoid such sad accidents as the one which caused the death of Mr. Sullivan. We herewith give a couple of

extracts from "Diseases of Live Stock," by Lloyd V. Teller, M. D., upon the peculiar symptoms of this disease, and the facts of a remarkable type of it that prevailed in Nebraska in 1872-73:

"Anthrax fever" occurs when the malignant inflammation attacks some of the internal organs. The cow or steer ceases feeding and ruminating, trembles, has partial sweats, arches the back, and rests his quarters against a wall or fence. The temperature is high, 105° to 107°; and this is the earliest symptom of the approach of the disease. The eye is sunken, dull, and often yellow; the pulse weak and irregular, the breathing jerky, and there is tenderness over the loins, back or sides. The urine becomes bloody, a bloody liquid escapes from the nose, the eyes and the anus, and the dung is mixed with blood. Hence the expressive name of the disease, "the Bloody Murrain." The temperature falls below the natural one (100°), and the animal dies in convulsion or stupor, often within 24 or 48 hours of the first symptoms; or else, the symptoms rapidly disappearing, he makes a prompt recovery.

A remarkable form of the disease prevailed in Nebraska in 1872-73. It was confined to cows and heifers. They were attacked, while apparently in perfect health, with a malignant carbuncle or gangrenous swelling at the lower commissure of the vagina, the spot looking "as if dead or frozen." This ulcerated and extended rapidly up the vagina, involving the rectum and surrounding tissues. In about 24 hours from its first appearance, the cow was seized with nervous shudders, violent twitching of the tail, and loss of power in the hind quarters. By the wild eye, total loss of appetite and bellowing, it was easy to see that the suffering was great. In from 36 to 48 hours from the beginning of the attack it usually proved fatal. Inflammation and ulceration of the lower bowel and vagina were the principal post mortem appearances. It was asserted that the early application of crude petroleum to and in the vagina cured some cases. The facts were reported by Senator Dodge to the United States Commissioner of Agriculture, but the nature of the disease was not recognized at the time.

THE Egyptian loss in the recent battle near Ismailia is estimated at 4,000.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER Saxe & Son, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey Cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

L. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

Moore's Prepared



The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Poultry and Stock Book

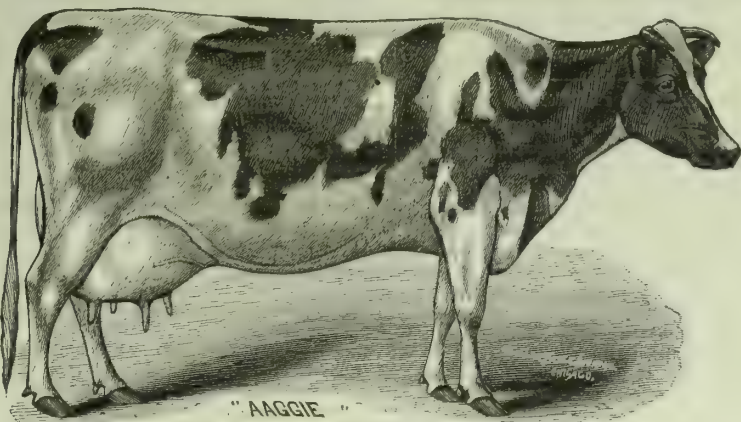
A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco. January, 1882.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

HOLSTEIN CATTLE.

THEY COMBINE MILK, CHEESE, BUTTER AND BEEF
Far More Successfully than any other Breed.



THE LARGEST HERD IN THE WORLD.

Every Animal Recorded in the Holstein Herd Book of America.

425 pure-bred, selected animals, nearly all imported, and selected personally by us from the best herds in Holland, regardless of price, and all from the deepest milking families. An unusually large and fine lot of Bull and Heifer Calves and yearling Heifers in calf. Prices very low, for the quality and breeding of these animals.

CLYDESDALE HORSES.

A large and elegant stud of Stallions and Mares on hand, and new importations constantly being added. Unusual inducements offered.

HAMBLETONIAN HORSES.

A magnificent stud, from the best trotting families. A large number of superior Young Stallions, Mares and Driving Horses for sale at low figures.

Catalogues of each class of stock sent free on application. Correspondence solicited. Call and satisfy yourselves before buying. To breed from the best is always the cheapest.

SMITHS & POWELL,

Lakeside Stock Farm, Syracuse, N. Y.

Duroc, or Red Hogs.

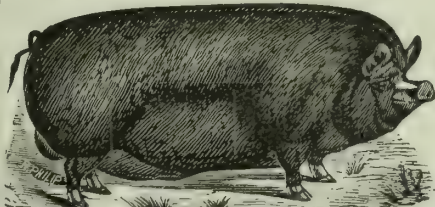


The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Spaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 583 lbs. gross, and 584 lbs. dressed. On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F., killed one weighing 1018 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

LAURELLES RANCH,

Monterey, - - - California

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.



Calvert's Carbolic
SHEEP WASH.
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

E. W. WOOLSEY & SON,

Importers and Breeders of THOROUGHbred



SPANISH MERINO SHEEP.

Choice RAMS and EWES for Sale. Ranch at Fulton, Sonoma county, Cal., and N. P. R. R. DIRECT TO THE RANCH, via Guerneville Branch at Fulton. Address, E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal., or 418 California St., S. F.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.



Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUISENBERG & CO, Sole Agents, 314 Sacramento St., San Francisco.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



RAMS FOR SALE.

350 THOROUGHbred

And Graded

SPANISH MERINO

Rams for Sale.

Bred from the first importation of Spanish Merino Sheep to California, in 1854 Thoroughbred and High-Grade Ewes for sale. Prices reasonable. Residence, one mile north of McConnell's Station, Western Pacific Division C. P. R. R.

P. O. address, MRS. E. MCCONNELL WILSON, Elk Grove, Sacramento Co., Cal.

BUCKS FOR SALE.



Spanish Merino, French Merino, LEICESTER.

Apply SHOOBERT & BEALE,

405 Montgomery St., San Francisco.

CRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
L. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. ORESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Oakland Poultry Yards,

(Cor. 17th and Castro Sts., Oakland, Cal.)



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity,	550 Eggs,	Price,	\$90.
No. 2, " "	250 " "	" "	65.
No. 3, " "	180 " "	" "	45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to

GEORGE B. BAYLEY,

Box 1771, San Francisco.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,

Los Angeles, Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

PURE BRED POULTRY.

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap, considering the quality of the stock. My birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock.

For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 262 Market St., S. F.

FOR THE WEEK ENDING AUGUST 15, 1882.
262,638.—CARRIAGE BOLT CUTTER.—Jos. S. Bright, San Bernardino, Cal.
262,639.—GRIP APPARATUS FOR CABLE RAILROAD.—H. Casebolt, S. F.
262,642.—ORE AND CEMENT CRUSHER.—Miles B. Dodge, S. F.
262,754.—APPARATUS FOR PUMPING WATER FROM MINES.—Wm. M. Ferry, Park City, Utah.
262,661.—CLOTHES DRIER.—Elliot H. Gordon, Ferndale, Cal.
262,665.—ROTARY ENGINE.—Thos. Hawkins, S. F.
262,668.—CAR COUPLING.—Clarke Hendricks, Modesto, Cal.
262,627.—FIRE ESCAPE.—Wm. H. Souther, S. F.
262,586.—SEWING MACHINE.—Geo. Gowing, Oakland, Cal.
262,716.—PLOW.—S. F. Woodworth, Newcastle, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

WOOD PLANING AND SAWING MACHINE.—J. F. Welch, East Oakland, No. 262,167. Dated Aug. 1, 1882. This invention has relation to wood-working machines, and combines in one the functions of three machines. By this device lumber is planed, ripped and cut into lengths in one operation. Provision is made for the lateral adjustment of the ripping saws so that different widths may be cut out at the same time. The cutting-off mechanism is ingenious and effective. It consists of a circular saw mounted upon a table or frame which travels across the work by means of the same power which drives all the saws and the surfacer heads. This table is nicely adjusted and begins and ends its work with perfect regularity. It will at once be seen that in driving a saw across the work, that the feed must stop to allow the operations of the cut-off saw. This is accomplished by the lumber itself, which, when it meets a certain stop, moves it to throw the feed rollers out of gear, and at the same moment the cut-off saw begins. This stop is adjustable outward from the machine to vary the length into which the lumber is to be cut. Heretofore, in single machines, they have never advanced further than to combine planing devices with ripping saws. Mr. Welch is the first to add to these the cutting-off mechanism. The labor saved by this invention is the best proof of its assured success. It would astonish one who has never seen the operation to see a rough board started in at one end and come out at the other in narrow strips of any desired length, and all dressed ready for use. Of the many gigantic strides which have characterized the advance of art in respect to wood-working machinery, this device is entitled to rank among the greatest.

CARRIAGE BOLT CUTTER.—J. S. Bright, San Bernardino, No. 262,638. Dated Aug. 15 1882. This invention relates to an apparatus for cutting and trimming off the ends of the carriage bolts after the nuts have been screwed up into place, and it consists of an oblong slotted guide, upon which the cutter moves, the bolt passing into the slot and being forced against it, where it is held as the cutter moves up against it. This guide has an enlargement or table upon which the actuating mechanism of the cutter works, and an extension back of this forms a handle, by which it is held. To the rear end of the cutter bar an eccentric strap is hinged or pivoted, and this is actuated by an eccentric, which is turned within the strap by a continuation or handle, which extends along the holding handle previously mentioned. The eccentric has a central bolt, which is properly braced, and holds it firmly to the table, so that it moves the eccentric strap when turned, but the cutter has a straight, reciprocating motion.

CAR COUPLING.—Clarke Hendricks, Modesto, Stanislaus Co., No. 262,668. Dated August 15, 1882. This car-coupling device is so arranged that the two parts automatically connect when the cars come together, and the disengagement can be effected from above without going between the cars. It is an improvement on devices of this character in its simplicity.

Try the Rural Press for 25 Cts. a Month.

Tell your friends that they can have the PACIFIC RURAL PRESS mailed to them one month on trial for 25 cents. Four back Nos. will be added on receipt of 10 cents additional—making eight copies for 35 cents. It is a handsomely printed and illustrated home journal. Mail it to friends abroad.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 602 Taylor St. Price, \$4.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIMMOUT & CO., 10 Barclay St., N. Y.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers, who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 262 Market St., S. F.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chapeas, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co., 506 Battery street, S. F.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

INTERESTING TO DRAFT HORSE BREEDERS.—L. H. Dahlman, New York City, the largest horse dealer in America, said: "I handle from 9,000 to 10,000 horses annually. The great proportion, nearly all the draft horses I handle are one-half and three-fourths blood Percheron-Normans. They are docile, intelligent, easily broken, steady in harness, powerful, compactly built, short in back, deep in body, and broad in chest, and the best feet of any horse in America, standing work on the pavements better than any other breed."—Chicago Tribune. The introduction of French horses is largely due to Western enterprise, and the country, in this respect, is greatly indebted to M. W. Dunham, of Wayne, Ill., who has imported and bred nearly 1,000 of them, which have been distributed to all parts of the United States and Canada for breeding purposes. He now has on hand about 400.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McCREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JARED C. HOAG—California.
B. W. CROWELL—San Luis Obispo and Santa Barbara counties.
T. E. THORNTON—Sonoma Co.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Aug. 30, 1882.

The markets have been rather quiet and uneventful this week. Values have not changed much, although some variations will be noted below. Wheat has been quiet, as foreign advices have not favored much activity. The following is the latest from abroad:

LIVERPOOL, Aug. 29.—California spot Wheat, firm, at 9s 9d @ 10s. Cargoes steady, at 4s 6d for just shipped, and 4s 6d for nearly due and off coast.

The Foreign Review.

LONDON, Aug. 29.—The Mark Lane Express, in its review of the British grain trade for the past week, says: The weather has been autumnal. Although rainfall was general on Tuesday, it was not sufficient to damage the crops materially. The outstanding crops, however, are endangered. English Wheat at provincial markets declined 1s @ 3s. In London, for the finest samples, a slight concession has been made, as the millers were not eager buyers. The new crop of foreign Wheat remains a dead-lock. The off-coast supply has been liberal, as many cargoes have been ordered to ports of discharge. There were 25 arrivals. Ten cargoes were sold and withdrawn. The floating stock has increased 352,500 quarters as compared with that of the corresponding period of 1881. Maize was rather dearer. The sales of English Wheat during the past week were 12,704 quarters, at 4s 10d, against 12,671 quarters, at 5s 10d, during the corresponding period last year.

London Wool Market.

LONDON, AUGUST, 29.—At the Wool sales to-day 10,000 bales were disposed of, chiefly New South Wales, Queensland and Victorian. The market was fairly sustained at previous rates.

Freights and Charters.

Freights are dull, with a weak feeling. There is considerable disengaged tonnage in port, and a large fleet on the way, and shippers are not anxious to engage, unless at concessions from holders of ships. Charters reported, both spot and prior to arrival, number 7 vessels, of a register of 8,578, or a carrying capacity of 12,867 short tons, or 257,340 cts. The chartered Wheat fleet now in port has a register of 43,307, or an export capacity of 64,960 short tons, or 1,299,200 cts, against 65,195 tons at the same time last year. The disengaged tonnage in port has now a register of 47,267, or an export capacity of

70,900 short tons, or 1,418,000 cts, against 3,976 tons at the same time last year. There is also a disengaged register of 7,054 at adjacent ports. Tonnage now on the way to this port has a register of 282,621, against 350,246 at the same time in 1881 and 190,166 in 1880.

Eastern Wool Markets.

BOSTON, August 29.—The Wool market remains the same. Desirable Wool is in good demand and prices firm. Supplies continue to arrive quite freely, and there is a good assortment of all kinds offering. Sales of Ohio and Pennsylvania fleeces, X and XX, at 40 @ 42c; choice lots, 42 @ 43c. Michigan X fleeces are in fair demand, at 39 @ 40c. Unwashed fleeces are active, with sales at 16 @ 32c for low and coarse, 25 @ 30c for fine and medium, 32 @ 35c for selected lots of medium. Combing and delaine fleeces are in demand, and have been selling at 43 @ 40c for fine delaine, and 47 @ 49c for fine and No. 1 coming. California Wool is quiet and sells at 25 @ 30c for good average Spring. Pulled Wool is in demand, with sales at 42 @ 45c for choice Maine and extra supers, and 25 @ 40c for common and good supers. In foreign Wool there is no change and very little doing.

Eastern Grain and Provision Markets.

CHICAGO, Aug. 29.—Closing quotations: Wheat, steady; 10 @ 10 1/2 for August; 90 for September. Corn, firm and higher; 7 1/2 cash; 7 1/2 September; 7 1/2 October. Pork, firmer, \$22.02 1/2; September, \$17 1/2. Lard, steady; \$12.42 1/2 cash.

BAGS.—Bags are quiet, prices not varying much from 9c for imported Bags and 8 1/2 for Oakland.

BARLEY.—Barley is a shade higher than a week ago, though not so buoyant as it was a day or two ago. Sale on the Produce Exchange yesterday morning, 100 tons No. 1 Feed, August, \$1.32 1/2. Bids and offers were: No. 1 Feed, spot, \$1.32 1/2 asked; September, \$1.25 1/2 bid, \$1.26 1/2 asked; October, \$1.25 1/2 bid, \$1.26 1/2 asked; seller '82, \$1.23 bid, \$1.24 1/2 asked; No. 2 Feed, August, \$1.28 1/2 bid, \$1.31 asked. Sales on the 3 o'clock call of 100 No. 1 Feed, October, \$1.25 1/2, and 100, \$1.25 1/2. No sales on the Grain Exchange. For No. 1 Feed, August, \$1.28 was asked; September, \$1.26 asked; October, \$1.25 1/2 bid, \$1.26 1/2 asked.

BEANS.—Beans are quiet and unchanged.

CORN.—Corn is held at \$1.80 for Large Yellow, but bids are about 10c below. There is nothing doing just now.

DAIRY PRODUCE.—Butter has advanced 2 1/2c, and choice is still in request. Cheese is plentiful and rather weak, although quotations are not changed.

EGGS.—Fresh ranch Eggs have advanced to 35 @ 37c.

FEED.—Hay is improving, the choicest Wheat now rating at \$16. There is considerable inquiry for hay just now.

FRUIT.—Prices do not change materially. Pears and Plums have recovered somewhat from their recent depression. Canteloupes are in their flush time and are low. Figs are also a little too abundant for prices. Peaches hold up well; mountain Fruit is now coming in.

FRESH MEAT.—There is no change, except a drop of 1c on dressed Pork.

HOPS.—Rates are still maintained, and the price seems to be well sustained by the facts of the short crop elsewhere which has been announced.

OATS.—Oats are quiet and a shade lower.

ONIONS.—There is no change.

POTATOES.—Early Rose and Chilis are 10c better per cwt.

PROVISIONS.—Trade is good and rates are unchanged. POULTRY AND GAME.—Roosters and Ducks are selling at lower figures this week. Some Hen Turkeys lose 1c from last week. Hare and Venison are cheaper.

VEGETABLES.—Changes this week are very few. The market is well supplied and sales are large.

WHEAT.—Wheat has been rather sluggish this week. Prices are reported a shade off in some quarters, but transactions are few to base a quotation on. There were no sales on the Produce Exchange call Tuesday morning, and but little bidding, as follows: No. 1 White, September, \$1.67 1/2 bid, \$1.68 asked; October, \$1.68 bid, \$1.70 asked; No. 1 Sonora, August, \$1.70 asked; Port Costa, \$1.71 1/2 bid, \$1.72 1/2 asked; No. 1 White, on the spot, is worth \$1.67 1/2 @ \$1.70. Sales on the afternoon call of 100 No. 1 White, September, \$1.67 1/2. Sales on the Grain Exchange of 1,800 tons all No. 2, as follows: 500, September, \$1.64; 200, October, \$1.65; 800, November, \$1.65 1/2; 300, January, \$1.65 1/2. For No. 1, September, \$1.67 1/2 was bid, and for No. 2, December, \$1.65 1/2 bid.

WOOL.—Rather more Wool has sold this week. Prices are not changed.

Pacific Coast Weather for the Week.

[Furnished for publication in the PRESS by NELSON GOROM, Sergt. Signal Service Corps, U. S. A.]

The following is a summary of the rainfall for each day of the week ending 11:58 A. M. Wednesday, Aug. 30th, for the stations named:

	Total.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.	Date.
Olympia.	.00	.00	.00	.00	.00	.00	.00	.00	
Portland.	.00	.00	.00	.00	.00	.00	.00	.00	
Roseburg.	.00	.00	.00	.00	.00	.00	.00	.00	
Red Bluff.	.00	.00	.00	.00	.00	.00	.00	.00	
Sacram'to.	.00	.00	.00	.00	.00	.00	.00	.00	
San Francisco.	.00	.00	.00	.00	.00	.00	.00	.00	
Visalia.	.00	.00	.00	.00	.00	.00	.00	.00	
Los Angeles.	.00	.00	.00	.00	.00	.00	.00	.00	
San Diego.	.00	.00	.00	.00	.00	.00	.00	.00	
Winnemucca.	.00	.00	.00	.00	.00	.00	.00	.00	
Pioche.	.00	.00	.00	.00	.00	.00	.00	.00	
Salt Lake.	.00	.00	.00	.00	.00	.00	.00	.00	

Bags and Bagging.

[JOBBER PRICES.]	
WEDNESDAY M. Aug. 30, 1882.	
Eng Standrd Wheat.	9 @ 9 1/2
45 inch.	9 1/2 @ 9 1/2

Domestic Produce.

WHOLESALE.		WEDNESDAY M., Aug. 30, 1882.	
BEANS & PEAS.			
Bayo, cts.	2 50 @ 2 90	Red.	30 @ 40
Butter.	3 75 @ 4 00	Silverskin.	65 @ 75
Castor.	3 50 @ 4 00	Oregon.	55 @ 60
Pea.	4 00 @ 4 25	ONIONS.	
Red.	2 30 @ 2 40	New, cts.	30 @ 40
Pink.	2 30 @ 2 40	Early Rose.	60 @ 60
Large White.	3 25 @ 3 40	Petaluma, chl.	— @ —
Small White.	4 00 @ 4 25	Fomales.	— @ —
Lima.	4 00 @ 4 50	Humboldt.	— @ —
Field Peas, b'k eye	5 @ 7 1/2	" Kidney.	— @ —
do, green.	2 00 @ 2 25	" Peachblow.	— @ —
BROOM CORN.		Jersey Blue.	— @ —
Southern.	3 @ 3 1/2	Cutty Cove.	— @ —
Northern.	4 @ 5	River, red.	— @ —
CHICORY.		Chile.	90 @ 1 00
California.	4 @ 4 1/2	do, Oregon.	— @ —
German.	6 1/2 @ 7	Peerless.	90 @ 1 00
DAIRY PRODUCE, ETC.		Salt Lake.	— @ —
Cal. Fresh Roll, lb.	35 @ 37 1/2	Sweet.	1 50 @ 2 12 1/2
do. Fancy Brauds.	— @ 40	POULTRY & GAME.	
Pickle Roll.	30 @ 32 1/2	Hens, doz.	6 00 @ 7 00
Firkin, new.	29 @ 30	Roosters.	5 00 @ 7 50
Eastern.	18 @ 20	Broilers.	3 50 @ 5 50
New York.	— @ —	Geese, lame, doz.	4 50 @ 5 50
CHEESE, BUTTER, EGGS.		Geese, 12.	20 @ 30
Cheese, Cal., D.	12 1/2 @ 13 1/2	do, young.	25 @ 75
do, Swiss.	— @ 14	Wild Gray, doz.	— @ 30 00
Cal. Fresh, doz.	35 @ 37	White do.	50 @ 60 00
Ducks.	— @ —	Turkeys.	15 @ 19
Oregon.	— @ —	do, Dressed.	— @ —
Eastern, by exp's.	22 1/2 @ 25	Turkey, broiler.	10 @ 20
Pickled here.	— @ —	tail and wing, lb.	10 @ 20
Utah.	— @ —	Snipe, Eng.	1 75 @ 2 00
FEED.		do, Common.	50 @ 75
Brant, ton.	17 00 @ 17 50	Quail, doz.	75 @ 80
Corn Meal.	— @ 38 00	Rabbite.	1 00 @ 1 25
Hay.	10 00 @ 10 10	Hare.	1 75 @ 2 00
Middlings.	— @ 28 00	Venison.	8 @ 12 1/2
Oil Cake Meal.	— @ 32 50	PROVISIONS.	
Straw, bale.	70 @ 75	Cal. Bacon, extra.	— @ —
FLOUR.		clear, lb.	16 1/2 @ 17
Extra, City Mills.	5 25 @ 5 50	Medium.	17 @ 18
do, Country Mills.	4 75 @ 5 25	Light.	17 @ 18
do, Oregon.	4 75 @ 5 12 1/2	Low.	17 @ 18
do, Walla Walla.	4 50 @ 5 00	Cal. Smoked.	14 @ 15
Superfine.	3 50 @ 4 75	Shoulders.	9 1/2 @ 10 1/2
FRESH MEAT.		Hams, Cal.	16 @ 17
Beef, 1st qual'y, lb.	7 1/2 @ 7	do, Eastern.	17 1/2 @ 18 1/2
Second.	6 1/2 @ 6	SEEDS.	
Third.	5 1/2 @ 5	Alfalfa.	10 @ 12 1/2
Mutton.	4 1/2 @ 5	do, Chile.	— @ —
Spring Lamb.	6 @ 6 1/2	Canary.	— @ 5 1/2
Pork, undressed.	8 1/2 @ 9	Clover, Red.	14 @ 15
Dressed.	10 1/2 @ 11	White.	45 @ 50
Veal.	6 1/2 @ 8	Cotton.	— @ 30
Milk Calves.	7 1/2 @ 8	Flaxseed.	24 @ 24 1/2
do, choice.	— @ 10	Hemp.	7 @ 7 1/2
GRAIN, ETC.		Barley, Rye.	6 1/2 @ 7
Barley, feed, cts.	1 70 @ 1 77 1/2	Perennial.	25 @ —
do, New.	1 25 @ 1 32 1/2	Millet, German.	10 @ 12
do, Brewing.	2 12 @ 2 15	do, Common.	7 @ 10
do, N.W.	1 35 @ 1 15	Mustard, White.	14 @ 3
Cheviater.	1 35 @ 1 50	Brown.	24 @ 3
Buckwheat.	1 35 @ 1 50	do, Blue.	30 @ 25
Corn, White.	— @ 75	Ky Blue.	30 @ 25
Yellow.	1 70 @ 1 85	2d quality.	16 @ 18
Small Round.	— @ 75	Sweet V Grass.	— @ 75
Oats.	1 50 @ 1 62 1/2	Orchard.	20 @ 25 1/2
Milling.	— @ —	Red Top.	— @ 15
Rye.	2 00 @ 2 25	Hungarian.	10 @ 10
Wheat, No. 1.	1 67 @ 1 70	Lespedeza.	10 @ 12 1/2
do, No. 2.	1 65 @ 1 67 1/2	Mesquit.	10 @ 12 1/2
do, No. 3.	1 50 @ 1 51	Timothy.	8 @ 8 1/2
Choice Milling.	1 72 @ 1 75	TALLOW.	
HIDES.		Crude, lb.	8 @ 8 1/2
Hides, dry.	19 @ 19 1/2	Refined.	11 @ 11 1/2
Wet salted.	9 1/2 @ 11	W.FOL. ETC.	
HONEY, ETC.		Strikes.	382
Beeswax, lb.	23 @ 25	San Joaquin, fire.	18 @ 20
Honey in comb.	12 @ 20	do, fair.	18 @ 19
Extracted, light.	8 @ 8	do, dusty.	15 @ 17
do, dark.	7 @ 8	Southern Coast.	14 @ 22
HOPS.		Moloto & Sakuyou.	24 @ 25
Oregon.	40 @ 42 1/2	Calaveras & Foot.	26 @ 27 1/2
California.	45 @ 50	do, hill.	22 @ 24
Wash. Ter.	40 @ 42 1/2	Stamslaus & Tuol.	— @ —
Old Hops.	— @ —	umme.	22 @ 24
NOTS—Jobbing.		Sonoma & Mendoc.	25 @ 27
Walnuts, Cal.	11 @ 12	Nor. Sacramento.	23 @ 25
do, Chile.	11 @ 12	do, Oregon, eastern.	20 @ 25
Almonds, h'd shell.	8 @ 10	do, Valley.	23 @ 24
Soft shell.	15 @ 17		
Brazil.	10 @ 12		
Pecans.	14 @ 15		

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kiddler, Redlands.....	10
J. F. Welsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Israel Real, Redlands.....	10
C. E. Tuedell, Redlands.....	20
R. B. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. B. Seymour, Redlands.....	20
P. R. Brown, Redlands.....	20
A. G. Simms, Redlands.....	10
Simeon Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassidy, Redlands.....	10
Orsen Van Leuven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	50
A. S. White, Riverside.....	20
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
L. M. Holt, Riverside.....	10
A. W. Boggs, Riverside.....	20
S. R. Weir, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. Y. V. Ansel, Riverside.....	50
J. P. Greeves, Riverside.....	10
D. U. Findlay, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. F. Moody, Riverside.....	10
T. E. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10
B. F. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Allett, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. B. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	20
Mrs. Sarah L. Moore, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	30
F. P. Morrison.....	25
A. T. Dewey, San Francisco.....	12
W. B. Ewer, San Francisco.....	12
E. F. Watrous.....	10
H. L. Rutgers.....	20
J. W. Bashford.....	20
S. Comey.....	5
Mrs. B. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cutts, Carson, City, Nevada.....	10
W. A. Merriman.....	10
J. T. Ford, San Bernardino.....	10
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	2

Total sold.....1,004
Judson & Brown (San Bernardino, P. O.), owners of the tract, are energetic men, who leave no stone turned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

Commission Merchants.

Grangers' Business Association
SHIPPING and COMMISSION HOUSE

No. 38 California St. SAN FRANCISCO

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON CONSIGNMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being carefully weighed, and on having their other interests faithfully attended to.

SEND YOUR CONSIGNMENTS TO



JAS. P. HULME, Late Miller & Co. JACKSON HART.

HULME & HART,
(Successors to MILLER & CO.)Wool, Grain,
AND GENERAL

Commission Merchants.

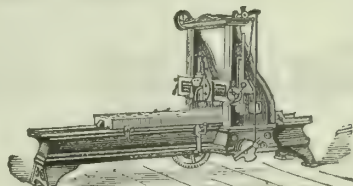
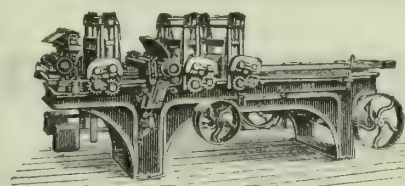
10 Davis Street, near Market,
SAN FRANCISCO.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

References.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

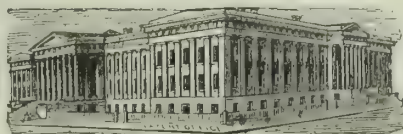
Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

DEWEY & CO.'S

Scientific Press



(ESTABLISHED 1860.)

Patent Agency.

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewey & Co., at published rates.



1838/1882 5,000 KIEFFER'S HYBRID PEARS in Orchard and 50,000 in Nursery. Being the introduction of this famous fruit, I have the original trees, procured from the originator, in fruiting at POMONA NURSERY, from which I am propagating my stock for sale. Apply to Headquarters and get the genuine. Liberal discount to the trade. Also small Fruits, Trees, Plants, and 12-16 in variety. Catalogue free. W. M. PARRY, Parry P. O., N. J.

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co.

Commission Merchants.

DALTON & GRAY,
Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F. Prompt Returns. Advance Liberally on Consignments.

HATCH & BARCLAY,

Commission Merchants,

(Members of San Francisco Produce Exchange.)

20 California Street, San Francisco.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments

AMERICAN BARB WIRE



FENCING.

GALVANIZED, PAINTED OR JAPANNED.

The Handsomest, Stiffest, and Most Durable. No Rust. No Decay. Secure Against Fire, Flood and Wind.

IT IS THE ONLY BARB WIRE that will prevent small animals, such as rabbits, hares, pigs, dogs, cats, etc., from passing through, under or over it, the barbs are so near each other. The Barbs being triangular-shaped, like the teeth of a saw, and close together, there is no cruelty to animals, as they cannot pierce the hide; they only prick, which is all that is ever necessary as no animal will go near a Barb Fence twice.

AS THE WIRE IS NOT BENT OR TWISTED, its tensile strength is much greater than the Wire in all other Barb Wire Fences, as they are all made of twisted or bent Wire. HEAT AND COLD CANNOT AFFECT THE AMERICAN BARB FENCE, as it can be allowed to sag when put up, enough to cover contraction and expansion, because it is a continuous Barb, and cannot slip through the staples one inch. Each panel of Fence takes care of itself.

The Barbs cannot be displaced or rubbed off, and are not pounded on and indented into the wire to hold them in place, as in other Barb Wire, thereby decreasing the strength of the Wire. The Barbs are short, and broad at the base, where strength is required.

THE PAINTED WEIGHS A POUND TO THE ROD, so that the purchaser knows exactly how much fencing he is getting. Galvanized weighs slightly more.

SEND FOR SAMPLES AND PRICES.

W. W. MONTAGUE & CO.,

110, 112, 114 and 116 Battery St., San Francisco,

Sole Agents for the Pacific Coast.

THE CHORAL CHOIR.

A NEW CHURCH MUSIC BOOK,

By W. O. PERKINS.

DITSON & CO. take pleasure in introducing to the public their new Choir Book for 1882-1883. Not only a Choir Book, but a Singing Class and Convention Book. Not only these, but a capital collection of easy Glee and Song music, of Hymn-tune and Anthem music easy, pleasing and thoroughly musical. Just out.

It would be well to send early for a copy for examination.

PRICE, \$1.00.

THE PEERLESS.

A New Singing School and Convention Book.

By W. O. PERKINS.

While the Choral Choir is one of the best of Singing Class Books, it seems necessary to provide for the wants of those who prefer to use a cheaper, lighter and smaller book. The Peerless is similar in arrangement and quality to its larger companion, differing only in its size, and in the number of pieces of a kind which it contains. Beginners cannot but be delighted at the large number of very easy and very pretty exercises and songs. PRICE, 75 CENTS. Send early for specimen copy.

Mailed to any address for above prices.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

M. COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

Mission Rock Dock and Grain Warehouse, San Francisco, Cal.

\$5,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - Proprietors. Office—318 California Street, Room 2.

Only "PEBBLE" Establishment.

1863 Muller's Optical Depot, 185 Montgomery St., near Bush. 1882

SPECIALTY FOR 33 YEARS.

The most complicated cases of defect ive vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Gillie's Improved Horse Powers. Plows. Cultivators. Improved Granger Gang. Genl. Seed Sowers. Improved Single Sod and Tule Plow. Double Deep Tiller. Hill's Improved Headers. Sangle Plows. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento

W. R. ALLEN & CO.,

IMPORTERS OF

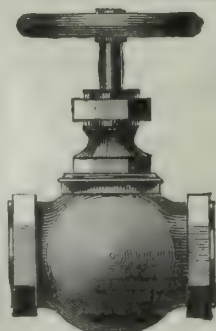
Iron Pipe and Fittings,

Lift and Force Pumps,

Brass Cocks and Valves, For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

California's Exposition for 1882

Sacramento, Cal.,

Opens Monday, September 11th; Closes Saturday, September 16th. A Holiday Week of Recreation and Sport.

\$40,000 in Cash

To be Awarded in Premiums.

The Premium List is full and complete, and is divided into Seven Departments: The Society's Gold Medal, (valued at \$100) will be awarded to the most meritorious display in each department. The exhibition of Live Stock promises to be large and fully up to the standard in each class. The latest and newest designs in Agricultural Implements will be upon exhibition. The Products of the Soil, representing California's greatest interest, will be fully shown. The Speed Programme (for entries see small bills) is within itself a distinct exhibition, wherein the produce of California's Breeding Establishments will be shown in their respective classes. Wing Shooting, Ladies' Equestrianism, and other sports will be held daily at the Park during the Fair.

The C. P. R. R. Co., will transport articles to and from the Fair free of charge. Wells, Fargo & Co. will deliver packages free not weighing over 20 lbs. Application for space, both at Park and Pavilion, should be made at once to the Secretary.

Season Tickets, admitting self and family.....\$5.00
Single Admissions......50

HUGH M. LARUE, President.

EDWIN F. SMITH, Sec'y.

CHEAP CASH GROCERIES

— AT —

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —

1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

Seeds, Plants, Etc.

PEPPER'S NURSERIES.

Established in 1858.
I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.,
Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.

True to name and reliable. Persons intending to plant JUNE BUDDED or other trees, next season, should
WRITE FOR MY TERMS

JUNE BUDDED TREES A SPECIALTY.
Principal Nursery located just south of Colton.
DAVE TURNER.

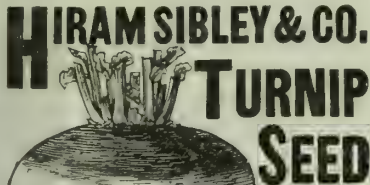
TO FRUIT GROWERS,

Tree Planters, Etc.

A part of the stock of the NAPA VALLEY NURSERIES, being on rented land, must be cleared off early. Stock includes yearling FRUIT TREES, deciduous SHADE and FOREST TREES, Etc.

All stock grown Without Irrigation, and absolutely FREE FROM DISEASE OR INSECTS.

Address for special price list,
LEONARD COATES, Napa City, Cal.
P. O. Box 2.



SEND FOR
CATALOGUE
AND
PRICE LIST
HIRAM SIBLEY & CO
179-183 MAIN STREET,
ROCHESTER, N. Y.
200-206 Randolph St. Chicago, Ill

NEEDHAM'S RED CLOVER

Blossoms and extracts of blossoms, the greatest blood purifier known. A sure cure for Cancer, Salt Rheum, and all blood diseases if taken in time. Many also have been cured of Catarrh, Rheumatism, Poison Oak and other diseases. For full particulars, circulars and testimonials address, W. C. NEEDHAM, sole agent for Pacific Coast, P. O. Box 422, San Jose, Cal.

FOR SALE.

Moor Park Apricot & French Prune Trees.

One year's growth in the graft, thrifty, and of good size. Free from pests and will be dug by hand. Address
STODDART & SANDERS,
Saratoga, Santa Clara Co., Cal

CRAPE CUTTINGS

Season 1882-3.

A SPECIALTY AT THE

Napa Valley Nurseries.

Zinfandel, Burger, Chasselas, Rieslings, Malvoisie, etc., \$3.50 per 1,000. All from vineyards where no phylloxera has been discovered. Also, ROOTED VINES and Phylloxera-proof stock, Riparia, Rupestris, etc. Address,
LEONARD COATES,
P. O. Box 2 Napa City, Cal.

TREES AND SEEDS TRUE TO NAME
APPLES—Red, 15 to 20; Golden, Harvest, Laxey, Pearmain, Winesap, etc.; PEACHES—2 to 4; ALMONDS—Burgundy, Green, etc.; PLUMS—2 to 4; CHERRIES—2 to 4; etc. Also, various kinds of seeds and plants. Address, W. A. SANDERS, Sacramento, Fresno Co., Cal.

BLoomington (PHENIX) NURSERY. Established in 1852. 13 GREENHOUSES! PRICED CATALOGUE FOR FALL, 1882, MAILED FREE. SEND FOR IT. SIDNEY TUTTLE, Agt., Bloomington, Illinois

MANchester Strawberry Plants, 75c. per doz., \$4 per 100. Valuable information in free Catalogue. Address F. I. SAGE & SON, Wethersfield, Conn.

TO VINE GROWERS.

Advertisers wish to form connection with shippers of produce suitable for the German market. Please address, C. K. 974, care of Rudolf Mosse, Hanover, Germany.

Silos Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE. RANSOME, 402 Montgomery St., S. F. Send for circular

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

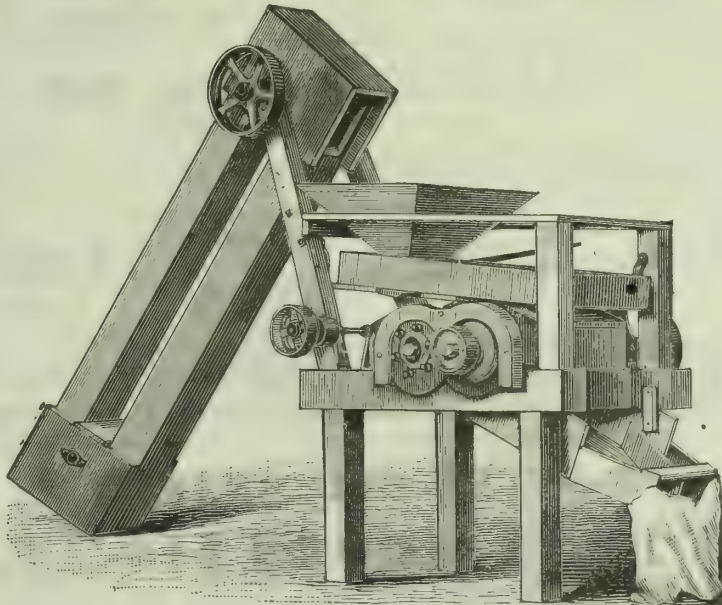
Seed Warehouse, 317 Washington St., San Francisco.

SEEDS

ALBERT DICKINSON,
DEALER IN
Timothy, Clover, Flax, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.
POP CORN.
WAREHOUSES: 115, 117 & 119 Kinzie St. Office, 115 Kinzie St., CHICAGO, ILL.
104, 106, 108 & 110 Michigan St.

"THE PIONEER BARLEY CRUSHER,"

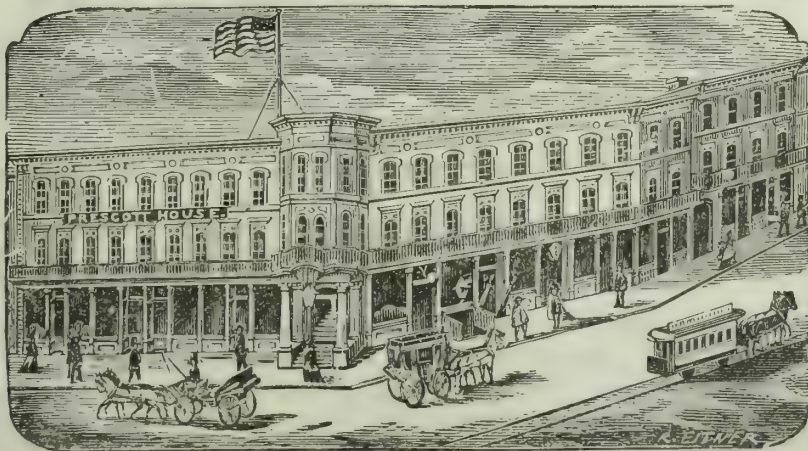
Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

PRESCOTT HOUSE.

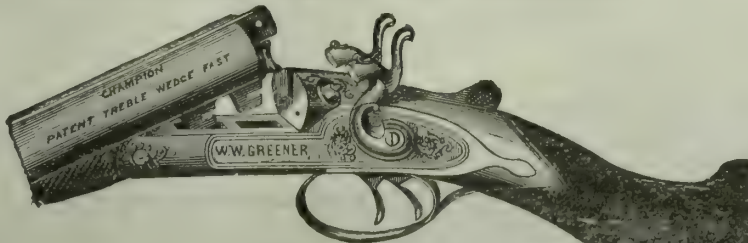


S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

Nathaniel Curry & Bro..
113 Sansome Street, San Francisco,



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS, PARKER and REMINGTON GUNS, SHARPS, BALLARD, WINCHESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS. Ammunition in quantities to suit. A liberal discount to the trade.

HORTON & KENNEDY

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.



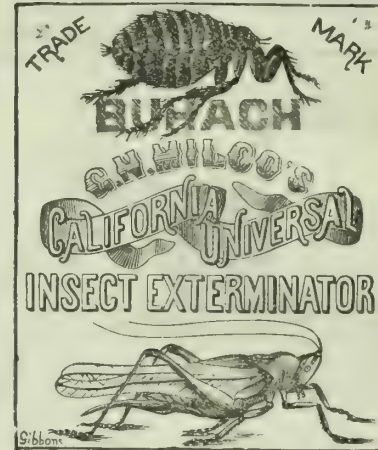
Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, LINFORTH, RICE & CO., 323 & 325 Market St., S. F.

New Crop Insect Powder. BUHACH BUHACH



None genuine without this trad. mark.

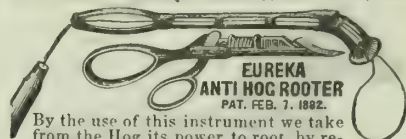
SURE DEATH TO ALL INSECTS.

An imported powder of a bright yellow color is sometimes sold as Buhach. Buy only that which bears our trade mark. All druggists and grocers net keep it, send for price list. BUHACH PRODUCING & MANUFACTURING CO., 154 Levee street, Stockton, Cal.

HOG RINGING A FAILURE!

OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually.

Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each. "Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address

G. G. WICKSON,
General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

CAMPTON'S Self-Opening Automatic Gate,



For Farm Use and Fancy Residences.

It is the Boss Gate where ladies have to do their own driving. For simplicity and durability, the only reliable automatic gate in use. No complex machinery. By a single lever it is thrown out of the center of gravity and opens and closes itself by its own weight. A child six years old can open it. We manufacture different styles gates from \$20 to \$100, for a cheap farm gate made of Wood and Iron; \$20 for Iron Tubular and Wire we charge from \$35 to \$100, according to the style wanted. For reference as to the merit of this gate we refer you to a few of the following gentlemen who have used the gate:

H. M. Larnie, President of the State Agricultural Society, Davisville, Yolo Co., Cal.; J. D. Carr, Salinas, Monterey Co., Cal.; Judge Weller, Milpitas, Santa Clara Co., Cal.; Juan Gallagor, Mission San Jose, Alameda Co., Cal. For further particulars and Illustrated Price List, address JOHN AYLWARD, P. O. Box 88, Livermore, Alameda Co., Cal., or JAMES STANLEY, Mission San Jose, Alameda Co., Cal.

Dewey & Co { 252 Market Street, } Patent Agts

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

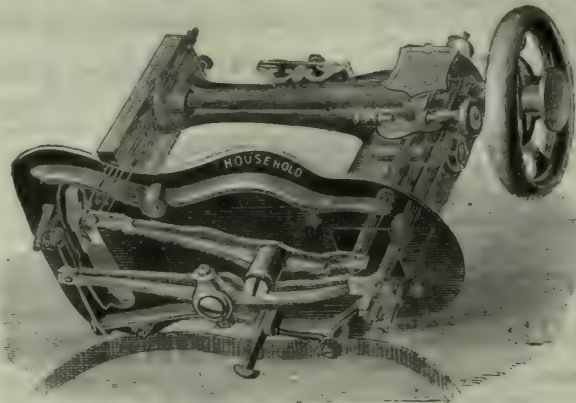
SEND FOR PRICE LIST OF THE

Easy Running, Simple and Beautiful



"HOUSEHOLD."

This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



HOUSEHOLD HEAD.

THE SHUTTLE

Is very simple, of cylinder shape and open at one end. The

BOBBIN

Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

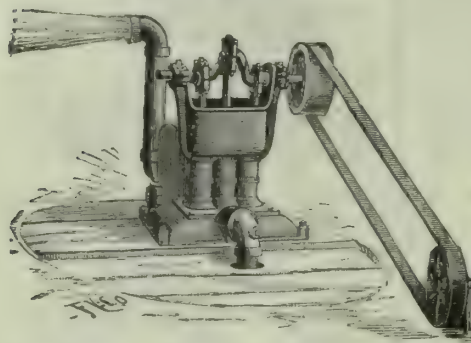
It has a loose fly wheel for winding Bobbin without running the Machine. The

TREADLE

Sets on anti-friction bearings and never requires oiling. It is the Finest Finished Machine ever offered to the public.

MARK SHELTON,

Wholesale Agent, 9 11 & 13 First St., S. F.



TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE-POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These Pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.



F. W. KROGH & CO.,

Manufacturers

And Sole Proprietors,

No. 51 Beale Street, SAN FRANCISCO.

FRUIT DRYING!

THE ZIMMERMAN

Portable Galvanized Iron

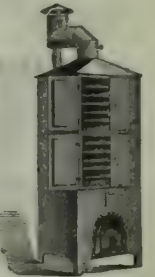
FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose. Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO.,

325 Market Street, S. F.

or to the following agents: Jno. B. Niles, Los Angeles; L. S. Leeb, Marysville; T. B. Watt, Salem, Or.; T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.



NEARLY 1,000 Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois,

28 miles West of Chicago, on C. & N. W. R'y.

250 OF THE FINEST

Imported from France by him

THIS YEAR.



NEARLY 400 NOW ON HAND.

The Largest and Most Select Stud ever collected, and making it possible to

SEE MORE FINE SPECIMENS IN A DAY than one could see in their native country in months.

Come and see for yourselves. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn. Send for Catalogue

BOONE & MILLER,
Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 820 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS,

Cor. Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco.

BAGS, TENTS, HOSE, TWINES.

PATENT STEEL WIRE BALE TIES.

Why do you waste Time making Ties in the field when you can buy them Ready Made Almost as Cheap as the Wire in the Coil?

We have on hand a large quantity of steel wire bale ties ready for immediate delivery which we will sell at the prices named in the following table:

No. 15 wire, 8 ft. 6 inches long.....	\$18.00 per 1,000
No. 14 wire, 8 ft. 6 inches long.....	22.40 per 1,000
No. 14 wire, 9 ft. long.....	23.50 per 1,000

For Dederick Presses, 17x22 bale, use ties 8 ft. long, No. 14 for heavy work, No. 15 for light. For Dederick Presses, 14x18 bale, use No. 15 wire, 8 ft. 6 inches long.

For the California Chief and Economy Presses use No. 14 wire, 9 ft. long.

For the Price or Petaluma Press use No. 15 wire, 9 ft. long. For all other upright presses use No. 15 wire of such length as may be required by the size of the bale

Advantages of Adjustable Steel Ties.

1. They are adjustable, hence sure, and no delay
2. When secured, they stay, and never come loose
3. They hold the bale closer, hence more hay in a car.
4. They require no need to pass them through
5. They require no stretcher.
6. Yet are the only tie adapted to the use of the stretcher
7. They may be removed from the bale and used over again
8. Hence will all be returned at low prices.
9. They may be worked with heavy gloves without inconvenience.

Comparative Cost of Coil Wire and Prepared Bale Ties

Experience will teach that the same number of tons of hay can be more safely secured, and at less cost by our prepared ties, than by the use of coil wire. In the use of coil wire one or two sizes larger is required, and then, the wire is not reliable at the fastening; add to this, the bother and loss of time in its use, the loss of wire, cost of repressing and loss of hay in transit and in the market by reason of broken bales, and we are certain coil wire cannot be economically used

JACKSON & TRUMAN,

Cor. Sixth & Bluxome Sts., S. F.

JACOB PRICE,
San Leandro, Cal.

LAND

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

St. SAN FRANCISCO

DO Not Fail to send for our FALL Price-List for 1882. Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address **MONTGOMERY WARD & CO.,** 227 and 229 Wabash Avenue, Chicago, Ill.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1882:

252 Market Street, Elevator 12 Front, SAN FRANCISCO.

Branch Offices in all Foreign Countries.

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE ON APPLICATION

GEO. H. STRONG.

W. B. EWER.

A. T. DEWEY

Engraving.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINDS AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 9, 1882,

Number 11

STATE FAIR EDITION—THIRTY-TWO PAGES.

California.

When Jacob, gazing eastward for the Orient, declared that his blessings should prevail "unto the utmost bound of the everlasting hills," what other boundary of earth could he have thus foreshadowed than this fair land, whose rugged peaks fringe the Pacific's shore. That blessing, never failing, though pronounced so long ago, was designed to find its latest lodgment here, as the remotest point in stretch of distance and in lapse of time. Here, at this western margin of the globe, our pioneers have come into a heritage which rivals the prophet's picture of the land of promise—"a land of brooks, of water, of fountains and depths that spring out of valleys and hills; a land of wheat and barley, and vines, and fig trees, and pomegranates; a land of oil, olive and honey; a land wherein thou shalt eat bread without scarceness—thou shalt not lack anything in it; a land whose stones are iron, and out of whose hills thou mayest dig brass." Nor is this all. For California was no less the offspring of political necessity than of divine appointment. By a wonderful analogy the destiny of nations has followed that same law which ruled among the chosen people. And when the poet said, "Westward the star of empire takes its way," his words were no less a delineation of the past than a prediction of the future. Yes, ever and forever westward has that star moved on from its first rising in the east. Asia beheld its earliest light when it illumined the pride of Babylon and Nineveh and the kingdom of Darius. It gleamed on the night of Greece and Rome, and bathed the modern Powers in its rich effulgence. Yet still it glided on to pour its latest splendor down upon America, until it fell on California, the empire of the West.

—J. W. Winans.



IN THE FOREST—BRUIN AT BAY.

Our Farmers.

The farms and the farmers of California have been a godsend to this coast. What the silent and noiseless sun and seasons have done to eliminate the promises of agriculture, these farmers have, with equal patience and modesty, done to evoke the permanent attachments, to inspire manufactures, and to lay the foundation of that commerce which in one half century will surpass any interest of national or international intercourse and trade ever recognized by man.

God preserve and prosper the farmers of our country! With them abides the true magic of our common prosperity and courage. When the fascinating enchantments of mining are panic-stricken with disaster; when manufactures languish, and dependent operatives are gloomily contemplating starvation; when commerce is swept from the sea through the merciless torch of maritime war; when the licentiousness of city life and cormorant fashions have well nigh consumed the honesty and energy of the business classes; when the relaxations of religion and virtue have communicated anemia and weakness to the body and soul of society, requiring the strong tonic reassurance of nature's own best remedy; then, with one accord, do the invalids of interest turn with filial instinct to the paternal refuge and protection of replenishing agriculture. And behold the sovereign magic of the view! The valleys are seen teeming with waving fields of golden-headed grain; the hills are alive with exhaustless herds of gamboling stock, or festooned with vigorous grape-bearing vines; the orchards are bending with luscious fruits; the gardens are plethoric of vegetables and berries and autumn flowers, and everywhere is seen the placid, sweet smile of mother earth, and the hearty, inspiring promises of the toil-worn farmer.—J. F. Morse.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. —Eps.

Evergreen Millet.

EDITORS PRESS: You have doubtless heard of the Dutchman's query about his baby boy: "Do you know vy I colt dot boy Yawcup?" "No." "Bekoss dot ish hees name!" For a similar reason I call this grass "evergreen millet." *Sorghum halapense* is not its name, but is the name of the species to which it belongs, the sorghums having perennial roots, as *Sorghum vulgare* is the name that includes those having (in our climate) annual roots. It is well known that of *Sorghum vulgare* we have a score of kinds of sugar-canes, from the Chinese Imphee, 25 ft. tall and 8 or 10 inches circumference of stalk, down to amber cane, 8 to 10 ft. tall, with stalks scarcely an inch in diameter; so, also, in seeds, from the Chinese sorghum, with its large, black seeds, down to the Nerzans, with its small white seeds; but all are included in the name *Sorghum vulgare*, which also includes all varieties of durra, or Egyptian corn, and broom corn in all its varieties. You will readily see how poorly a person would be prepared to speak of *S. vulgare* who had had experience in raising, only one variety of it—say common broom corn. Yet I did something closely akin to that, some years ago, in the RURAL PRESS, when, after two years' collection of seeds and roots of this grass, and the same time devoted to botanical research, I announced through its columns, that "Green Valley grass," "Angola Panic grass," *Panicum spectabile*, "Johnson grass," "Means grass," and many other aliases I don't remember, as I have not the article before me now, mean one and the same thing, and that one thing is *Sorghum halapense*. They are all *S. halapense* in the same way that all varieties of Indian corn, from the smallest pop-corn of New England to the giant Cuzco corn of South America, are all *Zea mays*; but there are different varieties of this valuable grass, differing as widely as do varieties of *S. vulgare*, or Indian corn. I have obtained seed of two widely different species under the name of "Johnson grass," one of them, from a leading New York seedsman, being an annual-rooted grass, a variety of *Panicum jumentorum*. I have obtained seed of three different varieties under other names previously given—all *S. halapense*, but differing widely as to growth and qualities. One had roots as sweet as sugar-cane stalks; another had roots bitter as peach leaves. The roots of these two penetrated no deeper than 20 inches, while the evergreen-millet roots reached the bedrock—from 4 to 10 ft. deep—had a taste closely resembling lettuce, were white, tender, and some of them an inch in diameter, differing from the roots of the others, however, only in taste, and being larger, longer, and more numerous. All the roots are perennial, and have, throughout their entire length, buds an inch or two apart, any one of which is capable of making a new bunch of grass; hence, they are indestructible by gophers, as every half inch of root they leave, at whatever depth it may be left, will produce a new bunch of grass.

The evergreen millet is a fine, leafy grass, 30 inches tall in field growth. The Johnson grass is coarse, few leaves, heads more open and seeds larger. I believe the evergreen millet to be indestructible by flood or drouth. The Johnson grass is admitted to be easily killed by flooding. I sowed mine with the evergreen millet (mixed the seed when I thought they were one and the same thing), and it was killed (but whether by flood or drouth I cannot say) before I had a good chance to know much about it. I know that evergreen millet will grow luxuriantly on our dryest hills, and that it will start in such locations with only natural moisture, if the annual rainfall is 10 inches or more. I don't believe the Johnson grass will do this. You will see by my catalogue that I have, for years, sold seed of the Johnson grass at half the price that I have sold evergreen millet seed. I heartily approve of your recommendation, that people should plant only a small area on trial, and will add, should their trial prove an success (as it has in every case I know of), they will have enough seeds and roots to plant a large area, as it yields enormously, one pound of seed having produced enough seeds and roots in one year to plant 20 acres.

The points of superiority of this grass are: 1. Stock prefer it to any other feed. 2. Stock never bloat from eating it, and where planted with alfalfa, so as to constitute five per cent. or more of the feed, it will prevent the alfalfa from causing bloat. 3. It will grow where alfalfa drowns out. 4. It will grow luxuriantly on ground too dry to produce alfalfa. 5. Gophers cannot kill it, however much they eat the roots, as every half inch of roots will make a new bunch of grass. Its seeds are a rich, nutritious grain. The yield on my place has been as high as one pound of seed from four square feet of ground.

The disadvantages of it are: 1. It never ripens a crop of seed; isolated heads are always ripening and dropping their seeds before others ripen, necessitating the gathering of the seed by selecting the heads fully ripe and stripping off the seeds with one's fingers. 2. Where it once gets a foothold it comes to stay. It cannot be

eradicated. But it is not exhausting to land; the growth now is even greater here on my farm than it was in 1877 on the same ground; and trees growing in it for years show as much vigor of growth as do those near them on uncultivated ground. Nothing that it can cover, however, can grow in it, as it effectually chokes out even alfalfa by its vigorous growth, which equals alfalfa, except on very dry ground, where it very much surpasses it.

Sanders, Cal.

W. A. SANDERS.

Etiwanda.

EDITORS PRESS:—It was my pleasure and privilege, a few weeks ago, to visit our enterprising neighbors at Etiwanda, and I have thought a few lines to your readers might not be amiss. Etiwanda is situated east of the famous Cucamonga vineyards about six miles, at the base of one of the spurs of Cucamonga mountain. The territory, consisting of something over 3,000 acres of land, is owned by George Chaffey, Jr., and his brother, William B. Chaffey. Both were residents of Riverside, and the latter owns property here yet. They conceived the idea of saving the water flowing from two canyons and utilizing it for purposes of irrigation, and so bought out Senor Garcia, and proceeded with their improvements, in the faith that purchasers would come for the land thus supplied with water.

They have a flume capable of carrying 400 inches of water. This flume is built V-shape 1, and when completed will be three miles long, and as the grade is fully 5 ft. to 100 ft., and averages 500 ft. to the mile, the velocity is very great. This flume is discharged into an iron pipe of 1,000 ft. in length, which has a pressure of 80 ft., thence will discharge into a large reservoir—of an acre in area, and 10 ft. in depth. As this water discharges at the reservoir, a turbine wheel will furnish power to generate electricity for three towers to light up the entire tract, the machinery of which has already been ordered.

The territory is laid out something in the plan of Riverside and Arlington. Three grand avenues run towards the railroad, in a due south direction, with corresponding cross streets at every half mile. Already, nearly 1,000 acres have been sold at \$100 an acre, and the last sales have been made at \$150 an acre.

From the reservoir, pipes made of cement and sand carry the water to every 10-acre lot, and 37½ inches of water for 24 hours per month is guaranteed to every 10-acre tract, and when the land is all sold, the people own all the ditches, reservoirs, etc. The basis of water is at the rate of one inch to eight acres of land; that is, if 250 inches of water is all they have when measured during the dry season, they can sell 2,000 acres of land and no more.

I went up into the canyons which supply the water, and without any accurate measurement with instruments, I should say the large canyon furnished 200 inches and the small one about 80. This was at its lowest period—Aug. 1st.

The outlook for this new settlement is very brilliant, and in a few years it will be another testimony to what, as Mr. Barnes, of the Call, once said at our Citrus fair, can be done by "brains, pluck and water."

I wish you could have had some of those delicious trout I caught while there. When the waters were turned into the flume the speckled beauties in the old zanja became easy victims, and I secured an ample supply.

As soon as business demands, the S. P. R. R. will give Etiwanda a station about five miles east of Cucamonga station and 10 west of Colton.

Last week I was informed that one gentleman telegraphed for 70 acres for families from Massachusetts, who desire to emigrate to southern California.

D. W. McLEON.

Riverside, Cal.

Apricots and Nut-Bearing Trees.

EDITORS PRESS:—The following, from one of the most reliable and widely copied horticultural papers of our State, is being extensively copied:

"Along the smooth edge of the pit of the Moorpark there is a little hole running lengthwise the pit. A pin introduced into this hole will sometimes pass entirely through and come out half an inch from where it is inserted, and sometimes the pin only goes in a quarter of an inch, and will not come out again at all. No other apricot has such a pit, unless it be an occasional seedling grown from Moorpark seed."

Allow me to correct this. The Peach apricot has the same passage through the smooth edge of the stone. Both it and the Moorpark have bitter kernels. The Jackson, a seedling of the Peach apricot, one of the largest and finest, and a native of our country, also has the same peculiarity, and also has a bitter kernel. The Moorpark is a biennial here, i. e., bears only on alternate years. The Peach variety is troubled in the same way, only more so, large, thrifty tree, on their "off" years, sometimes not producing a single fruit. These varieties differ in the Moorpark, ripening only half at a time, and in having a small and a large side. The Peach is more uniform in shape and ripening; is flatter; skin, yellow in shade, orange in sun, and flesh saffron color. Moorpark—skin, orange in the shade, reddish brown in the sun, and marked with numerous dark dots; flesh orange. The trees are readily distinguishable by those acquainted with them. The Jackson is flattened like the Peach, and has the brown skin and dots of the Moorpark. It originated on the farm of Andrew Jackson, a dozen miles from my place,

grew from seed planted by Mr. Hyde many years ago, and, standing, as it does, on its own roots, where it was originally planted, it probably surpasses in size and quality of fruit, yearly amount of yield and profitableness, any other apricot tree in the United States. What it will do on other roots and in other localities the future will soon show, as it is being widely disseminated.

Nut-Bearing Trees.

I have here on my farm black walnut trees grown from nuts planted in 1877, that are now filled with nuts, bearing the fifth summer of their growth from seed. I have chestnut trees of same age also bearing, but not prolifically, none of them having more than three or four burrs on each tree. They are grown from nuts obtained from Ohio and Tennessee, and once transplanted, that is, from the nursery row to the timber grove.

W. A. SANDERS.

Sanders, Cal.

POULTRY YARD.

Hints on Setting Hens.

Josh Billings has given it as his opinion that "the best time to set a hen is when the hen wants to set." Josh is so near right that nothing more need be added on that point, except that every hen don't want to set at the moment that she appears to. Like some other females, she may be coquettish. She may elevate her feathers and pick your hand, and stay on the nest a night or two, and yet not be quite ready to settle down to business. Hence, it is well enough to wait a day or two, at least after the first broody symptoms appear, or your hen may be off on a picnic after you give her her quota of eggs. That is one precaution to observe.

Next, as to the place. If she makes an incubatory squat in some nest where half a dozen other hens are every day laying, she ought to be moved. There may be other reasons for it also. Now, to move a hen at such a time is not always a success. She thinks there is no place like home, and she often has what politicians as often have not—the courage of her convictions. If you move her in broad daylight and simply deposit her, with your benediction, in another place, leaving her to stay or not, ten to one, yes, a hundred to one, she will not stay. But a quiet, good-natured, well-regulated hen can generally be moved, if you go at it right. Do it at night. For this, and for many other purposes, movable nest boxes are handy. I make them 8 or 10 inches high, and then on one or two sides I nail slats 18 inches long. When I place them against the side of a room or a wall, a third side is thus inclosed, and those with only one side are so mixed with the others that there is a separate entrance for each hen. Over the top I lay a board, or boards, when necessary to confine, and by simply changing the position, the entrance is closed. So, when Madame Hen announces her desire to become a mother, I pick her up, box and all, soon after the North star is visible, and gently, and with a few soothing remarks, carry her to the place where I wish her to stay. Safely arrived, I put her down, give her a few decoy eggs, perhaps unmerchantable ones, arrange things so that she can't get out at daylight, and leave her. The place is generally a loft or a cellar provided with hen comforts, but which does not allow general liberty. Food and water are close by the nest, and in a day or two, often the next morning, the box is turned so that she can get out and get her rations, dust herself, etc. Generally, after a survey of the premises, and discovering that she cannot get out, she returns to the nest. If she don't, or gets on another, one must be patient with her and educate her up to it. Longer confinement is the first step. When one gets several hens in the same room, they will sometimes exchange nests. This may do no great harm or none, but when two hens get on the same nest, and quarrel about it, and one nest is left bare, the matter is more serious. There is no way to get along but to watch and be patient, to visit the room several times a day and correct errors. Some hens make no trouble; others make a good deal. Sometimes, where a hen is outrageously stupid or obstinate, she can be supplanted by another, just as chickens may be transferred sometimes from one to another mother. A man with some ingenuity can generally manage it well enough.

As to the number of eggs, it must depend a little on the season. If very early, say in winter, not so many as later, and never more than can easily be covered. The nest should be nearly flat, so that the eggs will move a little to admit the feet that are to tarry there. If the weight all tends to the middle, some will be broken, perhaps, and that will tempt the hen to break and eat more. They sometimes get into this habit, and it makes bad work. In a state of nature, the nest is on the ground out of doors, and the earth and rains impart moisture to the eggs. In the artificial state, moisture must be supplied after a week or 10 days. Take tepid water and with a sponge or by hand sprinkle the eggs and the hay or straw under and about them. The heat to which they are subjected—98° to 105°—drives off moisture rapidly, so that it should be supplied every second day at least. If this is neglected, a poor hatch may be expected, from embryo chickens

dying in the shell. The hens will not object to the moisture at all; in fact, I think they like it.

It may be well to keep a supply of sulphur scattered in the nest, to keep off lice. I never tried it faithfully, so as to be positive about it; but I am sure that ashes, in the corners of the nest and under the hay, will do no good. Before the nest box is used for incubation have it painted with kerosene, and then no lice will be likely to appear in three weeks at least. But don't use kerosene where it can reach the eggs, as that may be fatal to them. All grease or oil is fatal to the hatching quality of an egg.

After incubation has proceeded a few days—not more than three—it is a good plan to examine the eggs carefully by a bright light—a lamp at night, or the sun in the day time—to see if incubation has really commenced. The novice should compare them carefully with a fresh egg, and he will soon see the difference. The latter will show a bright golden yellow when closely held between the thumb and fingers; the others will be dark, or streaked with lines. Those that look unchanged after a few days will not hatch, and can be eaten, or at least used as food for small chickens and turkeys; but if left under the hen they will soon "addie" or rot. It is always a good plan also to start at least two hens at once, or even three or four; and then if there is a bad hatch the owner can unite flocks. Or, if, after an examination of the eggs a few days after sitting, it appears that only one sitting is likely to hatch, out of two or three, the good eggs can all be given to one hen, and the others reset or discharged.—S. P. in *Breeders' Gazette*.

HORTICULTURE.

Questions for Berry Growers.

EDITORS PRESS:—I would like a little information from your columns on the subject of berries. Our people are just beginning to appreciate fruit of all kinds as an article of diet, and consequently it is being planted quite extensively. Tree fruit is well treated by your contributors, but berries are rather neglected. In this county of Lake, from which I write, there are several small patches of berries, but even among the owners thereof there is a dense ignorance existing. Until a very few years ago "a cow was a cow," and worth about \$25 to \$30; the latter figure for very extra ones. No great difference in price was made on account of quality, and the same rule seems to prevail now in regard to fruits. Very few, even of the producers, know the difference between a Wilson and a Lawton, a Cuthbert or a Gregg. As to gooseberries, the only known varieties are the "English," the "Small" and the "wild, prickly little thing." Strawberries have no varieties, being "only strawberries." Raspberries are unknown.

It is blackberries of which I wish to inquire this time. There are several methods of planting in use here, and, as no experiments have been made with a view to determine the best method, the difference in yield is attributed to varieties of soil, climate, etc.

First—Is very moist land necessary to good blackberries? On top of the mountain, on the line of Lake and Mendocino counties, is a beautiful glade of some 80 acres. Many such are to be found in the mountains of California. In the middle it is wet and "seepy," but berries are planted 100 yards from moist ground, back against the steep, chemise hill, and, seemingly, could do no better anywhere. The soil is a brown, dry, fern land.

As to the proper distance apart, what is it? It varies here from heavy, tangled, matted rows, seven feet apart, to hills 11 ft. by 8. The latter must certainly be a waste of land, while the former seems to me too thick. The "matted rows" are confined by two wires on either side of them, and the shoots are allowed to come up as thick as they please inside of the 18-inch limit. Some plant eight feet by six apart, stakes driven in each hill, and a board tacked on top along the row. Mr. D. O. Shattuck, of Bachelor valley, claims the right way is eight feet by four feet, a stake in each hill. He has not yet demonstrated the correctness of his theory by result.

Again, how high should they be topped? Opinions vary from four feet to as high as they choose to go. Some adopt irrigation, and others severely condemn it as injuring the quality of the berry. Now, among these diverse methods, mostly theories, which is correct? Will you, or some of your correspondents, indicate the method of producing the heaviest yield of the best berries from an acre? We wish to hear the result of practical experience, and not mere fancies.

We would also like to hear, from one who knows, of the merits of the different varieties which now exist. Which is the earliest, and in the order in which they come in? Which is the most prolific? Which is the best shipping berry? How do they compare in sweetness and flavor, and which is the most profitable to raise? In short, if your paper can give us an essay on the subject, you can help many persons who are just desiring to plant out some small fruits for home use and for sale.

Lake Co., Cal.

Vox.

[Will berry growers please answer?—Eps. PRESS.]

FORESTRY.

Forest Trees of California—No. 11.*

Fringe-cone Silver Fir—(*Abies* [*Picea*] *Bracteata*.)

The groves were God's first temples.—Bryant.

This exceedingly elegant, steeple-shaped fringe-cone fir is of the most extraordinary aspiring beauty, and quite unlike any other silver fir of the Pacific. The general outline approaches that of the white spruce (*Picea* [*Abies*] *alba*) in its best types, simulating the form, but not the habit, of the Lombardy poplar, for the short limbs of this merely strictly shaped tree are not upright, as in that—the Oriental cypress (*C. sempervirens*) and Irish yew (*Var. fastigiata* of *T. baccata*)—but the lower branches, from horizontal, at least, are often bent back in the usual typical tented style of the spruce; although the limbs above the middle and near the summit are mostly horizontal or spreading, and very slender, yet exceedingly tough and reliable, even when long dead, and are arranged in whorls; but there is scarcely strength in the main leader body of the very tender, long attenuated top to make it at all safe to climb to the cones, which as in all the firs, sit upright, like birds upon the branches; and if neither with figure and metaphor nor actually fringed with a crown of gold, yet the fruit is worth many times its weight in gold, so exceedingly scarce and valuable is it esteemed.

This invaluable, rare, and hitherto little-known fir rises from 100 to 200 ft. high, and is from two to four feet in diameter; trunk as trim and straight as an arrow, but full of knots that extend well to the center. Branching so low, it furnishes little or no proper lumber, but is a perfect pattern of sylvan perfection on the symmetrical plan. In Arctic or Alpine trees of this extremely attenuated type, the slender parts are frequently broken in outline by the severity of their climate, and hence exhibit more variety, often bordering upon the fantastic; but these are so sheltered by the deep gorges in which they grow, and being so thickly branched below, as well as throughout, and clad in a light green dress of silvery sheened foliage nearly or quite to the feet, gives them the most exquisitely delicate and elegantly feminine expression it is possible to conceive. Besides, the modest, plummy fringed cones, vanishing up in the blue amid a kind of gossamery haze, are eminently pleasing. The foliage is gemmed with golden drops of gum, that glitter in the sunlight like radiant, beaded jewels, thus sparkling all over, from crown to foot, with gold and dewy diamonds, contributing no little to effective beauty and to more Oriental ornamentation of this fringe fir. According to our taste, this is the loveliest of California's silver firs—most ornamental, most valuable—but it is only a half-hardy tree, not well suited to great extremes of temperature nor exposure to violent winds. So far as we know, this fir is only found on the Santa Lucia mountains, latitude 36°, of southern California, altitude from 4,000 to 6,000 ft.

Not being likely to confound this fir with any other, our excuse for a brief specific note is its rarity. Buds large and pointed, leaves from two to three inches long, line-like, entire, flat, rigid, sharp pointed, varnished green, and no breathing pores above; one-half twisted at the base, and in two rows; two silvery gray lines below; cones egg-shaped, four inches long by two to two and one-half inches thick; scales smooth, unlike any other fir, roundish kidney form, with the narrow, wedge-like claws short; falls off tardily from the fixed axis; the hidden part of the protruding bract wedged, rigid, leathery, three-toothed at the top, and these teeth again finely sub-toothed; whole form short and roundish; the straw-like mid-ribs stick far out from between the scales from one to one and one-half inches, and spreading or gently re-curling, they loosely fringe the whole surface of the cone, and are beaded with turpentine; seeds oblong, wedge-shaped, four sided; skin light leaden gray, wings slightly obversely egg-form, of membrane-like texture, entire, flat and thin.

The Grand Silver Fir—(*Abies* [*Picea*] *Grandis*.)

The perfect elegance of this trim, lofty silver fir is greatly enhanced by the relatively small diameter of the body. A tree may be from 200 to 300 ft. high, and the trunk barely four to eight feet in diameter, with a marvelously clean shaft from 80 to 100, or even 140 to 150 ft., as even and true as if laid off by line. The firs of this vicinity, say on the coast within 100 miles or so of San Francisco, average 160 ft. high by two to three feet in diameter, although a few reach 200 ft., by six to eight feet through. The distance to the first branches, thence towering to the at length conic or flat top, seems much greater than it actually is, since they scarcely approximate what we are accustomed to consider colossal, but rather the columnar type. These lofty columnar and towering traits of Pacific trees are more characteristic of these far-western forests than of the same species under culture. This fir is sometimes of singularly slow growth, in its early state, as are also some of the spruces; and again, other trees increase rapidly from the very first start up to maturity, which, for the coast here, is between 100 and 200 years; after 150 to 175 years the growth is barely nominal.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

As an example of the former early, nearly tacit *statu quo* state, say, for 40 years, the rate of increase may not be even one quarter of an inch in 10 years for the whole period or more, if much stunted in the start. Of the latter, the rate is exactly reversed, the rate of increase then being one and one-half to three inches in every 10 years for the first 40 years, and the exceedingly fine, decadent, annual rings, instead of being at the heart, as before, are seen next to the bark. This rate is to be esteemed as very variable, for some of these firs, at their most southern limit on the coast, will even occasionally make one inch thick of annual ring-growth. In thus laying down these extremes of illustrative variation, we are cautioned lest we generalize on too scanty data or too limited observation; nevertheless, we feel warranted in saying that, as a general rule, firs are of rapid growth, and, allowing that they may live a few hundred years, yet they are what we should designate as short-lived trees.

The branches of the grand silver fir of the coast here never pend, but maintain a perfectly horizontal position, in age the top becoming reluctantly squared or flat-topped. The bark is grayish-brown, rather thin, two inches or so for trees three to six feet through, brittle and not much roughened; the silvered foliage deepening to dark green towards the top, and at the crown quite dark hued. The leaves, as Dr. Englemann observes, are glossy-green above and without stomata; two well-marked white bands below, each consisting of 7 to 10 rows, under a strong glass, one to two inches long, more markedly distichous (two-rowed, one on this side and the other on that, or opposite sides of the twigs), at least in the sterile branchlets, than most other silver firs; strongly grooved and the end notched; leaves on the fertile branchlets similar, but rather shorter, and occasionally rounded at the tip; leaf-scars round or circular, not elevated. The cones, as usual in firs, on the topmost boughs of the trees, sit upright, like birds upon the branches; cylindroid, three to four and one-half inches long (seldom longer), about one and one half in diameter; obtuse, often with short, titted center, from the somewhat more depressed or retracted surrounding, and still rarer abruptly acute, when broken off the based portion, like *A. concolor* (?), deeply cupped by the much-bent scales and seeds, dull velvety greenish or parrot-bronze tinge; scales one-quarter broader than long, the outer air margin of the segment of a rather smaller circle than its very close kin, *Concolor* (perhaps only a variety); bracts under each scale short, and included or hid in the cone; this is oblong, obovate, finely cut toothed on the end and sides, mostly, the central sinus or notch with a rather long lance-pointed mucro; this thin appendage beneath scales, it will be noticed, is narrowed below, or wedge-shaped; seeds with an American ax-like wing, about as broad as long, ripening in November, or, farther north, a month earlier. The wood is white and soft; when well seasoned, makes the best of stiff, strong girths, etc.; holds nails remarkably well; makes good inside work when protected from the weather, but is very perishable when exposed. It is held, however, in little repute by lumbermen, as yet. This is the white fir of Oregon—from beyond the Cascades of the Columbia river to the Pacific ocean, and from Frazer's river to Vancouver island.

Trees felled and left in contact with the earth, and so exposed to the seasons, will utterly perish so as to be stamped to powder under the heel of one's boot in five or six years. At its southern limits it seldom fruits, and the few cones found seldom or never produce good seed.

A lofty tree, most aptly named for its most superb grandeur and beauty, worthy of all care and culture, the finished columnar shaft losing its slender lower limbs, for lack of light and air, very early in the native forest; rising almost palm-like in its exaltation, crowned with short cone, or flattish like the pine, or quite as the cedars of Lebanon, but with no great spread, and elegant smoothish or fissures shallow and openly spread, and thin, iron-gray bark, silver-lined foliage; fruit, as it were, brazen-plumed birds perched upon the top-most boughs, and you have a sylvan object of ever-increasing delight to the beholder. The sapwood is about in the ratio of one-ninth the diameter, and requires from 30 to 50 years to ripen into heart-wood, with due allowance for variability of growth.

In describing trees, some allowance must be made for what is called the "habitat," etc. A few general remarks may be allowed in this connection, to illustrate this principle: Take, as an example, the leaves. Now suppose an author to say of them, "more markedly two-rowed." To test the absolute value of this and similar manifest usual characteristics, upon which we are apt to rely, let us choose a similar case, unquestioned, as a standard of comparison. Let that be the Pacific Hemlock spruce (*Tsuga* [*Abies*] *Mertensiana*), which also grows in the same localities as the above *grandis*, both at their hotter southern limits, say 100 miles north of San Francisco. Here both become more distinctly, nay, strictly, two-rowed (distichous). This *Mertensiana* spruce, or Western Pacific hemlock, north to British Columbia, has densely crowded leaves distributed more or less all around the twigs, and the leaves are therefore exceedingly dense there, yet it becomes here perfectly two-rowed, shorter, and sparser, etc.—is, indeed, the airiest and gauziest of all gauzy trees ever seen. As with spruce, so with fir—*grandis* thickens towards the colder coast and mountains

north—hence the variety *densifolia*; but if this is deemed a good variety because denser foliaged, then, by parity of reasoning, from similar local characteristics, we must also have a variety of Pacific hemlock spruce, and also varieties of varieties, and so on to the end of the chapter.

As qualities of timber, etc., sometimes also follow these diversified forms, it may be useful to designate many varieties, as woodmen and workmen are in the habit of doing, for their own convenience and use; and, as science has the same end, so, at length, also scientifically refined discriminations ever keep pace with the most thorough knowledge, and are useful so long as they do not transcend the practicable.

THE DAIRY.

Milk and Butter Yields of Short Horns.

Some of the best dairy herds of California have an infusion of Short Horn blood. Some have thoroughbreds of great milking capacity and high grades, which show unmistakably the advantage of the cross of the common stock cows of the country with the Short Horn bull of milking strain. Others have as yet but a slight tinge of Short Horn blood. Enough can be seen in California to show that the Short Horn, properly-treated, has maintained the milking quality which was characteristic of the breed in its early history. This being the case, it will interest our readers to review the milking history of this breed, as it is sketched by a writer for the *Breeders' Gazette*.

Bell tells us, in his history of the Kirklevington herd, that the first Duchess by Daisy Bull "gave 14 quarts to a meal," and each quart, "when set up and churned separately, gave 1½ ozs., or 20 lbs. per meal." This, Mr. Bates explains, was when kept upon pasture alone, without "hand food of a costly kind, such as Indian corn or linseed cake," which he never gave to milch cows. This would show a yield of 40 ozs., 2½ lbs. per day, or 17½ lbs. per week. It is likewise upon record that the celebrated Duchess 34th "proved by several trials repeatedly made in various years, that she consumed less food (hay) per day than my first Duchess, grandam of No. 1 in the Herd Book. From a quart of milk, the yield of butter from Duchess 34th was more than from my first Duchess." It will be seen, therefore, that the ancestress of the costly Duchess tribe was a 17½-lb. cow—a record to which the Jerseys of the present day are proud to attain. The dairy product was an important factor in Mr. Bates' breeding operations, as is evident from the following, from the history of the herd:

"Mr. Mason once said to me, 'you can go on breeding Short Horns because they pay you in milk, butter and beef, but we cannot, unless we can sell at high prices to breeders.' This confession was unguardedly made one morning when he called on me to breakfast, just as my housekeeper had put the week's butter in readiness for the Newcastle market on the Saturday. I told him that however ready he was for breakfast, he should not have it until he had counted the butter. There were 300 half pounds to go to market, besides what was sold at home and used in the house. There were then, I remember, 30 cows which had calved, and the butter sold for above one shilling per half pound, being above 10 shillings per cow in butter alone, besides the value of the old milk otherwise sold; while all the calves were reared by the pail, as I did not allow any calves to suck the cows. Had all the milk been creamed and made into butter, it would have been above twice the quantity."

"He (Mr. Mason), however, at that time, as I told him, kept three lots of cows, one to breed calves and then get dry, which was no hard matter to attract notice by their high condition; a second lot as wet nurses to rear the calves, and a third lot to supply the family with milk and butter. This is a system that would ruin any man if he had the land rent free and no outgoings to pay; and yet many, even in the present day, pursue their reckless course to gain premiums, attract public attention and gratify their vanity at the cost of their pocket."

The cattle of Sir Charles Knightley's herd were renowned for the wealth of their milk and butter product. "A Fawsley Fill-Pail" soon passed into a herd proverb; and a dip into the blood of the Earl of Dublin (10178) and the "Friars"—White and Gray—was pretty sure to make one. The "Old Cherry" sort, in such high favor with Col. Cradock, and the foundation of Mr. Bolden's Cherry Duchesses, "The Druid" tells us, were popular on account of their "size and milk." "Whitaker of Burley" we find in "Saddle and Siroin," "had always gone for milking tribes in his quiet Yorkshire valley, and laid much stress upon the purchase of Magdalena by Comet (155), the only cow which was kept out of the Ketton sale catalogue. The Americans, and more especially Col. Powell and the Ohio Company, had heard of her and her 32 quarts a day in their repeated visits to Burley." Mr. Whitaker was an extensive cotton manufacturer, and, Mr. Allen states, was "led into the purchase of Short Horns from the reputation of their extraordinary milking qualities, having to provide that article for his operatives." He bred Yellow Rose, record, at three years, 36 quarts, and at four years, 38

quarts per day; besides Red Daisy and Wildair, record, 32 quarts each per day. Of these Mr. Barry wrote: "These cows are steady milkers, possessing great inclination to fatten; and Mr. Whitaker cannot be too highly complimented on his successful exertions to combine the two qualities." * * * The Duchess and Daisy tribes (with whose merit, as graziers' stock, the public are well acquainted), were all good milkers, possessing that valuable union of qualities of which it is thus obvious every breeder of Short Horns may avail himself who chooses to make it the object of his care."

In short, all existing accounts of early Short Horn history abound in references to the milking quality as a common Short Horn characteristic. Many of the cows imported to America in early days left well-attested remarkable butter and milk records, and numerous descendants to perpetuate the same valuable quality. Col. Powell's Belina yielded at the rate of 20½ lbs. of butter per week; her granddaughter, Belina 3d, gave 32 quarts of milk per day, and many others of the family were famous dairy cows. The roan cow, imp. Daisy, by Barnaby, gave 34 quarts of rich milk per day. Imp. Flora, by La Fon's son of Comet, was a great milker, and her dam produced 33 quarts per day. Col. Jaques' Cream Pots descended from her, and were celebrated for their performances at the pail. Mr. Vail's Eunice 2d made 19½ lbs. of butter in 7 days. Cara, the grandam of Comet, 7762, made 18½ lbs. of butter in seven days and 26½ lbs. in 10 days. Many wonderful yields have been secured from cows of the Pansy, Annabella, Arabella, Agatha and Dulcibella tribes. Many of the Matildas possess most excellent dairy qualities. The princesses, as a rule, have been fine milkers; and so we might go on enumerating instances showing that the milk and butter yield of the Short Horn has ever been one of its chief recommendations to popularity.

In view of the fact, therefore, that many Short Horn cows have made records fairly rivaling those of the so called dairy breeds, why is it that greater attention has not been paid to the development of that characteristic in the breed? Why cannot a herd of Short Horns be found to compete for prizes for the best herd of dairy cattle at our fairs, and win, as did Mr. Geo. Vail in the State of New York about 1844.

PISCICULTURE.

Carp Culture—No. 1.

EDITORS PRESS:—I have been solicited by hundreds of letters and friends to answer questions on carp culture. I now propose to give a few of the leading questions and my answers, in as short and as plain a manner as I can. The first is:

How do You Make Good Ponds?

I will first give a broad answer, and say that it makes no difference how they are made, or in what shape they are, providing there is, say, four feet of water in the deepest place, with considerable shallow water. But all ponds should have a drain box in the bottom of the dam, for at least two reasons. First, that you can draw all the water out without injuring your dam, and to separate your fish, if desired; also, to see if there is anything wrong, or any enemies to the fish in the pond that should be taken out. Of these I will speak hereafter. This drain box may be made of four boards, sufficiently long to reach through your dam. The two side boards should have a groove cut across them, about six inches from the ends, deep and broad enough to hold a gate; the side boards should sit on the bottom board, the ends coming even, the top board coming just against the gate—from the gate to the end of side and bottom boards; this should be covered with three two-inch strips, crosswise, the one next the gate and the one at the end nailed smoothly and firmly. Now you want a wire screen over the inside end of the box, to keep the fish from going out when you draw your water off. An old wheat riddle makes a very good screen. The two-inch opening on top is left so that, in case of a small supply of water, you can fill in with earth, so as to prevent any leakage; but with a good flow of water, this top space can be covered solid, and omit the earth. This is the end in the pond, and completes the box.

In making dams, I prefer, and think it will pay to board it up on each side, say have four stringers, two on a side, one at top and one at the bottom. Then place the boards against them, driving them down well. This saves all wear and tear of the dam. Across and on top of the dam there must be a waste box to carry off the water, and the upper end of this should be screened to keep the fish from going out—the common wire gauze is good for this.

The pond should have plenty of water-oress, lilies and grass, or some aquatic vegetation in it. Now we have the pond, we must protect it, and to do this, we must have good canals or ditches all around it to carry all surplus water off, and not allow any overflow. This all done, we have a pond ready for the fish.

Second question: Do Carp Need Gravel or Rock in the Pond to Spawn In or On?

No. They want a clay or loam bottom with the before-mentioned aquatic plant to spawn on. Now is a good time to prepare them.

J. C. DAVIS.

Forestville, Sonoma Co., Cal.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 8.

Written for the RURAL PRESS by CLARA DEMING.

The Coming Meeting of the State Grange.
"Some are never strangers,
But soon as seen, the soul, as if by instinct,
Springs toward them with resistless force, and owns
Congenial sympathy."

How many of us have proven the truthfulness of these lines! Many seem to draw us to them by some mysterious power, and we who were strangers are as old friends, and when asked the cause of our new-found friendship, we can scarcely explain it or give a reason for it.

We find this is often the case among our Grange friends whom we meet at the annual gatherings of Patrons from all parts of the State. Here we become acquainted with the very best people of the State, having a bond of union in our loved Order, often forming friendships which are to last a life-time and cast an influence and halo around us, even when the individual shall have penetrated the mysteries of the great Grange above.

One pen can scarcely tell of all the advantages to be obtained by Patrons who visit the State Grange. There, all subjects of importance to the farmers of the country are freely and wisely discussed by the accredited delegates to the State Grange and visiting fourth-degree members. The only distinction made is that only the delegates of the State Grange are allowed to do the voting; any brother or sister may have the privilege of talking upon whatever is before the assemblage. When the Grange is so kind as to allow fourth-degree members to ventilate their ideas, they should be careful not to consume too much of the valuable time of the organization by a senseless profusion of words, or obstinate adherence to an idea of minor importance.

The Grange movement is the greatest educator the farming community has ever known, and he who neglects to accept its benefits is surely standing in the light of his own advancement and that of his children, and is therefore responsible for the failure of his own life and those within his influence. We gather much good from those around us by discussing and comparing our experience with theirs upon the different methods of getting the greatest yield from the soil we cultivate, or the best manner of preserving fruit, or of house-keeping, and of elevating the grand calling of farming.

By attending the State Grange we can learn much of all portions of the State, by paying careful attention to those from various parts who are kind enough to entertain us with speeches or conversation. Stay-at-homes cannot realize how much benefit may be obtained by a trip away from home, into a portion of the country they never have visited, and by seeing how others manage to enliven their existence by throwing into it a little of the spice of travel, and the interchange of ideas.

It would be a good plan for each one to go to Stockton in October with their minds equipped for an attack upon some important topic of interest to all. I have heard that the large warehouses, other than the Grangers', get the farmers to store their wheat there, and then pay them what they choose for it, as shippers will not buy grain stored in the warehouses of another shipper. Will the producer allow others to cheat him in this way without making a murmur? Farmers and patrons, the days for patience in these matters have past; you have now an association of your own; patronize it, and if its capacity is not great enough to satisfy the demand, have it enlarged until it is large enough. If we could have the figures of the number of ships loaded elsewhere and compare them with those of the Grangers', we would soon see that farmers do not patronize and encourage their own institution as they ought to. This is just thrown out for all to think about, as it seems to be a subject worthy of consideration in the State Grange.

One of the Stockton sisters says she hopes all of the brothers and sisters will meet them at the State Grange, and I hope, out of compliment to the excellent brothers and sisters of Stockton and the worthy State officers who are doing so much to make the meeting a success, there will be a good attendance. Do not stay at home because you cannot have new clothes. Wear what you have, remembering that true nobility of soul is written in the countenance, and not upon the costume. Those who visit the State Grange will never regret the pains they took nor the time thus profitably spent. It is stated that Mr. Wm. Cyrus, Master of the State Grange of Oregon, is expected to attend the meeting in Stockton, which will take place the first Tuesday in October.

September 4, 1882.

["Grange Leaflet No. 7," in last week's RURAL, was, by mistake, printed without the name of the writer attached. Miss Deming should be accredited with all the "Leaflets."—EDS. PRESS.

SUBSTITUTES.—Bro. J. Millikan, of Sutter Creek, Amador Co., writes: "I don't think it will be possible for me to attend the State Grange. My business is such that I cannot

leave at that time. I will, however, be represented there by Mrs. Millikan and our daughter." Bro. Millikan does a sensible thing. If a man cannot come, the next best thing to do is to send the ladies of his family for a few days' enjoyment and profit.

Grange Duties and Privileges.

Furnished for Publication in the RURAL PRESS.

Now that we have received our new members, let us think of our duties and privileges. That we members of long standing have not received the benefits of our meetings that we ought, is but an instance of how far short of human aim fall human realizations, and should only stimulate all of us to more vigorous effort to rise higher in thought and action, and try to see things more in their right relations and real dimensions. As members of years, the privilege is ours to rejoice that we have stood by each other when our Grange was beleaguered by the indifference of members and failures of important projects, till the fraternal tie is strengthened until "life's silver cord is loosed—its golden bowl broken."

It is the duty of each of us to give something, either written or spoken, for the common good, and we should be able to carry home to our work some new ideas or ways of doing things to lift and dignify coarse toil into satisfying pleasure. By each one giving his thoughts, opposite thoughts are stimulated, strengthened and expressed, and things pertaining to the good of agriculture and our country put in a clearer light. Egotism and delusion are swept away, loftier sentiments inspired, while each member gains a keener sense of beauty, of humor, of enjoyment, and a genial love of all good. If we contribute nothing to our Grange meetings, it is not our duty to say that the Grange does us no good—amounts to nothing. We only get in measure what we give. Giving, receiving, each member becomes a teacher, each a pupil.

The more members we get, the more we will be expected of us; the more good we should do; and it is the especial privilege of our new members to aid us worn veterans with debates, essays, anecdotes, music—anything to improve or refine. No power greater than that of a life well spent, and each life well lived, in accordance with our declaration of purposes, is a pillar of strength to our Order. To say that he or she is a Granger, should be a guarantee of good character. All our Grange teachings are calculated to endear life and make it beautiful and sweet. Let us read our Grange duties aright, and do them faithfully. St. Paul's charge to the Ephesians is pertinent to us: "Let all bitterness, and wrath, and anger, and clamor, and evil speaking be put away from you, with all malice; and be ye kind to one another, tender-hearted, forgiving one another, even as God, for Christ's sake, hath forgiven you."

MRS. W. D. ASHLEY.

Lecturer of Stockton Grange.

The Debris Problem.

EDITORS PRESS:—Now that both political parties have held their State Conventions, it is remarkable what little consideration the debris question received at their hands. They must have thought it a dangerous hobby to ride on, and best to keep it out of politics, but as Judge Temple lays down the law which sent the miners to building dams, I think the matter left in its present state will only lead to new complications, and increase the dangers to the valley below. It is true, there is no law to prevent them building dams to hold their tailings, and so long as they hold their tailings, can we succeed in an action to enjoin them? But the question is, how long will the dams themselves hold, or how long should they hold? Judge Temple does not say. Are they to hold for all time, or only 10 years? If only for a time and then to break away, our destruction will be complete and nothing left worth enjoying. Under these circumstances, legislation is necessary in order to bring about anything like a safe solution. Those dams should have a State supervision, and be built according to plans of the State Engineer. The Legislature should provide for the formation of district taxes, to be levied on the inches of water for the 12 or 24 hours, as the case may be, the rate of taxation to be based on the engineer's estimates each year. It looks to me that the interest of both parties requires something of this kind, but if left in the courts, I fear the end is far off.

Nicolaus, Sutter Co., Cal.

P. C.

A Card.

Vines. Vine Cuttings, Olives, Chestnuts.

The undersigned desires to inform those who intend to plant vineyards during the coming winter, that he will be prepared to furnish rooted vines and cuttings, and olive and chestnut trees at standard prices. The vines that will be offered will be the most desirable among those of European origin; also, seedlings of the *Vitis californica*, *Vitis arizonica* and *Vitis riparia*, and rooted cuttings (one year old) of the *Riparia*, Taylor, Clinton, Elvira, *Rupestris* and *Herbemont*. Cuttings of the *Riparia* will be furnished in any quantity to suit, if ordered early. A circular will soon be issued.

CHAS. A. WETMORE.

No. 111 Leidesdorff street, S. F.

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

EVERGREEN MILLET.—Butte Record, Sept. 2: Two of our correspondents inquire about the evergreen millet, and whether anyone has had success with it. The Red Bluff People's Cause, in a recent issue, says that a farmer of Tehama county sowed evergreen millet in March last on poor and dry chaparral and manzanita land. It has not had a drop of rain since, nor any irrigation, yet it has made a good crop and stands four feet high. It makes fine green feed, and is also excellent for hay. The Yolo Mail reports that farmers in that county like it, so far as heard from.

COLUSA.

HOGS AND BEEF CATTLE.—Sycamore Cor. Sacramento Bee: Hogs and beef cattle are quite scarce through this section. Farmers are now looking for them in all directions to place on their stubble fields, as stubble is quite rich—more so this season, owing to the falling down of a considerable portion of the grain. Eight cents is readily refused for hogs, where this time last year they could be purchased for six cents.

FRESNO.

WILLIAMS' NURSERY AND ORCHARD.—Expositor, Aug. 30: The place selected for this improvement and industry was purchased by W. M. Williams, formerly of Los Angeles, two years ago, but operations were not commenced until last spring, when, with his force of about two dozen in number, he started the nursery of 40 acres, and has now growing on the place about 10,000 apricot trees, budded on the apricot stock, many persons preferring these to those budded on the peach stock; about 50,000 grafted pear trees, all of which are of the leading and favorite varieties; about 200,000 budded peach trees, among which are those delicious fruits: Lemon cling, Heath cling, Newington cling, etc., and of the freestones, the early and late Crawford, Foster, Salway and numerous other varieties. The nectarines, of which the New White is said to be the choicest kind, form a marked feature in his collection. Our reporter noticed many young walnut trees from the pit this season, that had attained a growth of four feet, while the peach, apricot and nectarine trees had even outstripped these, going four and a half and five ft. The nursery presents a beautiful appearance, being entirely free from weeds of every description, showing that intelligent system of cultivation so necessary to the successful prosecution of an industry of this nature. The stock of apple trees is simply enormous, and we shall not attempt to enumerate the several varieties, but will merely say it appeared enough to supply the entire county, and yet Mr. H. W. Bard, the superintendent of this place, and to whom we are indebted for the facts herein stated, informs us that the stock, in comparison with the many settlements being daily made in this section, is not large. The orchard containing 40 acres is a sight worth the trouble of those taking an interest in matters of this kind, and we do not hesitate in saying that this orchard presents the most rapid growth of any we have yet visited; the trees show all the growth of this prolific, wonderful soil, and are symmetrical, straight and healthy.

DEPRESSED MUSCATS.—The prices of Muscat grapes at this season are depreciated one-fifth of other varieties. The reason assigned for this is, that wine drinkers at the East no longer like this variety as formerly, and the brandy made from this grape seems to have fallen into disrepute. Persons having this variety of grape would do well to make raisins of them; they make superior raisins, and those having them can realize more in raisins than selling them at present prices for wine or brandy.

SEEDLING PEACH.—Republican, Sept. 2: Last Friday Mr. J. R. Baird, of Prairie district, brought to this office a sample twig containing nine as fine peaches as are often seen. They were taken from a tree propagated by Mr. Baird, the pit or seed being secured from a tree in the old orchard of the late Dr. Ellis, on Kings river. It is a cling peach, uniformly very large, of a rich yellow color and very thick meat. Mr. B. has named it the Golden Cling, and has budded a number of trees, which will be for sale this fall. Several of the specimens left us were from 10 to 10½ inches in circumference, and we are assured that but few, if any, on the tree would measure less than eight inches around. Mr. Baird has five other new varieties of peaches, two cling and three freestone, all of which he pronounces great successes. He is a practical nurseryman, and has a small stock of choice trees.

HUMBOLDT.

GOOD CROPS.—Ferndale Enterprise, Aug. 25: One thousand three hundred bushels of grain were taken from a ranch near Hydesville this season in excess of the entire crop last season, and the acreage was 20 acres less than last season. This shows the general increase in our grain product.

LOS ANGELES.

SHEEP POISONED.—Mirror, Sept. 2: The following paragraph appeared in the Los Angeles Herald of yesterday: "Mr. C. Garnier, who was in the city yesterday, informs us that sheep are dying off by thousands in different parts of the county. One man, near San Fernando, he says, has lost about 5,000 head. The disease

from which they die is said to be similar to the cattle plague." This statement excited so much comment that a Times reporter called on some of the prominent sheep owners to ascertain to what extent the item was correct. The first gentleman seen was Mr. T. Rimpau, of Anaheim, who knew nothing of any such disease as was spoken of in the paragraph. His sheep are in San Diego county, and he knew that there was nothing affecting the sheep in that county. Mr. L. Bixby was next seen, who said he knew nothing of any disease among the sheep, except from what he had read in the Herald. His sheep and those of his brother, H. H. Bixby, were in no way affected. The Times reporter then met Mr. L. Garnier, the brother of Mr. C. Garnier, and accosted him with anxious inquiries concerning this sheep disease which was said to have broken out. This gentleman said that there was great loss on one rancho in the San Fernando valley among the sheep belonging to Bernardo Dornalech, but that there was nothing of the kind in any other portion of the county. The disease was confined to Dornalech's sheep, and was purely local in character. It was not charbon, or anything like it, but was the result of the sheep eating poison weed, which they refuse to touch where there is clover and other succulent grasses for them to eat. He was positive that the sheep in all other localities were entirely unaffected. Messrs. J. B. Cohn, Charles Deleval, and others posted in the sheep business of the county, entertained practically the same views. All the gentlemen seen on the subject agreed in saying that it was well known that these poisonous weeds were peculiar to a dry season, and were not seen in wet seasons. There appears to be no reason to apprehend any widespread trouble, as the sheep men in the affected locality have taken every necessary precaution.

THE PEACH PRODUCT.—Los Angeles county horticulturists are suffering for the lack of a market for their peaches. The crop is an immense one, and the cannery at this city is not able to handle it. They are said to be overstocked now, and are only taking such fruit as has been contracted for in advance. It is represented that there are tons of peaches now dropping from the trees and rotting upon the ground in the orchards of this county. The demand is for another cannery, so that the fruit interests of this section, which have become one of the most important interests of the country, may not suffer. If the fruit cannot be canned, why cannot it be dried? The large Alden drier of the canning company is not in use, we are informed, but there are a large number of small, private driers in operation, and they are doing good work. A remedy is thus at hand for the fruit growers, and they would do well to adopt it rather than allow their fruit to go to waste. If in any community there is no one person who wishes to go to the expense of procuring a drier, let several of them join and share the expense and save their fruit. Yesterday Mr. Fred Upson, of Anaheim, brought up a load of peaches, but could not dispose of them to the cannery, so he purchased a Zimmerman drier, and took it out with him, determined to be independent of canneries and all the world.

MERCED.

THE HARVEST.—Valley Argus: Harvest time is nearly over in the San Joaquin valley, a very few only yet having standing grain or grain in the stack, and farmers have an opportunity for a short time to take a retrospective view of the past, and make their calculations upon future operations. The season has not been a remarkably profitable one to cultivators of the soil, nor yet to merchants, mechanics or other tradesmen, though this dry season has so far not been so disastrous to farmers and those depending upon farming operations for prosperity as some that have preceded it. The crop has been garnered and placed upon the market, and, so far, prices are remunerative, and the wherewithal is in the country to enable prudent, painstaking and industrious farmers and others to tide over the time until another crop can be produced, for the seeding of which nearly the entire area of the cultivated portion of the valley is in excellent condition; much of which was spring-plowed, and a large proportion of the stubbleland being nearly equal to summer-fallow for cropping, and should the coming winter prove seasonable, we may look for a larger harvest throughout the valley in 1883 than ever before since the country was settled.

MENDOCINO.

HOP NOTES.—Ukiah Press, Sept. 1: Bartlett Bros. are building a new hop press, and so is Wm. Burke. The hop season creates an unusual demand for fresh meat, and our butchers are slaughtering seven animals per day. The warm weather is ripening hops very fast, and pickers are scarce. It is believed that a large quantity will be lost through the scarcity of pickers. To harvest their hop crop, several Hopland growers have been obliged to employ Chinese. This action is perfectly justifiable. Bill Burke has attached to his hop kiln a cooling-room, 96x30 ft. He claims he will have the largest yield in the State from a field of 10 acres of old hops. His estimate is a ton to the acre. A general complaint with the hop men is that liquor is too easily obtained, and therefore too plentiful among the Indians. Since Judge McGarvey's decision that whisky is property which Indians may possess, the employers of such Indian help, and those living in the neighborhood of rancherias, have been filled with apprehensions. J. B. McClure sent two loads of

hops to Cloverdale last Friday, which is believed to be the first shipped from this section for the season.

NAPA.

THE LENOIR.—Reporter, Sept. 1: Mr. H. W. Crabb, of Oakville, has a vineyard of some 200 acres, chiefly of choice vines, and is giving much attention to the cultivation of varieties of resistant stocks. He has planted several hundred cuttings of the *Astavis* class, variety Lenoir or Jaques, which is a great bearer of handsome, perfect clusters, sometimes 16 inches long, with small but very juicy black berries, making a very superior red wine of the Burgundy type. Every one who has seen this variety becomes convinced of its bearing quality, its beautiful and durable foliage, and entire adaptability to this climate. He values it so highly that he has no cuttings to spare, but will use all the wood himself, for cuttings and grafting. Another resistant vine of the *Riparia* class is the *Elvira*, which has fruited well in this State, and of which Mr. Crabb is so favorably impressed that he intends to propagate it largely. It makes an excellent grafting stock and grows from cuttings with ease. It produces well on Mr. Crabb's place, and he has fruited and made wine from it.

WINTER IRRIGATION.—The Anaheim Gazette says: The winter system of irrigation is growing in favor, not only with fruit growers, but with farmers as well. The folly of depending upon the capricious rain when one can flood his lands with fertilizing river water is gradually being made apparent to those whose location enables them to thus bid defiance to drought. The policy adopted by the Anaheim Water Company last winter of bringing down all the water which their ditches could carry, and selling it to all who were willing to buy, is the true policy. The company gains by selling water for which it has no use; the user gains by raising a crop, where, without water, nothing would have been produced; and the whole community gains by the prosperity which follows. We are glad to know that the company proposes to pursue a similar policy this year, and bring down water more extensively than last winter, if that is possible. It is probable that, in addition to the territory irrigated last season, the major part of Garden Grove will desire to be supplied with water. Hill brothers, of that vicinity, pioneered the way last season, and their example is likely to be largely copied. The Messrs. Hough and Ware are even now making arrangements to flood their lands, and many of their neighbors will likely soon make similar preparations.

PLUMAS.

BEEF CATTLE.—Greenville Bulletin, Sept. 1: On last Thursday George Waters arrived at Prativille from Oregon with 250 head of beef cattle for the lower country. He says cattle are scarce and hard to buy in all the northern country; prices range all the way from four and a half to seven cents per pound, according as the seller has kept himself posted in market values. Mr. Waters said when he left the cattle range there was a man there who had \$100,000 to invest, but had not been able to find cattle enough to make it any object for him to purchase.

SAN BERNARDINO.

THE MUSCAT.—Riverside Press: Four years ago Mr. Chaffey purchased one and two-year-old Muscat vines from a neighbor who had lost confidence in the raisin grape. He planted one and a quarter acres to these vines. The first season after planting, he picked the crop, dried the same and sold the raisins for \$50; the second season he sold the crop on the vines for \$150; the third year he sold his crop in the same way for \$200, and this year he has again sold his grapes on the vine for \$250. For four years he has sold his crops for a total of \$650. The vines originally cost him about \$35; he has cultivated the same four years, and the little vineyard now pays him a net income on a valuation of about \$1,800 per acre.

SAN LUIS OBISPO.

EDITORS PRESS.—Thrashing goes steadily on. Recently five engines and thrashers were in sight. There is still considerable work to be done. Wheat is turning out well, also flax, of which several ranchers have quite a lot. It seems bad that the fiber or straw of it cannot be also turned to account, either as linen or in paper making. A party here cut his buckwheat, of which he had several acres, and it is also a success. I tried several stalks, it averaged seven lateral branches, with from 20 to 37 well-filled plump buckwheat grains. I must acknowledge I was surprised at the crop. It was sown in May after he had his beans in, which also are a success, and now fast ripening. There is no machine invented yet for thrashing them, but horse-tramping or flailing them out.—M. J. O'BYRNE, San Luis Obispo.

SANTA CLARA.

BARLEY BOOM.—Mercury, Aug. 31: Considerable barley is coming in from the country, and the largest part of it is being stored for speculative purposes. Berry & Evans, among others, have about 40,000 sacks in their warehouse, and are still building on it, notwithstanding the fact that prices are dropping in the great markets. Some barley is being received from Salinas valley, Merritt, Wood & Co. being the principal shippers from that part of the country at present. There are many who believe that the boom in barley will not speedily die out, but that it will develop into great dimensions.

TEHAMA.

STANFORD'S VINEYARD.—W. H. Smith, the

superintendent of Stanford's vineyard at Vina, informs the Red Bluff Tocsin that he has just ordered 200 acres more of land broken for the planting of vines, which will be done as soon as the season permits. Already 1,200 acres are presenting a beautiful appearance from the prosperity of the vines set out last season, and it is probable a couple of thousand more acres will be planted this year. A few years will make for Vina a scene which no other part of the globe can present, as the land is level and even for several miles to an extraordinary degree. The experiment at this stage is far beyond all expectations, and the owner is quite satisfied with his work. The old vines are loaded with grapes, which will be plucked, and wine-making commence about the first of next month.

TUOLUMNE.

EDITORS PRESS.—The fall of the year is evident from the falling leaf. The harvest is nearly past. The husbandman is storing or disposing of his crop. Prices seem satisfactory. The laborer is having his reward, and mortgages will be stricken from the records. It is to be hoped that very few, if any, take their places. Farming pays, and many energetic and enterprising farmers are steadily getting rich. Surely wealth obtained by bread producers will not canker the conscience. Honest labor is worthy of honest reward. The price of wheat in this county ranges for \$1.75 to \$1.80, scarcely enough to tempt farmers from shipping below. Oak Dale and Modesto are both alive from the immense quantities shipped from these points to San Francisco and Stockton. The latter place holds a No. 1 place as a storage centre, but she may partly lose it if she does not cut a straight canal through the tule, as the slough seems to be filling up, making it difficult for navigation. Our fruit crop is being handled for use and market. Peaches and grapes are a fair crop; apples are falling off; the codlin moth is too much for them. Pears are scarce. It seems to be the off year with this favorite fruit. Plums are plentiful in some gardens and short in others. Much fruit will be dried. But few peaches will be pared, a style which is in demand. But it must be remembered that the peach is short-lived after coming to maturity, and it takes time to pare them. One tree would spoil while the other was being pared. It takes quick work for a few hands to keep up with the crop as it ripens by merely dividing in two and pitting. That is my experience.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chetumal, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grain, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co., 506 Battery street, S. F.

Our Representative East.

MR. S. E. BAKER, of Springfield, Ohio, a gentleman of first-class recommendations and qualifications, will represent this paper on the Eastern side of the continent. He will occasionally make brief visits to most of the principal cities, and we recommend him to the attention of progressive men of industry for the transaction of business on equally as favorable terms as in our own office. Address No. 14 West High street, Springfield, Ohio.

To Settlers and Fruit Growers.

Purchasers who wish to secure land in large or small quantities, for cultivation, that will give satisfaction every season, or that will produce a diversity of crops, should call on, or address Edward Frisbie, Anderson, Shasta Co., Cal.

THE PACIFIC RURAL PRESS,

AN ILLUSTRATED
AGRICULTURAL HOME JOURNAL.

Among other Reasons for Subscribing are the Following:

Because it is a permanent, first class, conscientious, able, and well conducted journal.
Because it is the largest and best agricultural weekly west of the Rocky mountains.
That Patrons may be reliably informed on the progress of the Order in this and other fields.
That more farmers' wives and children in their rural homes may be cheered by the weekly visits, laden with its pleasing yet moral reading, and sound instruction.
That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.
That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed by an open and free discussion in our columns.
That all the worthy industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.
That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern friends of the Atlantic border, in aid of an increasing immigration to our sunny clime.

Subscription rates, \$3 per annum when paid in advance. Please invite your friends to subscribe. We will send free sample copies for circulation and further information on subscription, etc., on application.
Secretaries, Lecturers and other Patrons are cordially invited to correspond for our columns, for the good of the Order and their local interests.

DEWEY & CO., Publishers.
San Francisco, 1881.

The Great Waste of Salmon.

There has been a sorry waste of salmon in San Francisco this week. The opening of the season, Sept. 1st, brought down far more than could be made any use of, and worse than that: the hot weather destroyed the fish that had, perhaps, been caught just before the season opened and stored for the lawful time of shipment. However that may have been, it is certain that Market Inspector Jacob Wray seized on Saturday and Monday, in the harbor, over 20,000 lbs. of salmon, brought down from the Sacramento and San Joaquin rivers, as unfit for human food. In addition to the 20,000 salmon rendered unfit for use by the hot weather of Saturday and Sunday that were condemned by the Market Inspector and thrown into the bay, over 5,000 more came down on the City of Stockton Tuesday. These laid on the wharves for a while, but were eventually taken to the end of the Washington street wharf and thrown into the bay, which was well stocked with salmon—dead and floating. Along the water front from Market street to the Presidio wharf the stench was terrible. On Tuesday, at Meiggs wharf, the water was literally covered with the floating fish.

This is a criminal waste of good food material. If the fishermen had waited for the legal day, probably all they could have sent down fresh would have been disposed of. As it was, the fresh supply was reduced, and air and water were polluted. There should be some way to prevent such occurrences.

Since the above was written, we find the following in the *Call*, which seems to demonstrate the criminality of the occurrence: It is generally understood now that the twenty odd thousand of these fish thrown into the bay were caught before the opening of the season, and their owners, not daring to expose them to public gaze until after the lawful time for their taking, had them concealed along the river tules, depending upon the continuance of the cool weather for their preservation. But the warm weather coming on, upset their calculations, and, hoping to realize something out of the general wreck, shipped them to this city, but, of course, they could not be used. The matter is one that should receive the strict attention of the Fish Commissioners. If an investigation is instituted, it will not be difficult to trace the matter up to the guilty parties.

Exhibit of George A. Davis & Co.

Geo. A. Davis & Co. will have in the State fair a sample line of their agricultural implements and machines, finished in a very superior manner. It will pay all personally interested in these matters to look at Davis & Co.'s exhibit, and note the many improvements they have made in farming machinery. This firm have secured the sole control of the implements they handle, and represent—as agents—half a dozen or more of the largest manufacturers in the United States. They regard the La Dow harrow as a big bonanza for the farmer. They say with this wonderful disc harrow, that there is no need of burning stubble; that by running over the ground with the La Dow the stubble is cut down, chopped up fine, and turned under as nicely and cleanly as though plowed. In adobe land this mixing of straw aids wonderfully in keeping it warm and porous, and assists the seed in its germ development. For summer-fallowed land, it thoroughly cuts and pulverizes, and harrows the roughest land, and makes it as mellow and level as the most exacting could desire. There are three sizes and two kinds sold by Davis & Co.: One is styled Extra Heavy, for tough, stiff, clay or adobe work; the other Medium, for lighter sandy or alluvial land. Where the soil is not too tenacious, and at all resembles the light land of the San Joaquin, the La Dow can be used as a plow. Many of the largest ranchers in the southern and middle part of the State do all their plowing with it, and speak in unqualified terms of admiration. This implement can also be used as a seeder, and it is claimed that it will sow and cover the grain as nicely as any force-feed seeder ever used. George A. Davis & Co.'s exhibit will be well worth seeing. The firm is represented by M. Ayers, the old veteran in agricultural machinery, who will be pleased to explain the many points of merit about the different machines.

Revised Premium List.

We propose to publish, as soon as possible after the close of the State fair, an enlarged edition of the RURAL PRESS, which will contain a revised list of premiums awarded at the State fair and some of the leading district fairs. These lists are generally first published incomplete and too hastily, and are full of errors and omissions.

A correct premium list is of permanent value, as it contains the names of men who advance in the various departments of production, and is, more or less, a guide to those who are in search of different kinds of livestock, produce and manufactured articles.

By having the list carefully revised before publication, we believe we can do great service to the producing interests. The publication and wide distribution of an enlarged edition will be of benefit to all whose business is mentioned, and thus announcements in the "Premium List edition" will have unusual circulation and value.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 262 Market St., S. F.

FOR THE WEEK ENDING AUGUST 22, 1882.

262,932.—STATION INDICATOR—John Coxen, S. F.
263,186.—CAR COUPLING—John C. Look, Yuba City, Cal.
263,194.—TONGUE SUPPORT—Ela Moore, Walla Walla, W. T.
263,057.—VEHICLE BRAKE—M. M. Nathanson, S. F.
263,216.—APPARATUS FOR REGULATING THE PRESSURE IN DISPENSING MALT LIQUORS—Chas. C. Redmond, San Jose, Cal.
263,227.—CARR FOR CABLE RAILWAYS—Henry Root, S. F.
263,006.—VEHICLE SPRING ATTACHMENT—D. Shelton, Santa Rosa, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific Coast Inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

BRAKE.—Martin M. Nathanson, S. F. No. 263,057. Dated Aug. 22, 1882. This vehicle brake consists in forcing conical pieces into hollow conical attachments on the hubs of the wheels by means of an operating rod pressing and forcing toggle levers, the whole being operated by a bell crank lever and a rod within the body of the vehicle.

CARS FOR CABLE RAILROADS.—Henry Root, S. F. No. 263,227. Dated Aug. 22, 1882. In this class of roads the dummy or grip-car travels in front of the attached cars, so as to give the operator an unobstructed view of the track. This grip-car is usually made up of two frames, one of which is mounted upon springs and carries the seats for passengers, forming an open car. The other frame may be attached to boxes directly upon the axle, or it may be attached to the bottom of the boxes which carry the springs, and it thus carries the gripping apparatus at a nearly fixed height above the surface of the track. The frame which is supported upon the springs has a considerable range of movement, from variable loads and from the plunging motion caused by the inequalities of the track. It does not, therefore, furnish that rigid support which is required for carrying the fender at a fixed distance above the surface of the street, and at the same time so close to it at all times as to make it impossible for it to pass over any persons who may fall in front of the cars.

Pacific Business College.

The Pacific Business College, beautifully located at 320 Post street, S. F., opposite Union Square, is enjoying merited prosperity. The attendance this year, we are told, 60% more than any previous year in its history, and a host of young men from all parts of the Coast are rapidly preparing themselves for entrance to business life. The institution is worthy the attention of those seeking an acquaintance with business methods of the most approved order. The courses of study have been specially prepared to meet the requirements of a business life, and are thorough and practical. In the Commercial Course, a system of actual business is employed, combining theory and practice, and is at once so simple and natural that it needs only an examination of its merits to convince the most skeptical of its superiority over all other systems. Book-keeping in all its departments and the collateral branches included in the business course, are taught in the most thorough and systematic manner. The Academic Course is designed to give regular and systematic training in the English and advanced mathematical branches, and to prepare those who need elementary education to enter upon the commercial course with a better foundation, and with more certainty of success. In the Business Course, the class system is entirely discarded except for general reviews and practical exercises on the black-board. Students receive such individual instruction in the several departments as enables them to pursue their studies as rapidly as their ability will admit. No student, therefore, is kept back in his course by those of less ability and application. On the contrary, he is always advanced as rapidly as is compatible with thoroughness. Those who have not had the advantages of education in youth will here find the readiest means of supplying their deficiencies. Ladies are admitted into all the departments of the College on an equality with young men; they receive the same instruction and have in every respect the same advantages as the other sex. The Pacific Business College is recognized as one of the substantial institutions of California, and affords excellent facilities for acquiring a thorough business education. The proprietors, Profs. Chamberlin & Robinson, are practical men and first-class educators in the line they have chosen to work.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.



The Lesson of the Leaves.

Sweet buds look through the haze which dims
The silent trees, which listen where
A forest life its battered limbs,
Like armies standing still in prayer,
How soon the songs of wild-bird hymns
Will wake the wood flowers sleeping there!

The trees are teachers that I love;
Their leafy lesson I have read,
Their branches point to worlds above,
Their roots point to the world that's dead;
Spring, hasten with thy cooing dove
And bow of promise overhead!

Here, root clasps root throughout the wood,
And branches fellow branch embrace,
A hand joins hand in brotherhood,
When trusting friends meet face to face
In worship with the multitude—
Invoking precious gifts of grace.

O solemn thought! the woods so lone
In winter, and in spring so fair,
Hold in their trunks for the unborn
Cities and ships and colonies there;
Soon the brown branches, tempest torn,
Will wave green banners in the air.

Low bushes, whose soft bark is seared,
Hold their red rosaries of beads,
The thistle, with its head upreared,
Like genius bearing noble deeds,
Though coarsely clad and rough its beard,
Will send afar its winged seeds.

Arise sweet-scented violet!
Come, orchid, with thy lips of red!
Spring beauty, come, thy coverlet
Of snow is lifted from thy head;
The bluebird sounds his flageolet,
The robin's flute pipes overhead!

—G. W. Bungay.

A Small Beginning.

A little ground-floor room, a little fire in a small stove, burning dully, as fires are apt to do at times when their blaze might be worth something in the way of cheer; out-doors the raw gray of a spring thaw; on the window-seat, two girls crouched together, and looking out with faces as disconsolate as the weather. Such was the picture presented at No. 13 Farewell street, three years ago last March.

Farewell street was so named because of its being the customary route of exit from the old cemetery; the point where mourners were supposed to turn for a last look at the gates which had just shut in the newly-buried friend; and this association, as well as the glimpse of the tall cemetery fence, topped with mournful evergreens, which bounded the view, did not tend to make the sad outlook any the less sad on that dismal day. For it was only a fortnight since Delia and Hetty Willett, the girls on the window-seat, had left within those gates the kind old grandmother, who for years had stood to them in the stead of father and mother both.

"The Willetts," as the neighbors called them, using the collective phrase always, were twins, and just 18 years old. Bearing to each other even a stronger personal likeness than twins customarily possess, they were in other points curiously unlike. Delia was soft and clinging, Hetty, vigorous and self-reliant. Delia loved to be guided, Hetty to guide; the former had few independent views and opinions, the latter was brimful of ideas and fancies, plans and purposes—some crude, some foolish, but all her own. Yet, oddly enough, it was Delia, very often, who gave the casting vote in their decisions, for Hetty's love for her slender twin was a sentiment so deep and intense that she often yielded against her own better sense and judgment, simply for the pleasure of yielding to what Delia wished. Delia, in return, adored her sister, waited on her, petted, consoled, "exactly as if she were Hetty's wife," Aunt Polly said, "and the worst was they suited each other so well that no one else would ever suit either of them, and they were bound to die old maids in consequence!"

But 18 can laugh at such auguries, and there was no thought or question of marriage in the minds of the sisters, as they crouched that afternoon close together on the old window-seat.

A very different question absorbed them, and a perplexing one; how they were to live, and to keep together while doing so, which meant pretty much the same thing to them both. Grandmother's death had left them with so very, very little—her annuity died with her. There was the old house, the plain, worn furniture to which they had been accustomed all their lives, and about a \$100 a year! What could they do with that?

"If one of us only happened to be clever," sighed Delia. "If I could paint pictures, or you had a talent for writing, how easy it would be."

"I don't know as to that," responded Hetty. "Seems to me I've heard of people who did those things, and yet didn't find it so mighty easy to get along. Somebody's got to buy the pictures after they're painted, and read the books, and pay for them." She spoke in an absent tone, and her brow was knitted into the little frown which Delia knew betokened that her twin was puzzling hard over something.

"Don't scowl, it'll spoil your forehead," she said, smoothing out the objectionable frown with her fingers.

"Was I scowling? Well, never mind, I'm trying to think, Dely. You can't paint, and I can't write. The question is, what can we do?"

"That is the question," said a voice at the door. It was Aunt Polly's voice. She managed on most days to drop in and "give a look to them, the lonely little creatures," as she would have expressed it.

"You're consultin', I see," she said, taking in the situation at a glance; the dismal room, the depressed and tearful cheeks of the two girls, the lack of comfort and cheer. She twitched open the stove door as she passed, threw in a stick of wood, twirled the damper, and gave a brisk, ranting shake to the ashes—all with a turn of the hand, as it were—attentions to which the stove presently responded with a brisk roar. "Well, it's time you did. I was planning to have a talk with you before long, for you ought to settle to something. Pull the blind down, Dely, and Hetty, you light the lamp, and come to the fire both of you, and let's see what we can make of it. It's a tangled skein enough, I don't deny it; but most skeins are that, and there's always a right end somewhere, if the Lord'll give us sense enough to get hold of it and keep on pulling out and winding up."

Presently the girls were seated close to Aunt Polly's rocking-chair. The room looked more cheerful now, with the lamp-light and the yellow glow from the stove, and both were conscious of a sense of hopefulness.

"Now—what can you do?" demanded Aunt Polly, whirling round in her chair so as to face them.

"We hadn't got so far as that when you came in," replied Hetty. "I suppose we must do what other people do in the same circumstances."

"What's that?"

"Teach something, or sew, I suppose."

"Sewing's slow starvation, in my opinion, unless you've got a machine, which you haven't, and not much better then. What do you know that you can teach?"

"Not much," replied Hetty, humbly, while Delia added, hesitatingly: "We could teach children their letters, perhaps."

"I presume you could," responded Aunt Polly, dryly. "But though you mayn't know it, perhaps, there are about fifty women in this town can do the same, and who mean to do it. And most of 'em have got the start of you in one way or another, so what's your chance worth? No, girls, sewing and teaching are played out. They are good things in their way, but every woman who's got her living to earn thinks of them the very first thing, and of nothing else, and the market is always overstocked. My advice to you is, to think up something you can do better than other people—that's what gives folks a real chance. Now what is there?"

"There isn't anything I can do better than other people," cried the dismayed Delia. "Nor Hetty either—except make gingerbread," she added, with a faint little laugh. "Hetty beats everybody at that, grandmother always said."

"Very well; make gingerbread then. That's your thing to do," said Aunt Polly.

Hetty looked at her with incredulous eyes.

"You're not in earnest are you?" she said.

"I am. In dead earnest."

"But, Aunt Polly, gingerbread! Such a little thing as that! Who ever heard of a girl's doing such a thing?"

"All the better, if they never did. A new trade has a double chance. As for the 'little,' great things often come from small beginnings. Fortunes have been made out of gingerbread before now, I'll be bound, or if not that, out of something no bigger. No, Hetty, depend upon it, if your gingerbread is best, folks will want it. And if your teaching or sewing is only second best, they won't. It's the law of human nature, and a very good law, too, though it cuts the wrong way sometimes, like all laws."

"Aunt Polly, you're a genius," cried Hetty, warmed into sudden glow by this vigorous common sense. "I can make good gingerbread, and it's just as you say, neither of us know enough to teach well, and we are both poor hands at sewing, and we should have a much better chance if we tried to do what we can, and not what we can't. Why shouldn't I make gingerbread? Dely'd help me, and if folks liked our things and bought them, we could live and keep together. We could make a kind of shop of this room, couldn't we? What do you think?"

"Tisn't a bit a bad place for such a trade," said Aunt Polly, slowly measuring the room with her eyes. "Being on a corner is an advantage, you see; and there's that double window on the street gives a first-rate chance to show what you've got to sell. I never did see no use in that window before. My father, he had it cut for a kind of a whim like, and we all thought it was notional in him; but, as they say, keep a thing long enough, and a use'll turn up. It's a sort of a gain for you, too, having the house so old-fashioned. Folks has a hankering for such things, nowadays—the Lord knows why—I hear 'em going on about it when I'm out tailorin'—calling ugly things 'quaint,' and lovely, because they're old. Hetty," with sudden inspiration, "here's an idea for you, be 'quaint!' Don't try for a shop; keep the room a room, and make it as old-fashioned looking as you can, and I'll bet a cookie that your gingerbread'll be twice as popular with one set of folks, and if it's first-

rate gingerbread, the other set who don't care for old things will like it just as well."

What a bracing thing is a word in season! Aunt Polly's little seed of suggestion grew and spread like Jack's fabled bean-stalk.

"Your light biscuits always turn out well," said Delia.

"And my snaps. Grandmother always liked them so much. And you're a good hand at loaf bread, you know." Aunt Polly, I seem to smell a fortune in the air. We will begin at once, just as soon as I can get a half-barrel of flour and put an advertisement in the paper."

Hetty had a ready wit, and Aunt Polly's hint as to "quaintness" was not lost upon her. The advertisement, when it appeared the next day but one, ran thus: "After Monday next, the Old Time Bakery, corner of Farewell and Martin streets, will be prepared to furnish, to order, fresh bread, buns, biscuits and grandmother's gingerbread, all home made."

People smiled over the little notice, but the odd wording stuck in their memories as odd things will, and more than one person went out of his way during the next week to take a look into the wide, low window, within which, on a broad, napkin-covered shelf, stood rows of biscuits, light and white, buns, each glazed with shining, amber-brown, and loaves of gingerbread, whose complexion and smell were enough to vouch for their excellence. Acting on Aunt Polly's suggestion, Hetty had set forth her wares on plates of the oldest and oddest pattern which could be found in grandmother's closet. A queer, tall pitcher flanked them on either side, and round the window-frame she had twined the long, luxuriant shoots of a potted ivy. Altogether the effect was pretty, and no one need be told that the pitchers had for years been consecrated to the reception of yeast and corks, or that the plates had long since been relegated to kitchen use as too shabby for better occasions.

"Hain't ye no white chany," remarked their first customer, an old woman, as she counted out the pennies for half a dozen biscuit. "It would kind of set your cakes off."

"We used what we had," replied Hetty, diplomatically. "But I hope your biscuits'll taste just as good as if they came off a white plate."

This old woman, two others, and a little boy, were the only customers the first day.

"Tisn't a bit a good beginning," declared Delia, pouring the money received out of an old-fashioned China tea-caddy, which Hetty had unearthed in an up-stairs closet, and brought down to serve as a till. "Two dozen biscuits, that's 24 cents, a loaf of gingerbread and about half the buns. That's 53 cents in all. What did you say the material cost?"

"About 70 cents. But then we have our supper and breakfast out of them, and nearly half the stock to sell at a reduced rate to-morrow. We shan't lose anything, I reckon, but we shan't gain much either."

"Rome wasn't built all in a minute. You will do, yet," remarked Aunt Polly, who had dropped in to hear the result of the first day's sales.

But two days—three—a week went by, and still trade did not materially improve, and it took all Aunt Polly's wise saws and hopeful auguries to keep their spirits up. Each day showed the same record, no loss, but almost no gain. Toward the end of the second week matters mended. Mrs. Corlies, the wife of a wealthy manufacturer, having an errand in Farewell street, happened to pass the little window, and her bric-a-brac-loving eyes were caught at once by its unusual appearance. She stopped, studied the whole arrangement, from the ivy wreath to the old pitchers; a recollection of the droll little advertisement over which she had laughed a few days previously, came over her. "I declare, this is the very place," she said to herself, and, opening the door, she entered, precisely as Hetty came from the kitchen through the opposite door, a handkerchief tied over her shiny hair, a white apron with a little ruffled waist protecting her print gown, her cheeks flushed rosy pink with heat, and in her hands a tray full of crisp, delectably smelling ginger-snaps.

"A real study—like a Flemish picture," Mrs. Corlies said afterward. She fell in love at once with the quaint room, the pretty sisters, the old china, stayed 20 minutes nibbling ginger-snaps and looking about her, bought a dollar's worth of everything, "on trial," as she said, and swept out, leaving a wake of rose-colored hope in the air, and Delia and Hetty executing a wild waltz behind her back, for joy and congratulation.

"Luck has turned—I know, I feel it," declared Hetty.

Luck had turned. Mrs. Corlies raved to everybody she knew about the room, the twin sisters, and the excellence of the gingerbread. It became a fashion to go to Farewell street for buns and biscuits. Hetty and Delia had to work early and late to fill their orders; but what was that "to sewing their fingers off for a bare living?" Hetty said, and toil was sweetened now by a gradually increasing profit. At the end of the first six months, they had not only "lived and kept together," but had a little sum laid by, which, as Aunt Polly advised, was treated as "business capital," part of it being invested in the purchase of an awning for the window, and an extra stove to increase their baking capacity. Very rarely were there any stale things now to be sold next day at half price, the regular orders and chance custom consuming all.

"We shall have to hire a boy to carry things

round, I actually believe," declared Hetty. "Mrs. Malcomb and Mrs. Sayres both said that they would order our bread regularly, if we could send it home."

"I've been expecting that would be the next step," remarked Aunt Polly, "and I guess I've got just the boy you want in my eye. It's Widow McCullen's lad—Sandy, as they call him. He's a good little chap, and it'll be a real help to his mother to have him earning a trifle."

So Sandy McCullen was regularly engaged as "bread boy," and business grew brisker still.

"Aunt Polly, we've got to another notch," said Hetty, at the end of the first year. "You don't happen to know of a girl, do you, who could help us in the baking? Delia and I can't keep up with the orders. She gets so tired every now and then that she can't sleep, and that worries me so that I lie awake, too."

"That'll never answer; no, I don't know of any girl, but there's a nice kind of an oldish woman, if she'll do, that I'd like to recommend. Yes—I mean myself"—she went on, chuckling at Hetty's amazed look. "It's come to me more than once lately, that it'd be kind of good and restful to make a change, and not go on tailorin' forever, all the rest of my days. I used to be a master hand at bread and piccrust, too, when I was your age, and I've a little saved up which can go with the business, if it's needed; and, if you girls say so, we'll make a kind of family firm of the thing. How does it strike you?"

"Oh, Aunt Polly, the very thing, only it seems too good to be true. Do you really mean it? We did so hate the idea of a raw girl, to whom we should have to teach everything, and who would spoil half she made for the first month, and I've fought it off as long as I could; why, it will be like having grandmother come back, to have you living with us. There's the west room all ready. Dear me! How delightful things seem to turn out for us always!"

"That wasn't your view always, it seems to me," rejoined Aunt Polly. "A year ago you was pretty down in the month, if I don't mistake. Gingerbread is good for something, you see."

"The Old Time Bakery" still goes on in Farewell street, but it has grown far beyond its original proportions. If you were to visit it to-day you would find a room double the size of the former, and which has been made by taking down a partition wall between the sitting-room and a spare bedroom, and throwing them into one. There are two windows on the street now, one full of bread, biscuits and buns, the other stored with Hetty's now favorite gingerbread, and with delicious looking pumpkin pies and apple tarts, with old-fashioned flaky crust, which are Aunt Polly's specialty, and have added greatly to the reputation of the establishment.

Still it is not a shop. Hetty with wary, good taste, has scrupulously preserved the "quaint" look, which first gave character to the little enterprise, and by judicious rummaging in neighbors' garrets, has acquired sundry old-time chairs, bottles, jugs and platters, which help in the effect. Everything is scrupulously clean and bright, as all things must be where Aunt Polly supervises, but the brightest things in the room are the faces of the twin sisters. They have tested and proved their powers; they know now what they can do, and they taste the happiness of success.

I tell their little story, in which is nothing remarkable or out of the way, for the sake of other girls, who, perhaps, are sitting to-day, with folded hands, and puzzling and wondering, just as Hetty and Delia did, over what they are to do and how to set about it. I do not mean at all that these girls should all make gingerbread; that, indeed, would be "overstocking the market," as Aunt Polly would say, but only that they should hearken to her word of wisdom, "Find out what they can do best, and do that," whatever it is. Secure that good work, and hearty striving will win some measure of success soon or late, even if its beginnings are small and insignificant as a gingerbread loaf or a batch of biscuit.—Susan Coolidge.

RESTORING FADED FLOWERS.—Place the flower in a small empty teacup or scent bottle. Half fill a saucer with water, in the center of which place the cup or bottle containing the flower, over which invert a tumbler, the top of which rests in the water, covering the flower in the cup and excluding the air. The effect is surprising; in a short time the faded flower will revive, the color return into the petals, which quickly expand, and the scent return as powerfully as when the flower is first plucked. Care should be taken that the flower does not come in contact with the sides or bottom of the inverted tumbler. I have supplied a method, the surprising efficacy of which anyone can prove. A wiser head than mine can perhaps supply me with the cause of this effect.—Flora, in London Field.

A NEW INVENTION, better, prettier and more artistic than potichomnie or decalcomanie, and equally available for practice by any lady with a smattering of art talent, has been brought under notice. By it porcelain slabs or vases, etc., can be so prepared as to take the impression of an ordinary crayon, and after having been baked, to retain what may have been sketched on them forever. These paintings are unalterable for time or use, and are consequently well adapted to external and internal decoration, as well as to home decoration of articles for the table or for ornament.

Baby Tending in the Rocky Mountains.

There was nothing very peculiar about the appearance of this baby. Not over-burdened with garments, it was strapped in Indian fashion to a board about two feet long and one foot broad. The board and the baby were leaning against the log wall of a frontier shanty, on its shady side. There was nobody near; and, as I had heard a good deal about the cute dodges employed by Westerners when "pre-empting" new locations, the letter of the land laws obliging them to mark possession by some visible and unmistakable "squatter's sign," I imagined this possibly might be a new way of demonstrating ownership to would-be "claim-jumpers," always ready to pounce upon unprotected property. The baby seemed very happy; its little arms were free, and kept up constant movement—the only sign of life on the arid, dusty plains that surrounded the miserable sod-roofed shanty with oppressive vastness. Urging my horse a little closer, I remarked that some strings were dangling about the baby's neck, and that one was tied to the big toe of one of the rosy little feet of the infant.

I was puzzled. Dismounting from my tired "saw-buck," I proceeded to examine the arrangement in tape. The child was complacently sucking at a bit of raw pork, about the size of a large walnut, tied to one end of the string, while the other was fastened, as I have said, to a little foot; a second piece of twine, knotted to the board over its head, prevented the piece of meat falling to the ground, should the child loosen its clutch. Nine men out of ten, would, I fancy, have immediately detected the connecting link between the toe and the pork. I was, however, the tenth, for at that time you could not have seen anywhere a more brilliant specimen of the genus "tenderfoot" than I was. So what wonder that even that baby began to wax wrath at the density of my perceptions, and with the typical western love of displaying the greatness of the "biggest country in the world, sir," it forthwith proceeded to give me that first genuine impression of which I have spoken. Its face suddenly got very red, then bluish, its eyes filled with tears, and its little feet beat the air with frantic energy. It gradually dawned upon me that the baby might be choking; at least, had a grown-up person evinced such symptoms, I certainly would have commenced thumping him on the back. My native cautiousness stood a sore trial, for I had heard that to tamper with a man's land-claim was an offense visited by "shooting on sight." But nevertheless, that baby acted its part in such a life-like manner, that, had not at that moment the mother made her appearance, I think I should have risked rendering assistance.

"That baby is choking, ma'am," I cried. "No he ain't, and he can't," replied she tersely, and for her, truly, for at this instant the infantile legs also began to work; one kick, two kicks, and there on the bib lay the obstruction—the piece of pork—jerked from the baby throat by the judiciously applied string to the judiciously kicking little leg. I was vastly relieved, but also vastly impressed.

"Ain't you ever seen this afore, mister," queried the woman—a true specimen of the lady of the Rocky mountains—a survival, not of the most beautiful, but certainly of the fittest, as ever I have had the pleasure of meeting.

To my quavering "No-o-o," she answered: "Then kind o' remembrance it; mayhaps yer wife won't go back on it;" and noticing a smile on my face, she added: "But I reckon you ain't married, anyhow; wa'al, it'll keep, you bet." And keep I hope it will, for others as well as for me. If there is anything that could possibly tempt the most misogynistic old bachelor to enter a more blissful condition, it would, I should say, be the hope of by-and-by rigging up such an arrangement in strings, and seeing it work in his own nursery.

Several years have passed since that day. I have seen, to speak metaphorically, that baby in a hundred different guises, all displaying the keenness of Western intellect, and from sheer habit it has become with me a sort of standard wherewith to gauge novel and striking instances of the three great qualities of Western men—self-help, self-confidence and adaptability.—*From Camps in the Rockies, by W. A. Baillie Grohman.*

Sunbeams.

The greatest of physical paradoxes is the sunbeam. It is the most potent and versatile force we have, and yet it behaves itself like the gentlest and most accommodating. Nothing can fall more softly and more silently upon the earth than the rays of our great luminary—not even the feathery flakes of snow, which thread their way through the atmosphere as if they were too filmy to yield to the demands of gravity like grosser things. The most delicate slip of gold leaf, exposed as a target to the sun's shafts, is not stirred to the extent of a hair, though an infant's faintest breath would set it into tremulous motion. The tenderest of human organs, the apple of the eye, though pierced and buffeted each day by thousands of sunbeams, suffers no pain during the process, but rejoices in their sweetness, and blesses the useful light. Yet a few of those rays, insinuating themselves into a mass of iron, like the Britannia tubular bridge, will compel the closely-knit particles to separate, and will move the whole enormous fabric with as much ease as a giant would stir a straw.

YOUNG FOLKS' COLUMN.

Mother Goose Expounded.

Georgie Porgie, pudding and pie,
Kissed the girls and made them cry.
When the girls came out to play,
Georgie Porgie ran away.

His last name wasn't Porgie at all, and I, for one, can't see why they called him that, because his papa's name was Mr. Bacon, and so Georgie's must have been the same. But Bacon doesn't rhyme half so well with Georgie as Porgie does, and so, I suppose, Mother Goose put it in that way on purpose.

Georgie went to the primary school, and so did Bessie and Kitty Clover. One morning the little girls' mother said:

"What will you take for lunch to-day?"

"Pudding," said Bessie.

"Pie," said Kitty.

"Now, that's lucky," said Mrs. Clover.

"There's some nice pudding left over from yesterday, and a whole huckleberry pie baked in a saucer."

So she got the luncheon-pails down from their nails in the entry, and Bessie had some pudding in her's, while Kitty took the pie. Of course, there was some bread and butter, too. And then they started off to school. On the way they met Georgie. He had a lunch-pail, too.

"Hulloa, girls!" he cried, before they came up to him; "what have you got for lunch to-day? Anything good?"

"Pudding," said Bessie.

"Pie," said Kitty.

"Let me see," said Georgie.

So the little girls took off the covers of the pails, and Georgie looked in.

"I like pudding and pie, awfully," he said, "and mother was out of everything 'cept doughnuts. Do you want to swap?"

But, as they had doughnuts the day before, they didn't want to.

So they walked along to school, and the little girls went in, leaving their pails in the entry where they hung their sacks.

The teacher rang the bell, and school began.

"Where's Georgie?" asked the teacher. "Has anybody seen him?"

"O, yes; I saw him," said Bessie and Kitty, both at once. "He walked to school with us."

"Then I wish you would go and try to find him, and say if he doesn't come right straight in there will be a good deal of trouble."

So Bessie and Kitty went out, and what do you think they saw? You never would guess, because you have always supposed Georgie was a good boy; but, if you don't change your mind now, I'm very much mistaken, for there he was eating Kitty's pie as fast as he could, having already finished Bessie's pudding! Then he kissed both the little girls, and told them he was sorry! And they began to cry as hard as they could. So the teacher came out, and when she discovered what the matter was, she took Georgie right by the ear and marched him into the school-room and made him eat the rest of the pie standing on the platform, while she told the other boys and girls all about it.

"Now, what shall I do to a little boy who steals—really steals!" said the teacher.

"Stand him in the corner," said one of the scholars.

"Pin his apron over his head," said another.

"Soap his ears with a whalebone," said a third.

"No," said Bessie, "let's forgive him this time."

"Yes, that's so," said Kitty.

And this made Georgie so sorry for what he had done that he began to cry. But he had to stand up there before the whole school till recess time, until all the children went out to play, and when the teacher thought he had been punished enough, she said he could go out too; but he was so ashamed of himself that he ran away home, while all the children sang:

Georgie Porgie, pudding and pie,
Kissed the girls and made them cry.
When the girls came out to play,
Georgie Porgie ran away.

But, I'm very glad to say, he was really and truly sorry for what he had done, and the next day he went out into his garden and picked some of his biggest flowers to give to Bessie and Kitty; and he told his teacher that if he lived to be ever so old, he would never, never, never do such a thing again. And, upon my word, he never did.—*Tribune.*

JUMBO AND THE BABY TAKE A BATH.

The *Republican*, Springfield, Mass., says that the baby elephant, "Bridgeport," took her first bath, and Jumbo his first one in this country, last week, at Brattleboro, Vt. A deep and shady pool in Whetstone brook, conveniently near the circus tents, was chosen. The baby came down to the water with a dainty, mincing motion, dipped her toes into the drink, shivered and partly withdrew, and then, urged on by the keeper's prod, plunged boldly in. Once in, she seemed to enjoy the wetting, and swam about, equipping jets of water with her tiny trunk and giving shrill grunts of satisfaction. "Jumbo" appeared later, and entered the bath hardly less suspiciously. When the first chill was over, however, he dived in head foremost, raising the general level of the pool several inches and sending the waves rolling up against the bank. He cavorted around, threw a stream of water into the air with his trunk, and then settled down into his bath till only the top of his head and the ridge of his back were seen.

GOOD HEALTH.

Ladies and Vinegar.

Taken in moderation, there is no doubt that vinegar is beneficial; but in excess it impairs the digestive organs. Experiments on artificial digestion show that if the quantity of acid be diminished, digestion is retarded; if increased beyond a certain point, digestion is arrested. There is reason, therefore, in the vulgar notion, unhappily too often relied on, that vinegar helps to keep down any alarming adiposity, and that ladies who dread the disappearance of their graceful outlines in curves of plumpness expanding into fat may arrest so dreadful a result by liberal potations of vinegar, but they can only so arrest it at the far more dreadful expense of their health. The amount of acid which will keep them thin will destroy their digestive powers.

Portal gives a case which should be a warning. "A few years since, a young lady in easy circumstances enjoyed good health; she was very plump, had a good appetite, and a complexion blooming with roses and lilies. She began to look upon her plumpness with suspicion, for her mother was very fat, and she was afraid of becoming like her. Accordingly she consulted a woman, who advised her to drink a glass of vinegar daily. The young lady followed her advice, and her plumpness diminished. She was delighted with the success of the experiment, and continued it for more than a month. She began to have a cough, but it was dry at its commencement, and was considered as a slight cold, which would go off. Meantime, from dry it became moist; a slow fever came on, and a difficulty of breathing; her body became lean and wasted away; night sweats, swelling of the feet and legs succeeded, and a diarrhoea terminated her life." Therefore, young ladies, be boldly fat! Never pine for graceful slenderness and romantic pallor; but if nature intends you to be ruddy and rotund, accept it with a laughing grace, which will captivate more hearts than all the paleness of a circulating library.

UNFERMENTED WINE AS A MEDICINE.—The Paris correspondent of the New York *Times* writes: "During the past few years the Parisians have taken to the habit of visiting Suresnes during the vintage, not only to witness the curious spectacle of the *vendangeurs* at their work, but for the prosaic object of taking a purge. When the juice of the grape is first pressed out, before fermentation has fairly begun, the effect of the wine is like that produced by sweet cider when taken in considerable quantities as it comes from the press. Three or four glasses of new wine have the medicinal effect required, and its action is not accompanied by the colic or cramps produced by most of the purgative waters of Europe. Indeed, the effect produced is similar to that of a good dose of castor oil, and at the same time the medicine is very agreeable to the palate. Thousands of persons here have great faith in the sweet wine cure, and not for the world would they miss their annual visit to the wine-presses of Suresnes as soon as the vintage has been officially opened.

GRANULAR INFLAMMATION OF THE EYES.—A prominent oculist says that the contagious Egyptian granular inflammation of the eyes is spreading rapidly throughout the country, and that he has been able in many, and indeed in a majority of cases, to trace the disease to what are commonly called rolling towels. Towels of this kind are generally found in country hotels and in the dwellings of the working classes, and, being thus used by nearly everyone, are made the carriers of the most dangerous, and, as regards its symptoms, most troublesome disease of the eye. This being the case, it is urgently recommended that the use of these rolling towels be discarded, and thus one of the special vehicles for the spread of a most dangerous disorder of the eyes—one by which thousands of workmen are annually deprived of their means of support—will no longer exist.

RECIPE FOR CURING A TASTE FOR LIQUORS.—At the festival of one of our reformatory institutions a gentleman is reported to have said: "I overcame the appetite by a recipe given to me by old Dr. Hatfield, one of those good old physicians who do not have a percentage from a neighboring druggist. The prescription is simply an orange every morning half an hour before breakfast. 'Take that,' said the doctor, 'and you will want neither liquor nor medicine.' I have done so regularly, and find that liquor has become repulsive. The taste of the orange is in the saliva of my tongue, and it would be as well to mix water and oil as rum with my taste." The recipe is simple, and has the recommendation that it can do no harm, even if it does no good.—*St. Louis Medical and Surgical Journal.*

FRIZZLED HAIR.—Putting up the hair of children in curling papers breaks and checks its growth; often pulls it out by the roots. Curling irons are fatal to the hair of both children and grown persons. The heat saps up the juice out of the fibers as effectually as fire or frost saps the vitality of a green branch, leaving but a dry, withered skeleton. The practice which hair dressers have of frizzing out the hair with a comb to make the most of it is one of the most cruel injuries that can be inflicted on the living hair. The comb cuts it in the act of frizzing it. You can test the truth of this by combing out the hair after it has been so dressed.

DOMESTIC ECONOMY.

How All Can Have Good Vinegar.

The vinegar plant, as is well known, belongs to the genus of fungi (*Penicillium glaucum*), and is readily propagated by the following annexed recipe: Take half a pound of brown sugar and half a pint of molasses, simmer them in three quarts of water till well dissolved; then place the mixture in a wooden or stone pot, cover it over, and place behind the stove in a warm situation. In about six or seven weeks you will find floating on the top a tough, fleshy substance—this is the vinegar plant. The mixture will have turned to vinegar, but of a poorer quality than will be manufactured with its aid. Now prepare a mixture as before, and when coolish lay over it the vinegar plant. A bit of lath or shingle should be laid upon the mixture before placing the plant over it, as the vinegar is of a purer quality if the plant does not lie wholly upon it. Set it behind the stove or beside the range, covering it closely, and in two weeks or more taste it; if sharp vinegar, bottle it and continue your manufacture. The vinegar is of a dark color, but of a far better quality than is bought generally for cider vinegar, but which has never seen apples. It is probable that what is termed the "mother" is loosely allied to this plant, and might be employed by those who desire to produce a "vinegar plant" without delay. The cost of vinegar made in this manner is extremely small, and as it is a condiment so universally employed in culinary matters, we recommend it to our readers. We do not think there is anything deleterious in its properties, and it would certainly give a great number of families a large supply of vinegar who would be unable to procure it in any other manner. A small, wooden butter firkin would be an excellent utensil for the preparation of the mixture, as it could be covered tightly.

NEW PAINT FOR FLOORS.—A new kind of paint, especially good for floors, is made out of water-glass. It unites not only the qualities of beauty and durability, but is also advantageous as a means of protection against the action of fire. In order to lay on a covering of this paint, first of all the floor is neatly cleaned, then any cracks or crevices between the boards that may exist are luted with a thick dough, made of water-glass and pulverized chalk or gypsum. By means of a stiff brush, a coating of water-glass of the consistency, say, of syrup is then spread over the floor. Again, in the same manner, a second coating is laid on, consisting of water-glass mixed with the desired color. It must, however, be a mineral color, from the fact that the alkalies of the water-glass commonly decompose vegetable colors. This coating having become dry, other layers of water-glass may be thereafter given, until the floor has taken on the required lustrous appearance. In order to give the surface a brightness indicative of polish, it is ground off a little, oiled, and thoroughly dried. In this way a coating for the floor is obtained which is very durable, since the water-glass is not worn away either by means of heat, or yet, on account of its hardness, by means of continued use. As regards beauty and utility, floors coated in this manner are found to be fully equal to the best lacquered or varnished ones.

PASTE FOR TARTS.—A delicate paste for tarts is made of the white of one egg and yolks of three, one ounce of sugar, one ounce of butter, a little salt, and enough flour to make a paste so stiff that it can be rolled out smoothly. Roll as thin as you do common pie-crust—say a quarter of an inch thick. Bake in patty pans, or in gem pans, if they are good shape and not too deep. To keep the paste from puffing up, prick it lightly, not piercing clear through to the tin, and then, as a still greater safeguard, fill the tarts with uncooked rice; then bake. When cool fill with fresh fruit or preserves, or any kind of jelly. The whites of the two eggs which you reserved, at first beat to a stiff froth with a tablespoonful of sugar, and put on the top of the tarts.

BEAN SOUP.—Boil a small soup bone in three quarts of water until the meat can be separated from the bone and the juice of the meat is all extracted; then strain. Add a cup or more of white beans—soaked over night, or for two hours—with more water, if necessary, and a slice of salt pork; parboil until the beans are soft and ready to put in the oven. Take out the pork and part of the beans, leaving enough for a bean soup; place the pot on the back of the stove and keep hot. Three-quarters of an hour before dinner, heat soup, sprinkle in a few bread crumbs, or bits of fried bread, season with salt or pepper, if needed, and serve with raw onions, sliced very fine for those who like them.

TOMATO SALAD.—Take the skin, juice and seeds from nice, fresh tomatoes, chop what remains with celery, and add a dressing made of two hard-boiled eggs, rubbed fine and smooth, one saltspoon of English mustard, the yolk of one raw egg beaten into the other. Add very best salad oil, poured in by very small quantities, and beaten as long as the mixture continues to thicken; then add vinegar till as thin as desired. If not hot enough with mustard, add a little cayenne pepper.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	25	80	22.50	\$ 5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

O. H. STRONG

SAN FRANCISCO:

Saturday, September 9, 1882.

TABLE OF CONTENTS.

EDITORIALS—California; Our Farmers, 165. The Week; The Fair Season; Beet Sugar in California; The "Pacific Rural Press," 172. Chance for Pacific Coast Lumber in Asia; Old Oleomargarine Has Come; Fairy Gift; Forests and Weather, 173. Convention of Grape Growers; A Splendid Implement and Hardware Establishment; Silos and Ensilage Again; Abortion among Dairy Cows, 175. Local Fairs, 176. The Mazurka Tribe of Short Horns, 181. The State Fairs of California, 182 and 185.

ILLUSTRATIONS—In the Forest—Bruin at Bay, 165. Trotting Stallion, "Fairy Gift," owned by A. G. Danforth, Washington, 11, 173; New Store of Baker & Hamilton, 175. Short Horn Cow, Mazurka 11th, 181.

CORRESPONDENCE—Evergreen Millet; Evidences; Apples and Nut-Bearing Trees, 166.

HORTICULTURE—Questions for Berry Growers, 166.

FORESTRY—Forest Trees of California—No. 11, 167.

PISCICULTURE—Carp Culture—No. 1, 167.

PATRONS OF HUSBANDRY—Orange Leaflets, No. 8; Orange Duties and Privileges; Debris Problem, 168.

AGRICULTURAL NOTES, from the various counties of California and Nevada, 168-69.

HOME CIRCLE—The Lesson of the Leaves (Poetry); A small Beginning; Restoring Faded Flowers, 170. Baby Tending in the Rocky Mountains; Sunbeams, 171.

YOUNG FOLKS' COLUMN—Mother Goose Expounded; Jumbo and Baby Take a Bath, 171.

GOOD HEALTH—Ladies and Vinegar; Unfermented Wine as a Medicine; Granular Inflammation of the Eyes; Recipe for Curing a Taste for Liquors; Frizzled Hair, 171.

DOMESTIC ECONOMY—How All Can Have Good Vinegar; New Paint for Floors; Paste for Tarts, Eau Soufflé; Tomato Salad, 171.

QUERIES AND REPLIES—Saving Pits for Planting; Date Palm Suckers; Grape Prices, 172.

ENTOMOLOGICAL—The Box Disinfection Problem, 176.

THE FIELD—Russian River Hop Notes; Hemp Culture in Yucatan, 176.

THE APIARY—The Bee Pastures of California, 179 and 181. Cling-Comb Bees and Moths, 181.

MISCELLANEOUS—Miscellaneous articles on 165.

POULTRY YARD—Hints on Setting Hens, 185. Poultry Notes, 185.

THE DAIRY—Milk and Butter Yields of Short Horns, 187. Cheese Making at Home; Eastern Factory Cheese, 188.

Business Announcements.

Brush Electric Light, California Electric Light Co., S. F.
Victor Mower, Judson Manufacturing Co., S. F.
Wagon, A. W. Sanborn, S. F.
Barbed Wire Fencing, Jones & Given, Sacramento.
Agricultural Implements, Hawley Bros., S. F.
Italian Sheep Wash, Chas. Dunsenberry & Co., S. F.
Agricultural Machinery, Benzie Agricultural Works.
Althouse Vanless Winery, Benzie & Chamberlain, S. F.
Pacific Business College, Robinson & Chamberlain, S. F.
Household Sewing Machines, Mark Sheldon, S. F.
La Dow Pulverizing Harrow, Geo. A. Davis, S. F.
Averil Mixed Paint, O. S. Orrick, S. F.
Self-binding Harvester, D. M. Osborne, S. F.
Baking Powder, A. Schilling & Co., S. F.
Grain Separator, John Klees, Sacramento.
Hardwood Lumber, John Wigmore, S. F.
Baling Wire, Baker & Hamilton, Sacramento.
Oub-foot Shoe, Wm. Antenwerth, Cincinnati, O.
Harness, Saddles, etc., Wm. Davis, S. F.
Monarch Stomach Bitters, Williams & Co., Cincinnati, O.
Terra Cotta Pipe, Gladding, McBean, S. F.
Harrow, Jackson & Truman, S. F.
Cancer, Dr. J. McLeish, Cincinnati, O.
Pears Wanted, Leonard Coates, Napa, Cal.
Agents Wanted, Twombly Knitting Machine Co.
Wagons, Baker & Hamilton, S. F.
Hear Ye Deaf, John Garmore, Cincinnati, O.
Pacific Coast Land Bureau
Business College, E. J. Atkinson, Sacramento
Abel Stearns Ranches, A. Robinson, S. F.

The Week.

The fairs are fairly in progress. The exhibition at Petaluma, last week, was a notable success, both in attendance and exhibits. Much public interest was awakened, and the new grounds bid fair to grow in appreciation, as they

certainly will grow in beauty with the forest which its bounds enclose. As we write, the throngs are visiting the Golden Gate fair at Shell Mound park, in Oakland township. There is a fine display of livestock, and the afternoons bring to the grounds a multitude of speed devotees of both sexes. The Chico fair is also in full swing, and though the town lost its chief hotel by fire, the stranger is said to be well housed and fed. Thus the scene changes, Next week the grand display will open at Sacramento, and throngs from all parts will rally at the State fair. Joy go with all, and profit and entertainment.

The Fair Season.

The hard work of the harvest year is accomplished. In the dairy regions, also, there is a period of small flow of milk, and the milker's task is light. The fruit is progressing finely in its course from the tree to the market and the drier. It is true that the vintage presses on, but the greater part of our farming population count the days now at hand as giving them most abundant leisure.

It is now the season of visiting, and from near and far the social element will brave the dust. Tried and trusty old friends will seek each other's ranches and discuss the season's work and its results. In the houses the kind ladies will praise each other's culinary skill, and solicit recipes; bright eyes and flowing habits will enliven the ways of those who pull the rein; boats and guns will give assurance that the boys know the game season has commenced; excursion parties will seek the abodes of beauty and romance. Many are the ways in which the days will pass until the rains speed the plow. In all of them we have an interest, and for all of them we have a longing. Once a year at least the hard laboring farmer should devote the days to rest and recreation, and give his family such a change of scene and surrounding as lie within his means to secure. The result will be stronger men, more contented women and happier children. The home will shine with new comfort and charm as the inmates return to it after wandering. Appropriate to the season of rest comes the season of fairs. From Siskiyou to Los Angeles the State is banded into strips of country, each tributary to some central point, at which will be held a fair during the next four weeks. In the center will be the State fair at Sacramento. We believe that if the farmers of the State will use these fairs for all there is in them, as a means of gaining a better acquaintance with each other, with the productions of farm industry and with the general progress of agriculture, they will find them of incalculable benefit. To do this several things are necessary.

The agricultural fair should be considered by the farmer himself as an institution of his own. It should not be permitted to borrow the name of his industry with none of its spirit—with no real sympathy for his work or his advancement. The highest development of the agricultural fair deserves approval, because it is a thing of good, and an institution of usefulness. Interest should be won by the display by the fact that it contains real excellence—excellence which will tell for the improvement of our productive arts. With a condition of agriculture of such wide and varied capacity as ours, who can doubt the efficacy of a general competitive display of what our air and soil can do under the different conditions which prevail. If the showing and comparison of farm products have been so valuable in the Eastern States, where conditions are hard and fixed, and where the questions of production have been studied by generations, who can doubt the value here, where everything is so new and so untied, and where each man's progress depends so completely upon the practical experience of others with which he can supplement his own?

An agricultural fair, true to the name, affords one of the best-known opportunities for the dissemination of valuable practical experience. We do not propose in this place to discuss questions of management. We believe whatever there is objectionable in the institutions as now conducted could be overcome in great measure if practical and progressive farmers would interest themselves more thoroughly in their management and promote those features which are most desirable and valuable. To this end we commend our agricultural fairs to the consideration of our farmers now that they have the leisure to bestow attention upon them. We would suggest that every one who has something which seems to him good should prepare to exhibit it. Making an exhibit not only contributes something to the success of the fair, but it sharpens the exhibitor's own interest in it.

There is a wealth of interest, profit and amusement in a fair where the people can meet in gala costume, and spend the day in social intercourse. We think it devolves upon our farmers to rescue the agricultural exhibitions from the abuses into which they have fallen. It can be done by fostering the industrial display and turning the shoulder upon the gamblers, small and large, which infest the grounds, until the legitimate features of the show assert their own prominence and push the evil from the field.

CIRCULATE IT.—Parties receiving extra copies of this paper will please circulate them among persons most likely to be interested and to subscribe for the same.

Beet Sugar in California.

California may claim the distinction of having a beet sugarie which has been run for three years in succession. Three consecutive years is a long life for a beet sugar enterprise in the United States, if we may judge of the history of this industry. The California establishment, too, has a promise of a much greater lease of life, for the report of the superintendent shows that there is profit in its operation. The *Sugar Beet*, a Philadelphia publication, has secured from Mr. Dyer, the superintendent, a review of the third year of the Standard Sugar Company's establishment at Alvarado, from which we shall quote certain points. The year ended May 10, 1882:

EXPENSE OF THIRD CAMPAIGN.	
Manufacturing expenses:	
Filter cloth.....	\$ 1,222.33
Beet account (11,229.91 tons at \$4.23).....	47,562.75
Barrels and pk'g mat.....	4,167.95
Bone coal.....	2,210.30
Pay roll.....	18,932.56
Molasses (expense at factory).....	92.29
Acid.....	1,658.48
Lime.....	1,145.88
Incidentals.....	802.38
Accident (explosion of boiler).....	3,248.43
Running repairs.....	897.61
Coke.....	191.28
Light.....	916.45
Coal (4,161 tons at \$5.607).....	23,357.08
Oil, tallow and waste.....	\$11.19
Insurance on buildings.....	1,192.00
Supplies.....	1,454.57
	\$109,357.58
Sales expense:	
Commission, adv., etc.....	\$ 1,063.93
Freight on sugar from Alvarado.....	746.08
Storage and insurance on sugar.....	730.14
Drayage in S. F.....	741.92
Interest.....	750.11
Molasses (freight, etc.).....	292.69
	4,324.07
Profit of third campaign.....	\$44,935.85
Total expenses.....	\$113,681.65

PRODUCT OF THIRD CAMPAIGN.	
Sugar:	
1,391,688 lbs. at .1084c.....	\$150,858.54
Crude sugar on hand, excess over balance of last campaign, 24,107 lbs. at 6c.....	1,450.00
	\$152,308.54
Molasses:	
Total product, 81,775 gallons; sold, 61,775 gallons at .813c.....	\$4,208.96
On hand, 80,000 gallons, at 7c (estimated).....	2,100.00
	\$6,308.96
Total product.....	\$158,617.50
Less expenses.....	113,681.65
Net profit.....	\$44,935.85

The editor of the *Sugar Beet* comments upon the above statement in an interesting way. He says Mr. Dyer has written him time and again that it is impossible, under existing circumstances, to work as economically as if the entire establishment had been built strictly in accordance with scientific principles. In other words, with the most improved machinery placed in a building adequate to the requirements, the profits would have been, under the same management, even greater than for the third campaign, as above shown. The cost of working per ton would then have been less, etc., and it is evident that, when steam is to be used, the distance it must be carried from the boiler should be at a minimum to prevent condensation, which conditions are seldom, if ever, realized where the plans of piping are not determined upon in advance. Some of our Eastern farmers have written us that they cannot raise beets with a profit at five dollars per ton. In consequence, we call attention to what has been done in California. The 11,229 tons used by the Alvarado factory cost \$47,553, or \$4.23 a ton. As the average yield to the acre was nearly 15 tons, the returns from the same were \$63.45 per acre, which evidently leaves a handsome profit to the tiller.

The sugar manufactured from the beet at the Alvarado factory sold at nearly 11 cents per pound, which figure gives evidence of its superior quality. The fact of 1,391,688 lbs. of sugar having been obtained from 22,460,000 lbs. of beets, shows that the average yield in high grade sugar was over six per cent.; and if to this be added the crude sugar, we would have a yield of over seven per cent.—a most excellent result, which in itself far exceeds what was obtained in the greater number of European beet sugar factories some years since. We sincerely regret that the molasses cannot be utilized; the Alvarado company are selling it at eight and one-third cents a gallon, which practically means they are giving it away. If the various improved methods of osmotic, elution, etc., had been resorted to, they might have been made profitable, and the crude sugar then obtained would have amounted to over eight per cent. of the beets worked. It should not be forgotten that one pound of ordinary beet molasses contains a half pound of sugar, which will not crystallize for reasons before explained. The sugar can, by fermentation, be transformed into alcohol. If, for example, the 81,000 gallons of molasses had been fermented, distilled and rectified with improved apparatus, they would have yielded over 20,000 gallons of the very best alcohol; and if we admit a net profit of one dollar per gallon, which is very low when the superior quality of the product is considered, that is, alcohol marking 96° B., there would have resulted a profit of \$20,000. The surplus capital required for molasses distillation sufficiently large to use the resulting molasses for a 200-ton factory, would be about \$40,000. The profit consequently would be nearly 50% the first year, and besides alcohol there would be potassa, etc., as residuary products.

The "Pacific Rural Press."

Through the distribution of a large extra edition of our journal to visitors at the State fair and elsewhere, many will read the *PACIFIC RURAL PRESS* for the first time. To these new friends we would say that our paper is conceded by all to be the leading authority on agricultural matters on the Pacific coast. We are enabled, by the aid of a large corps of contributors, who are themselves practical workers as well as writers, to present each week the newest facts concerning agricultural practices and materials. In every department of farm life the *RURAL PRESS* is a trustworthy guide, because it promulgates the results of experience, and not the imaginings of mere theorists.

The *PACIFIC RURAL PRESS* contains the fullest, latest and most accurate information concerning the progress of the dairy and livestock interests on this coast. Its contributors are those who have for years bred animals and fowls, and have learned by experience the best way to handle them. Methods of care and treatment which give best success on this coast are quite unlike Eastern practices. Stock growers need a medium for comparing notes and aiding each other by practical suggestions. They have chosen the *PACIFIC RURAL PRESS* as their avenue of communication, and as such it is commended to all who are engaged in the animal industry. Our market reports of livestock products are prepared with great care, and give general satisfaction.

The *PACIFIC RURAL PRESS* is also the chief medium for the dissemination of information concerning fruit growing in California. It has the fullest and most accurate reports of horticultural meetings, and is the best record of the experience of growers of all kinds of fruits in all parts of the State. Its market reports in these departments are prepared with care and the greatest reliability possible for the benefit of the producer.

In all matters relating to home life on the farm the *RURAL PRESS* is a friend of the farmer's family. Its "Home Circle" pages are pure in tone, entertaining and encouraging, bringing good cheer and helpful hints to the housewife in her important and arduous labors. The young folks are not neglected, but are furnished each week with charming stories, puzzles and other things interesting to the little people.

We shall be glad to make many new friends in this year of prosperity to our agricultural interests. We ask but that you give the *RURAL PRESS* a trial. Our strongest friends are those who best know our work.

QUERIES AND REPLIES.

Saving Pits for Planting.

EDITORS PRESS:—In answer to your correspondent's inquiry about pits, I will give my plan, which has always been successful. Keep them out of the sun until the rains commence in the fall, then put them into a box about a foot deep, and scatter sand or fine earth through them, putting about two inches on top, and place them under the eaves of a building on the south side, where they will get well soaked every time it rains. If there should be a long dry spell during the winter, water them a little. The warm and cold of day and night, and wet and dry of rain and shine, is what causes the pits to open, although the sprouting favors it. About March they will open and sprout. Then take a plow and open a deep furrow in loose, mellow ground, and, with a hoe, pull about two-thirds of the dirt back into the furrow, breaking the clods, and making it fine, the same as you would if you expected to plant onion seed there. Drop the sprouted pits in a straight line, and cover two inches. On account of the extra work in preparing the ground, the trees will be large enough to bud in July, which is a great advantage in a dry year like this.—D. J. P., Vacaville, Cal.

Date Palm Suckers.

EDITORS PRESS:—Can you inform me whether the sucker of a date palm is always of the same sex as the parent tree? Also, at what season the suckers should be transplanted? I cannot find the information in any treatise on horticulture that I can get access to.—A. J., Orange, Los Angeles county.

The sucker of the date palm, like all offspring from a plant, not being the product of sexual reproduction, will, of course, be of the same sex as the tree it is taken from. The time for planting out the suckers may vary according to climate. In your section, probably February would be the best time.

Complimentary.

As we print a large complimentary edition, subscribers can, if they desire, receive from one to six extra copies of this issue of the *RURAL* free, by sending their address (plainly written) and stamps (at the rate of one cent for each copy) to this office.

If you prefer to send the addresses of your friends, we will mail them direct from our office.

OYSTERS are said to be the cheapest food in the New York market, and the number consumed averages a half dozen daily to each inhabitant. The quality this season is reported to be finer than usual, and the supply is immense.

Chance for Pacific Coast Lumber in Asia.

A fair export trade in lumber is already done in Pacific coast lumber, but much more might be accomplished in this direction. In a report to the State Department Consul-General O. N. Denny, of Shanghai, furnishes a very interesting sketch of the lumber resources and requirements of China and Japan, from which our lumbermen may, perhaps, gain profitable suggestions. He shows that timber, and particularly soft timber, is getting scarcer every year. For centuries the forests of China have been drawn upon regardless of preservation; and, with the exception of the provinces in the remote west, some thousand miles inland, and some of the southern provinces, the timber districts of this country may be said to be entirely exhausted. Some good timber is also still to be found in northern Manchuria and in the confines of Corea, but the means of communication are so defective that before it reaches a point of shipping and the central markets, the cost becomes almost prohibitory.

In late years, Japan has been furnishing large quantities of inferior soft wood, which have always been eagerly taken up at prices which must be remunerative to the sellers. But Japan has, for the last 15 years, also been carrying on the cutting down of timber in a most reckless manner, without replanting. It is only quite lately that the authorities have justly taken alarm. Then, again, the timber is short, furnishing but a small amount of lumber to the tree, and frequently full of knots at that; we may, therefore, reasonably expect a check in the export of Japan, and correspondingly higher prices.

Next to the Russian sea provinces and Amoor country, whence the export of timber is prohibited by the government, Oregon and Washington Territory, on the Pacific coast, will be China's nearest and best source of supply for soft lumber.

This branch of trade only requires being studied a little to make it a very large and paying one; it has an almost inexhaustible field in the supply of furniture, which might be sent out in pieces in a rough state, left to be put together by the Chinese on this side.

The ordinary use of the lumber hitherto shipped from this section of the United States is for planking ships and junks, for roofs and floors of foreign houses, etc.; long lengths are always preferred, as the Chinese would much rather have one long plank than two short ones, even if it has to be cut the next minute after it is purchased. The average price of lumber at this port is about \$36 (Mexican), and the import duty about \$1 per 1,000 superficial ft.

Mr. Denny is informed by an American citizen, who is in the trade, that three or four small cargoes of Oregon wood each year are always sure to find a ready market. The same can be said of the pumpkin pine brought to San Francisco by the Flume Company, and from there to this market, where it always found a ready sale. Ships loading for this port should use shingles and laths for small stowage, also fire-wood, which is the stowage generally taken by the captains in the trade, because it finds a ready market here.

Cargoes of from 500,000 to 600,000 ft. are greatly preferred to very large cargoes, and they fetch generally fuller prices. The reason of this is that a small cargo is more easily financed for by the purchaser, and that detention and the expense of lightering at the Woosung bar are avoided.

The most unfavorable time for cargoes to arrive is during the months of January and February, the time of the Chinese new year, when the native merchants are invariably wholly absorbed in the settlement of the old year's accounts; money is then generally very tight, and new transactions are not gone into until about the middle of March.

All superior lumber coming to this market should be fairly clean and sawn full thickness,

thin lumber being little required except for flooring, as all the coverings, consisting of one inch and one and one-half inch board, are imported from Japan.

Cargoes should be about equally divided, half plank and the other half timber.

Old Oleomargarine Has Come.

The Mege Pacific Commercial Company filed articles of incorporation with the County Clerk this morning. The document states that the business of the company will be "the treatment of animal fats under the Mege patent and process; the production of oleomargarine oil and stearine; the conversion of oleomargarine oil into butter or butterine; the use of oleomargarine in the making of cheese, the canning of meats, fowls and fish; the conversion of tallow and stearine into glycerine, candles and soaps; the use of animal fats in the production of useful and valuable products, and the manufacture and sale of such productions."

The manufactory will be located in this city. The following are the five directors appointed to serve the first year, with the capital stock subscribed by each: Edward Michelson, San Francisco, \$200,000; James Wilson, New York, \$200,000; George H. Eggers, San Francisco, \$100,000; E. B. Mastick, Alameda, \$100,000; N. Easterbrook, Jr., New Haven, Conn., \$400,000. Total capital stock, \$1,000,000.—*Evening Bulletin, Sept. 2d*

Here are all the abominations in a paragraph: False butter, bogus cheese, and all the rest of the category which has excited the righteous indignation of the Eastern dairymen for the last few years. We have been watching for the incoming of false butter by rail for a long time, and have secured the avowals of dairy dealers that they had had and would have nothing to do with the stuff. Now comes the factory itself, and we shall have the manufacture right under our noses probably. Is it not time for the dairymen to get together on this question and prepare a campaign for the next Legisla-

Fairy Gift.

We give on this page an engraving of the remarkably handsome and very fast young trotting stallion Fairy Gift, owned by Mr. A. G. Danforth, Washington, Illinois. Mr. Danforth, a banker, for the sake of recreation, decided to buy a stock farm, near Washington, Ill.; and wishing the results of his stock-breeding enterprise to be both creditable to himself and profitable as well, he has been very careful in the selection of brood mares, aiming to have only the best. He has chosen Fairy Gift to place at the head of his stud, on account of his beauty, great speed, and rich inheritance of fast-trotting strains of blood, and is very much pleased with the high quality of the few colts he has sired.

Fairy Gift was sired by Hero of Thorndale, a horse considered by many as handsome as Dr. Herr's celebrated Mambrino King, and the sire of Alice Taylor, record 2:30, his sire being Thorndale, who has a record of 2:22½, and is the sire of Edwin Thorne, 2:17½, and Daisydale, 2:19½. Fairy Gift's dam was Fairy Bell, by Belmont, sire of Nutwood, 2:18½, Wedgewood, 2:19, and several others with records better than 2:30. His second dam, Waterwitch, by Pilot, Jr., was the dam of the famous stallion Mambrino Gift, 2:20, and Scotland, 2:22½; third dam by Kinkead's St. Lawrence. This young stallion does not depend on his rare breeding alone for a recommendation, for, as a three-year-old, he showed great speed, trotting

Forests and Weather.

The interesting problem involving the influence of forests upon climate is still engaging the attention of observers. No nation has made such extended inquiry on this subject as the German, and in no country is the forest subject to such strict guardianship. The U. S. Consular reports contain reviews of the German investigations, the conclusions of which are of general interest:

If one examines the statistics furnished by the Prussian meteorological stations, relative to the temperature of the surface of the earth and the neighboring atmosphere in their districts, it will be found that the rise and fall of the same are quite gradual, and that the extremes of temperature are reached somewhat later in the forests than in the open fields. This gradual rise and fall of temperature is one of the chief requisites for the proper growth of forest trees, as well as for plants generally. Young trees are often injured by sudden changes of temperature, and some species cannot thrive unless some protection from such changes is furnished them. The leaves of the trees retain a great deal of water, which is evaporated and thus given back to the air, the humidity of which is thereby increased, and the supply of moisture to the soil is rendered more equal and regular. That the soil receives is absorbed and evaporated very slowly. Much of the rain that falls upon open fields is wasted, the supply be-

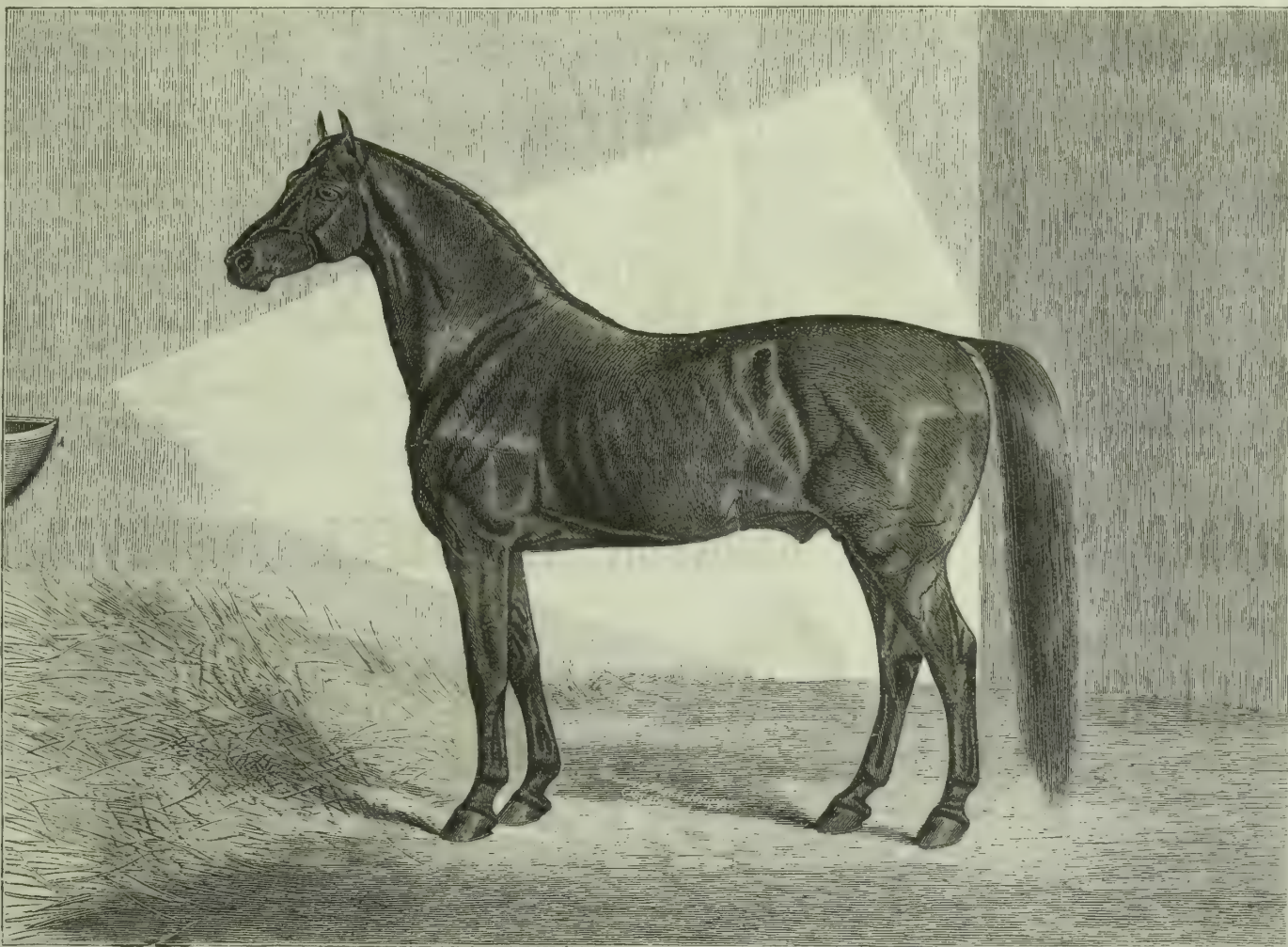
ing often greater than the requirement for the time being. Forests, moreover, directly induce rain. The air within the forest becoming warm by the absorption of heat, both from the ground and the air next above it, leaves over the forest a current considerably colder than the neighboring air, and rain-clouds passing over are, in most cases, condensed by coming in contact with this colder atmosphere. To exercise such an influence, however, on atmospheric temperature the forest must be of very considerable extent. Authorities on the subject of forest culture in Prussia are unanimous in the opinion that rainfall is more abundant and regular in districts well wooded than in bare lands. In this connection it is worthy of remark that the forests are generally rich in springs and brooks. This alone goes a great way towards showing the intimate relations between woods and water.

And further, while the forest tends to moderate climate, while it

regulates the supply of moisture, the forest land is continually receiving a supply of the richest soil through the yearly fall of leaves. This soil increases the capacity of the ground for warmth, its moisture-retaining properties, and furnishes all the requirements needed for the growth of plants. The important influence of forests on climate and the fertility of the soil having long been recognized, it has, therefore, often been attempted to forest lands sterile because of unfavorable conditions of climate. These attempts have often been crowned with success. The foresting of the Luneburg heath, a sandy plain near Hanover, was successful, though accomplished at great expense and in the face of various difficulties. In like manner the foresting of sandy stretches of land in Brandenburg and other Prussian provinces has resulted very favorably; the aim in all these cases being, of course, to counteract the influence that these sterile tracts exercised over the neighboring fertile soil, and to convert them into useful and productive possessions.

CALF PARASITES.—The Half Moon Bay correspondent of the Redwood City Gazette says: The stock and dairymen are losing young calves by small hair-line worms from one to two inches long, that gather in bunches in the windpipe and choke the animals to death. Mr. Montgomery Digges found one of his calves dead, and he, to satisfy himself, cut the throat and windpipe, and found it as above stated.

The winter wheat crop of Illinois for 1882 reached over 50,000,000 bushels—the largest ever harvested except that of 1880.



TROTTER STALLION "FAIRY GIFT," OWNED BY A. G. DANFORTH, WASHINGTON, ILL.

ture, demanding a law that shall drive this product out from the cover of genuine butter, and make it stand on its own merits or demerits, as the purchaser chooses to consider them? If a movement should be started it would not lack support. Consumers are quite as much interested that their butter should come from the churn and not from the rendering caldrons. There was once such a popular feeling on the subject that the oleomargarine business of Paraf evaporated like an ether before the heat of popular indignation. This time the enterprise comes with a mass of capital behind it, and probably will not down at popular bidding. But the people should have the safety of knowing the artificial product when it appears on the market, and that can be obtained from the Legislature this winter if there is systematic effort to do it.

ABOUT SULTANAS.—R. B. Blowers writes to the *Riverside Press* about the Sultanias, and says: First, the Sultanias, to make a good raisin, should remain on the vine at least as long as the Muscatel before picking; second, in this latitude they do not hybridize in the least if planted in among any other kinds. It is a very valuable variety, producing sometimes 12 tons per acre at four or five years old.

PROLIFIC PRUNES.—The Los Angeles *Mirror* says: S. P. Jewett, of Pasadena, has two small prune trees seven years old, from which he picked 401 lbs. of fruit on Wednesday, and sold it to the Pasadena cannery for \$16.04. He says he thinks that fully 100 lbs. of fruit still remains on the trees.

a miletrial, at Ottawa, on a half-mile track, in 2:29½, the last half in 1:13. Since then he has been used in the stud, and has not been trained. Gift is as symmetrical as an animal can well be. He is powerful in all his points, his propelling powers being very remarkable; his limbs are very strong, and yet hard and clean as a thoroughbred. His feet are good—well shaped and strong.

PEACH AND NECTARINE.—The horticultural expert of the *Visalia Delta* is responsible for the following: From the orchard of Peter Sczaghini, near Grangeville, we received, as specimens, two remarkably fine nectarines. They were unusually large, richly colored, and of excellent flavor. He assures us that the tree which bore them is a seedling from a common peach seed. This seems odd, but Mr. Sczaghini is known to be a close observer, and is so careful with his seed and trees that he is not likely to be mistaken. Such freaks are on record in our best works on fruit culture. In fact, the peach and nectarine are so closely related that there are well authenticated instances where trees raised from peach seed have not only borne peaches and nectarines on different branches of the same tree, but occasionally the fruit has grown with thorough furze of the peach on one side and the smooth coat of the nectarine on the other half. It should also be remembered that just as there are freestone peaches and clingstone peaches, so there are both freestone and clingstone nectarines.

IMPROVED THRESHING MACHINERY

FOR SALE BY

BAKER & HAMILTON,

San Francisco and Sacramento, Cal.

This is the Most Economical, Safe
and Effective

THRESHING ENGINE

On The Coast.

It is mounted upon trucks having 6-inch tires on the wheels, a substantial brake and a seat for the driver. Run boards upon each side of the boiler. The boiler has a jacket made of 2-inch staves held in place by brass bands.

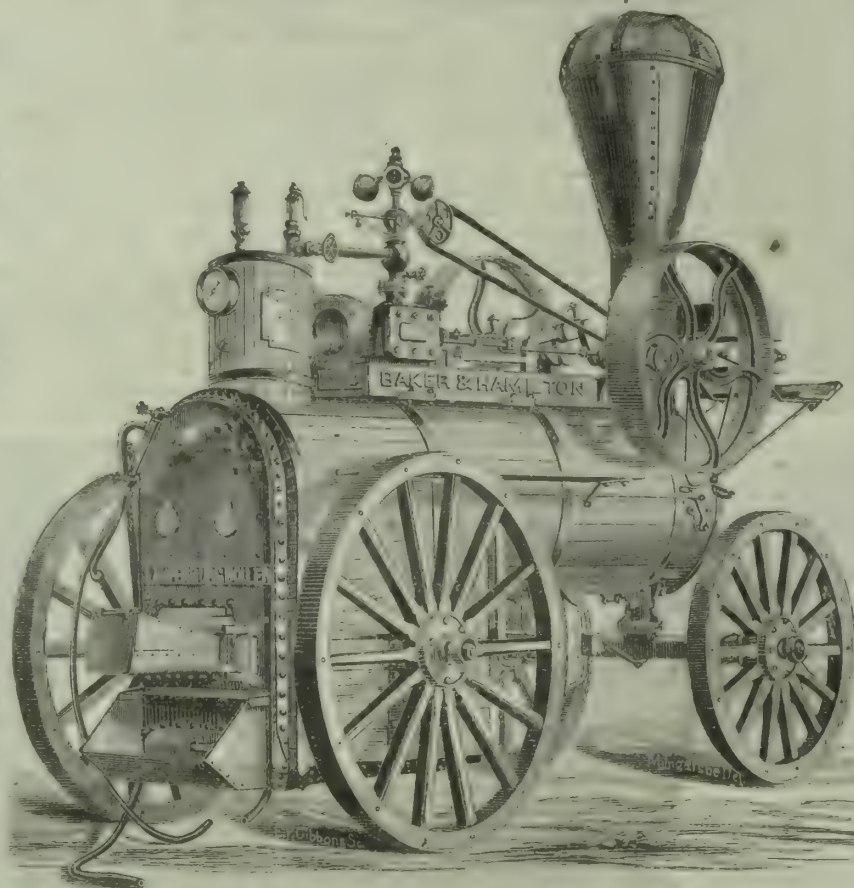
The Smoke Stack

Is of the safest and most approved pattern. In fact, it is the only Engine that is ready for work as it leaves our store.

It embodies all the essential points and improved principles which a long experience in the field could suggest, and is particularly adapted to the requirements of threshermen and farmers. Its design is perfection—complete, compact and effective, and manufactured of the very best material obtainable. All parts are duplicated, and in case of breakage (which does not often happen), can be expressed to any part of the Pacific Coast on short notice. No machine shop necessary to keep the

AMES ENGINE

In repair, or loss of time and expense sustained in shipping to and from the repair shop.



LAUFENBURG'S PATENT FURNACE BOILER—For Burning Wood, Coal or Straw.

THE LAUFENBURG

Patent Furnace Boiler

WITH

AMES ENGINE,

Subsequent to the advent of burning straw for fuel, and ever since, has maintained its superiority, and with recent applications of confirmed improvement to its already perfect design, is without a rival—the foremost self-contained

Threshing Engine in the World.

We have carefully guarded against introducing any emotional discovery, or even plausible ideas, which have invariably exploded; nor could we hazard the reputation of this engine to any venturesome experiments to test any primitive notions, or jeopardize life and property while such were being made.

We are confident that any intelligent man, who will carefully examine the style, arrangement, dimensions for rated horse-power, workmanship, material of construction, completeness and working economy of our engines, would select them for his own use in preference to any and all others.

We ask and court the closest and most intelligent scrutiny of all the detail and general "make up" of our engines, being satisfied in that event the "verdict" must be unhesitatingly given in our favor.

TO FARMERS

And others who may contemplate purchasing for use during the season of 1883, we can now offer special inducements and low prices.

THE BUFFALO PITTS AND BRONSON THRESHERS, IMPROVED FOR 1882.

The "Farmers' Friend"

STILL AHEAD!!

Another Year's Success—The
Greatest of Them All!

The united efforts of the proprietors of the Pitts Agricultural Works, of Buffalo, N. Y., and ourselves to keep the Buffalo Pitts and Bronson Threshers far in advance of all competitors for California work, have met with their customary reward in the results of another season's threshing on this coast. From every quarter comes the acknowledgment that these machines maintain their standard.

THE CHIEFS OF THRESHERS.

The manufacturers have thus been cheered on to redoubled efforts to further improve and to keep up the advance so that others, instead of becoming the leaders, are compelled year after year to fall still further behind, and to be left at last to the right of entirely new machines remembered only as things of the past.

Unapproached

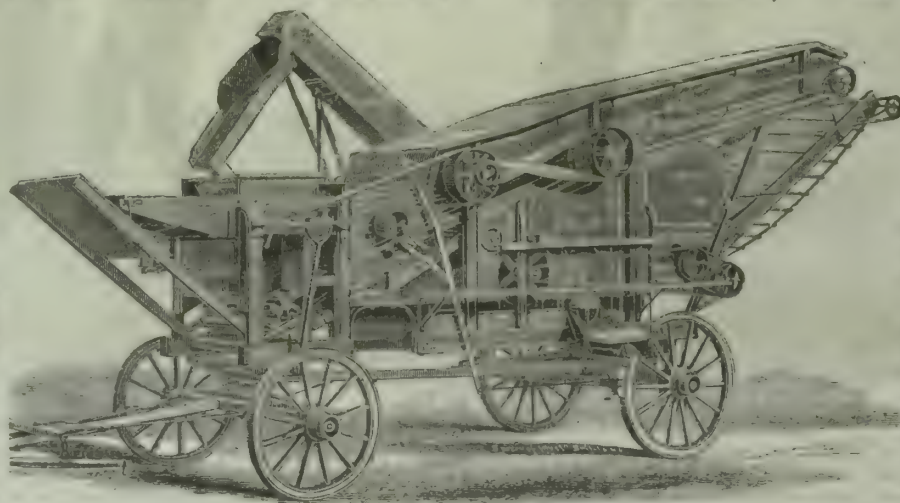
—AND

UNAPPROACHABLE.

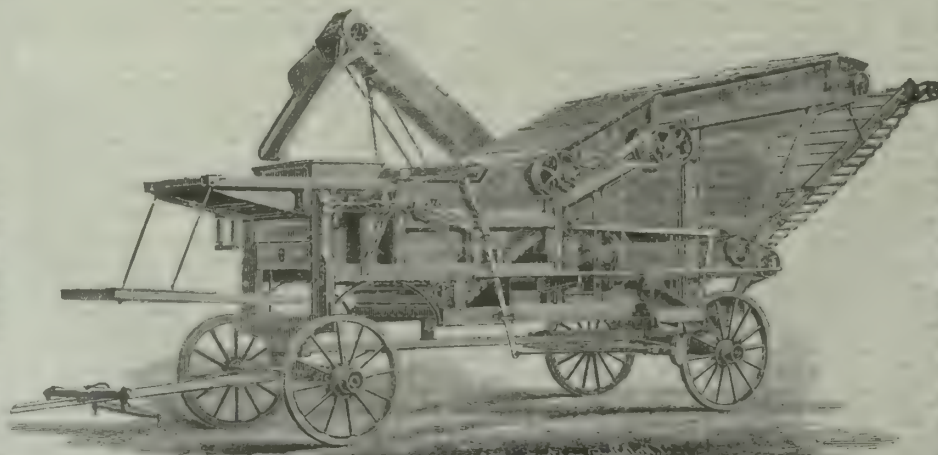
The gradual changes and improvements made especially for California work during the past years have kept these "Kings of Threshers" constantly in the lead for good work and durability, as well as progressive improvement, and yet it will have to be admitted that perfection itself was not attained until the 1882 models were built.

It is a source of great satisfaction to us to state that the history of the Buffalo Threshers and their record, especially on this coast in the last two or three years. We, as well as all who have used them, are satisfied that in superiority they are unapproached and unapproachable. The manufacturers ever spend a vast amount of money in expending money and bettering the machines and in so doing they give a way that at the head of the column of threshers, they have been so gradually improving for the last three years that they may almost be said to surpass themselves.

The classic reputation for building an honest machine is maintained by the proprietors of the Pitts Agricultural Works for over a quarter of a century, and their well known responsibility, guarantees to the purchaser the great value for the price. This is also assured by the manufacturers' absolute discretion in selection of the best materials, and the use of none other in the machine, the employment of the best mechanics, the last machinery and the perfecting of the attainment of uniformity in workmanship, correct proportions and correct arrangement of all the parts.



GENUINE BUFFALO PITTS SEPARATOR.



GENUINE PITTS BRONSON SEPARATOR.

This is the Secret of the Great Success of the Buffalo Pitts and Bronson Separators on the Pacific Coast:

They have been built from the bottom up for California work, upon California ideas, obtained by actual experience in California by the manufacturers and California men, and not on theory and scientific principles alone.

Farmers and threshermen often ask why California threshers agents cannot find other threshers to equal them. The question is easily answered. Other threshers are made for other markets, and the fact that they suit other markets is sufficient evidence that they will not suit California, because of the great difference in climate and grain. If other machines ever reach the point now attained by our machines for California work, they must be new, then if they are practical, painstaking and industrious, and have the necessary perseverance and courage, they may attain the same degree of perfection in twenty or twenty-five years from now, but it is probable that the few remaining competitors will lack courage to try this, and will gradually drop out, as scores of others have done before, to be forgotten and unremembered, the Buffalo Pitts and Bronson Machines remaining as heretofore the

KINGS OF THE FIELD.

CHEAP.

There is no word apparently so popular as the word Cheap. This is a practical age, and no man proposes to pay too much for anything he buys if he knows it. The danger of this state of things is that men may, in their desire to secure cheapness, sacrifice excellence. It is plain to every observer that within the past few years there has been, to some extent, in almost every department of industry, reduction in prices of both labor and material. In view of this fact the question may be fairly asked, why is it that there has not been a reduction in the price of these separators? Our answer is easy and reasonably given, and shows that it is not our customers, and not we, but the market, that are benefited. During these years of shrinkage in the cost of material and labor, it has been our constant effort and fixed determination to give our customers the whole benefit by adding to the machine in the way of valuable improvements and betterment, even more than the difference between the cost of the labor and material now and years past.

Every one acquainted with these machines knows perfectly well that each year it comes out greatly improved, and that these improvements are not without increased expense, and that the expense is considerable and well applied in improvements and betterments that threshermen appreciate and would not be willing to do without. Take the machine as it is built today and compare it carefully with that built even three years ago, and you will notice, in almost every feature, a very marked difference. Suppose we were to offer you a Buffalo Pitts machine to-day, built as it was built even three years ago, for \$50 or even \$100 less than the price of those now built, would you buy it? It is a \$50 or \$100 cheaper. Certainly you would not. You would wisely conclude that you must have the best, and that the best is the cheapest.

SEND FOR SPECIAL CIRCULAR.

Convention of Grape Growers.

The first annual Viticultural Convention, under the auspices of the State Viticultural Commission of California, will be held in San Francisco on the 18th, 19th and 20th of September, 1882. The place of meeting will probably be in the hall of the Academy of Sciences, corner of California and Dupont streets. If any change be made as to place of meetings, due notice will be given through the daily newspapers.

The following rules will govern the Convention: The presiding officer will be either the President or Vice-President of the State Commission, in the absence of whom the Convention will elect a chairman. The Secretary of the Commission will act as secretary to record the proceedings of the Convention. To avoid confusion in determining questions submitted to a vote of the Convention, and relating to any matter of policy affecting the viticultural interests of the State and the enforcement of quarantine rules, and to insure harmony of action equally favorable to all sections of the State, the main and active body of the Convention will be composed as follows:

1. The members of the State Viticultural Commission;
2. The local resident Viticultural Inspectors holding certificates of appointment from the Chief Executive Viticultural Officer;
3. Two practical viticulturists selected from each county within each viticultural district, by the commissioner for the district, and five selected at large by each of the Commissioners at Large;
4. One practical viticulturist, to be selected by each local resident inspector from among those residing within the county represented by said inspector;
5. Five practical viticulturists, to be appointed by each regularly organized and active viticultural society within the State. The members of the Convention thus organized will be distinguished by badges to be worn after being duly accredited and admitted. All persons interested in viticulture will be invited to attend the sessions of the Convention; but no one, not a member, will be expected to address the meeting, except he be introduced by one of the members and specially invited by the presiding officer.

There will be two daily sessions, viz., from 10 A. M. to M. From 2 P. M. to 5 P. M. The following subjects will be the topics for consideration:

Monday, Sept. 18th. Morning session—The grape products of other countries, and the variety of vines, climatic conditions and soils necessary to produce them. Afternoon session—Same subject, with consideration of similar adaptations for California.

Tuesday, Sept. 19th. Morning session—Varieties of vines grown in California; their adaptations to soils, climates and certain products, illustrated by samples of raisins, wines, brandies, fruit, canes and leaves. Afternoon session—Grafting and pruning, illustrated.

Wednesday, Sept. 20th. Morning session—The phylloxera and its remedies; other diseases. Afternoon session—Reports of committees; consideration of quarantine rules and proposed changes in the same, and conclusions of the Convention.

Without further notice, the members of the State Board of Viticultural Commissioners and the local resident inspectors are invited to attend this Convention and to select persons to attend, as provided for in respect to membership, and all local viticultural societies are requested to send delegations, as already stated.

Vine growers are requested to send in for study and comparison samples of grapes, each bunch, when practicable, to be attached to its cane, with foliage preserved and labeled as known. Samples of wine and brandy, new or old, from known varieties of grapes, unblended, and raisins are also desired for study and comparison, each of which will be reported upon by a special Committee.

CHAS. A. WETMORE,
Chief Executive Viticultural Officer.
San Francisco, Aug. 30, 1882.

MENDOCINO HOP CROP.—The Ukiah Press says: Mendocino's 575 acres of hops, upon careful estimates, will yield 528,950 lbs. of hops, or an average of 915 lbs. per acre, for old and new fields. At 37½ cents per pound this will bring \$198,256.25 into the county, and, after paying expenses, will leave \$132,237.50 in the growers' hands as profit.

A LEXINGTON (Ky.) youth who went to work in the country, wrote his girl, a June graduate, that he was raising a calf. Imagine his feelings when the girl replied: "I am glad you have begun to support yourself."

A Splendid Implement and Hardware Establishment.

The progress of our agriculture is shown in many ways. The rise and progress of our business houses devoted to the manufacture and sale of agricultural implements is one indication. When a house comes to occupy a building like that shown in the engraving on this page, it shows not only that the business has been conducted on principles which insure success, but also that the production to which it ministers has gone forward to a great success. The establishment of Baker & Hamilton is one in which the city of San Francisco may well take pride. The building is located at the intersection of Market, Davis and Pine streets, right in the wholesale business center of the town. It is one of the most carefully and well-built business blocks in the city—spacious, elegant and convenient for the uses demanded. It is well worth a visit. Baker & Hamilton are so well known to our readers that it is hardly necessary to give them new introduction. It may be remarked, however, that they are a pioneer firm, and have grown up with the State, whose interests they have served while they have built up their own prosperity. In the manufacture of implements and machines they are as prominent as in the trade in them. Taking their establishments in connection, the Benicia Agri-

Silos and Ensilage Again.

Last week we alluded to a proposed silo near Petaluma, in Sonoma county. We now learn from the *Argus* that Isaac R. Jewell, an educated and successful dairyman, is building a silo on his farm, about six miles west of Petaluma, which is nearly completed. It is built of stone laid in cement and lime mortar, in proportion of one barrel of cement to two of lime, and the floor and walls lined with Portland cement. The dimensions of the silo are 20 ft. in width, 30 ft. in length and 20 ft. in height, with walls 16 inches thick. Its capacity is estimated at 200 tons of ensilage. Mr. Jewell will ensilage the corn from a 12-acre field, which he had sown broadcast for that purpose. He has ordered his machinery—the "Cycle ensilage cutter"—from the East, and intends to propel it by steam power. This is the first silo built in Sonoma county, and one of the first, and probably the largest, on the coast.

In this connection we may remark that J. P. Roberts, Professor of Agriculture at Cornell University, has made a practical test of the silo system of storing fodder, and from his condensed article in the *American Agriculturist* for September, we here give some of his conclusions: He believes the greatest utility of silos will be found to consist in the means they furnish of preserving forage plants in a green and palatable state, which may be easily grown in abundance

Abortion Among Dairy Cows.

This great and baffling trouble of the dairy regions does not occur in California as it does in the East and in England, and yet there are occasionally instances of its presence among our dairy herds. The causes of abortion among cows are as yet an unsolved problem, but it will no doubt be satisfactory to any of our readers who may have the evil in their herds to know the present state of knowledge on the subject. Dr. E. L. Sturtevant, Director of the New York State Agricultural Experiment station, in a letter to the *New York Tribune*, reviews the history of efforts to elucidate the matter, and the results reached, as follows:

In 1867 the New York State Agricultural Society "set on foot an investigation for the purpose of discovering the cause, and, if possible, the remedy for this troublesome epidemic of abortion among cows, now extending over certain portions of the country," under the guidance of I. C. Dalton, M. D., Commissioner. In 1868 and 1869 reports, the name of William H. Carmalt, Commissioner, appears. In these three investigations in different years we have much material of interest and value collected, but no satisfactory accounting for the cause, or discovery of a remedy. Of great value they undoubtedly are in narrowing the bounds of future inquiry and in the negative evidence they afford. These reports are, or seem to be, expressions of facts rather than of opinions, and are the only data we possess, so far as my information extends, in arriving at the causes of the disease. From this data, and from collateral information, we may derive the following statements for premises:

1. It seems that abortion as a disease is unknown among the semi-wild herds of the New and Old World.
2. It seems as if epizootic abortion is unknown in the mountainous districts of Wales and Scotland where cattle are less subjected to the artificial conditions than in a dairy region.
3. In America abortion seems the most frequent in those localities where milk has a value for market, and where it is for the interest of the dairy farmer to force a supply.
4. A herd once subject to abortion seems peculiarly liable to a recurrence, and when this form of abortion occurs in a cow, it seems apt to follow in others of the herd.
5. Cows affected with epizootic abortion, or the abortive habit, seem to occupy particular tracts of country, so that we may almost speak of this form of disease as having a habit at.
6. There seems to be an irregularity of distribution among farms even in affected districts.
7. There seems no regularity of period of pregnancy during which abortions may take place, but a general increase in number as the cows advance toward the period of normal parturition.
8. The prevalence of abortion, as has been before suggested, seems to be among those herds where generous feeding is the habit.
9. The influence of the bulls seems to be but slight.

The correct reasoning from these premises—premises which must not, however, be considered as absolutely complete—seems to suggest the following conclusions: Epizootic abortion is caused by agencies which are brought about by, and which accompany, the artificial condition of treatment. It is brought about, probably, through some general agency, otherwise it would not be likely to appear among herds rather than to be sporadic in its appearance. This general agency must possess a certain individuality of its own; that is, to be dependent on strictly local conditions, for otherwise we would not find farms exempt in affected localities. The direct cause must be structural in its character, for otherwise we would not see the abortive habit present in certain cows. A strong predisposing cause must be in the matter of nutrition, for otherwise we would not find it more general among those cattle which are well kept or forced for milk. The cause would seem to require to be looked for in the practices of the dairyman rather than in those of other kinds of farmers. Such are the conclusions that seem to me to point out the direction and nature of an investigation. We must avoid those paths which have been travelled over and found to lead to no definite result, and must seek out the roads which seem to lead somewhere, and then traverse them. The whole subject is a puzzle that should no longer remain unsolved, and in the course of time I earnestly hope that this station will earn the credit of a successful attempt.

ABOUT THE DODO.—"Student" wants to know "What kind of a bird was the dodo?" From the fact that the species is entirely extinct, we suppose it was the fabled spring chicken, of which we still hear so often and see so never.



NEW STORE OF BAKER & HAMILTON, JUNCTION OF MARKET, DAVIS & PINE STS., S. F.

cultural Works and the new city stores shown on this page, and they are unsurpassed on the Pacific coast.

NECTARINE ON ALMOND.—In San Bernardino county, as elsewhere, they have been grafting over almond trees to more certain fruits. The *Riverside Press* says that Hon. D. A. Shaw, of Lugonia, brought 500 lbs. of nectarines to the Riverside cannery, for which he received three cents per pound. They were of the Hardwick variety, and were taken from a tree that was grafted on almond in February, 1881. The tree this year bore about 200 lbs. The fruit was very fine and large, many of the samples running four to the pound, and some of them three, while he says he had some samples that weighed half a pound each, and measured eight and one-fourth inches in circumference. Mr. Shaw has a very fine place that produces some very fine fruit; the soil is warm and the trees bear very young and very prolifically.

FOOTHILL PEACHES.—We receive from Ira T. White some specimens of peaches grown on his "Sunnyside fruit farm," in the foothills at Penryn, Placer county. They were sent as an average of about 100 boxes which Mr. White has delivered to his customers lately. The beauty of the fruit lay in its uniform size, perfect development and handsome appearance. Mr. White's trees have been well laden, and the peaches he sends surely demonstrate his success as a peach grower.

MINING projects are out of favor. People are sick of the hole business.

in May and June; but if not then secured, they would become dried up and nearly worthless, or, if dried and housed, the animals appear to have but little relish for them. The reasons for building silos with small compartments are manifold. A small compartment may be filled and sealed up in a single day, thereby not seriously interfering with the regular work. Each forage plant may be taken when in its best condition. One compartment may be filled early with rye and clover, which is showing a tendency to spoil by lodging, or is full of weeds that it is desirable to eradicate; a second with oats and a second cutting of the former clover field, or a weedy, belated piece of timothy. A piece of fodder corn and aftermath would fill a third compartment later in the season.

ABOUT POURING TEA.—The *House-keeper* says: There is more to be learned about pouring out tea and coffee than most ladies are willing to believe. If these decoctions are made at the table—which is by far the best way—they require experience, judgment and exactness; if they are brought on the table ready made, it still requires judgment so to apportion them that they shall prove sufficient in quantity for the family party, and that the elder members shall have the stronger cups. Often persons pour out tea who, not being at all aware that the first cup is the weakest, and that the tea grows stronger as you proceed, bestow the poorest cup upon the greatest stranger, and give the strongest to a very young member of the family, who would have been better without any. Where several cups of equal strength are wanted, you should pour a little into each, and then the strength will be apportioned properly.

ENTOMOLOGICAL.

The Box-Disinfection Problem.

A representative of the *Record-Union* called upon Mr. Cooke, Chief Horticultural Officer, on Monday, and received the following information in regard to litigation connected with the horticultural interests:

Reporter. Mr. Cooke, have you any objection to informing the public as to the status of the litigation in the case of the People vs. A. Lusk & Co., of San Francisco?

Answer. Not in the least.

Rep. On what charges were A. Lusk & Co. arrested?

A. For violation of the quarantine rules and regulations for the protection of horticulture of the Board of State Viticultural Commissioners.

Rep. Wherein did A. Lusk & Co. violate the law?

A. By returning a lot of boxes to J. Bassford, Sr., of Vacaville, without being disinfected as required by quarantine rules.

Rep. In what court was this case brought?

A. The Police Court of San Francisco, presided over by Judge Rix.

Rep. What action was taken there?

A. Previous to the case being brought into court, Messrs. Lusk & Co.'s counsel agreed with Judge Dwinelle, counsel for the people, that this case should be made a test case of the constitutionality of the law by carrying it to the Supreme Court. However, the evening previous to the case coming before the court, the counsel for Lusk & Co. withdrew from such agreement.

Rep. Did the case come before the court?

A. Yes, sir. The counsel of Lusk & Co. filed a demurrer, which was argued before the court.

Rep. On what grounds did he argue the demurrer?

A. He quoted several authorities, but the principal argument was that the Legislature had exceeded its authority in granting an individual, the Chief Horticultural Officer, extraordinary powers.

Rep. What were the arguments in opposition to the demurrer?

A. The people were represented by Judge Dwinelle and W. J. Tuska, who argued that the Legislature had not granted extraordinary powers to the Chief Horticultural Officer; that the power was granted to the State Board of Viticultural Commissioners, which was appointed by the Governor of the State.

Rep. What was the decision given?

A. The case was taken under advisement for one week, and, as near as I can recollect, the decision was: "I never heard of such a law, and therefore I will sustain the demurrer," or words to that effect.

Rep. Has there been any further action taken in the case?

A. Yes, sir. The case has been appealed to the Superior Court.

Rep. At what time do you expect a decision?

A. I cannot say.

Rep. Did you expect such a decision from the Police Court?

A. I cannot say that I was unprepared for such a decision, as I was informed that Mr. Lusk stated on the Monday previous to the decision being given, that he would gain the day. However, I must say that the opinion of eminent members of the bar had led me to believe the decision would have been in support of the law.

Rep. What effect had the decision on the work for the protection of horticulture?

A. San Francisco being the place where the work could be done to the best advantage, and the Police Court having jurisdiction of such cases, the work had to be suspended until a decision of a higher court was determined on the merits of a case tried.

Rep. What amount of injury do you consider such interference has been to the fruit interests?

A. It has virtually delayed the work of successfully destroying insect pests of the orchard one year in many localities.

Rep. What object was wished to be obtained in opposing the working of the law?

A. I cannot answer this question more appropriately than by repeating a statement made by Judge Dwinelle in the San Francisco Police Court: The only object he could see in opposing this law was that there was more profit selling and buying wormy, scaly, etc., fruit than by having to trade in clean fruit.

Rep. Is there any market or especial line of business where fruit infested by worms or scale insects can be sold?

A. In answering this question without explanation, I might do an injustice to parties having a large amount of capital invested in business connected with horticulture. However, I wish to say that I have seen returns from San Francisco in 1881, allowing 10 cents per box for Bartlett pears, while choice pears of that variety were selling from \$1.50 to \$2 per box. So that, at least, I know of one firm in San Francisco that have disposed of such fruit.

Rep. Speaking of Bartlett pears, what advantage do you consider is gained by producing clean fruit?

A. A fruit grower having an early crop of Bartlett pears for sale that are free from the attack of codlin moths, has the advantage of a variety of markets—first, the Eastern shippers;

second, private consumption, and third, the packers.

Rep. Then you claim that the fruit grower gains an advantage in the disposal of the fruit from having it clean?

A. I claim that the fruit grower has a choice of markets, and has something to say about the price. For instance, if the fruit is wormy, the shipper does not want it, neither is it sought for for family use; therefore there is at least one place to sell infested fruit, where it is taken at a price generally much below that of clean fruit.

Rep. Have A. Lusk & Co., at any time previous to their arrest for violating the law, conversed with you on the subject?

A. I have conversed with Mr. Lusk only.

Rep. What grounds did he take in opposing the law?

A. That the law was unconstitutional, according to the decision of the Supreme Court on the cubic air ordinance.

Rep. Did Mr. Lusk, in showing opposition to the law, do it openly?

A. He may have done some of it in an open, straightforward manner, but I regret to say that, like many other men who are only endowed with a limited reasoning power, he used some personalities, so far as I was individually concerned. For instance, Mr. Lusk would meet a fruit grower, and, talking over the subject, he would say, "This will cost you \$25,000, and Cooke will get the half of it. The whole thing is a scheme to make money." However, he has not, so far as I have heard, dared to sign his name to any paper where such an assertion was made.

Rep. I noticed an item in a San Francisco daily paper, stating that the wholesale fruit growers of that city have subscribed a purse to pay Mr. Lusk's expenses in defending the suit. Were the dealers combined in opposition to the law, as represented in the item referred to?

A. As to who the wholesale fruit dealers referred to are, the statement is not clear, as the fruit sent to San Francisco is generally handled by commission merchants. And in justice to them, at least to the leading firms in the business, I think the item referred to was an imposition on the reporter.

Rep. Were the fruit growers generally opposed to the enforcement of the law?

A. Mr. Bassford has stated that he wished the boxes disinfected, and did not wish me to think that he was opposed to the law. I may state that the enterprising fruit growers of the State are unanimous in support of the law, and insist upon its enforcement.

Rep. Do you intend to enforce the law immediately?

A. Yes, sir. As soon as any person can be found violating the quarantine rules.

Rep. May I ask you who are the counsel that will represent the people in any cases that may arise in the higher courts?

A. Judge Dwinelle, J. T. Doyle and W. T. Tuska, all of San Francisco, and the Attorney-General.

Rep. From what source do you expect danger in the fall season?

A. From importations of trees and fruit into the State. There is great danger of importing the plum curculio, which is an evil not known in this State at present, and is not sought after by orchardists; also, a species of scale on imported oranges and lemons.

Rep. May I ask you where the funds come from to pay special counsel, etc.?

A. Certainly. The funds are furnished by the enterprising fruit growers.

Rep. Can you estimate what effect the work done has produced in improvement of orchard property?

A. It would be difficult at the present time, without statistics, to state with a certainty. But in individual cases, at least equal to 100% on amount expended.

Rep. Had you any difficulty with the transportation companies in connection with the quarantine laws?

A. No, sir. The California Navigation Co., Central Pacific Railroad Co., Southern Pacific Railroad Co., South Pacific Railroad Co., etc., assisted in every manner required by signing an agreement not to receive any return packages without a certificate of disinfection.

Rep. Why was this agreement not carried out?

A. As I understand the matter, the California Navigation Co. signed the agreement, say on Wednesday, and withdrew its signature on the Saturday following, after all the others had signed; therefore, when the Navigation Co. withdrew, the others were released from the agreement.

Rep. What reason did the Navigation Co. give for breaking the agreement ordered by its Board of Directors?

A. I might answer this question by asking another: Did any person threaten Captains Anderson or Nelson by telling them that if their names should remain on that agreement that opposition boats would be put on the river to carry the fruit?

Rep. Did the packers of San Francisco make good the offer made in their report to the Fruit Growers' Convention concerning free packages?

A. So far as I can learn, they made the allowances promised.

Rep. Has the return box and basket been in general use this season as heretofore?

A. I think not. I heard of a grower on the Sacramento river who gave up the baskets this year, and used 10,000 free packages, and in many other districts a large percentage of the crop was shipped in free packages.

THE FIELD.

Russian River Hop Notes.

On Saturday last we took a run down to the hop fields, just below town, and found the growers busy making preparations for picking, drying and baling their crops. John D. Grant has a fraction over 19 acres. His field between the railroad track and county road will make a big yield. He grubbed his vines early, and in the field mentioned he fertilized the ground thoroughly, for which he will be well rewarded. He is trying the experiment on a small scale, of using taller poles, and the vines thus trained will produce much more hops than those trained on poles of ordinary height. Next year he intends to substitute in both his fields, poles full six feet taller than those now in use. Also, instead of training the vines on cords (which costs about seven dollars an acre, and has to be renewed each year), he will put on permanent redwood scantlings, which he thinks will cost no more than cord, and will have the advantage of being permanent, thus saving expense and labor every year. By training the vines higher, his yield will be considerably increased. Mr. Grant says the market is very firm; buyers don't offer, but ask producers to name a price. Last week he could have readily engaged his crop in San Francisco at 50 cents a pound (\$1,000 a ton), but preferred to take chances on the market going higher. His two fields have yielded 19 tons. This year he may get as big a crop as he ever had, and, possibly, it may be a few tons less. However, his two fields, containing less than 20 acres, will make him from \$15,000 to \$20,000. He is engaging white labor at a \$1.50 a 100 lbs., furnishing pleasant camping grounds free. In the lower part of the country some growers have Chinamen engaged to pick at 90 cts. a 100 lbs. Chinamen offered to pick here for \$1.12½ a 100 lbs., but all of our hop growers, with commendable liberality, will pay \$1.50, and give white labor the preference. The Indians, who, by the way are excellent pickers and spend their earnings here, are also given work. Mr. Redding, who bought the Alderson place, has about 30 acres of hops—22 acres old vines, and eight acres set out last spring. John Born has Mr. Redding's yard leased; he pays all expenses, and takes two-thirds of the crop. Mr. Redding's portion will be four or five tons, net, which he has sold for \$900 a ton. In addition to the Redding yard, Mr. Born has almost 20 acres of his own in hops—about half old vines, balance set last spring. He will have in the neighborhood of \$15,000 worth of hops as his own product and his share of Mr. Redding's yard. Picking commenced there last Monday, white help and Indians being employed at \$1.50 a 100 lbs.

Henry Hebron has four acres near by, and will make more money from his small patch than most wheat raisers will from 50 or more acres of grain.

E. Thaveny has three and one-half acres, set last spring, and Fred. Hebron has four acres, set last spring. Wm. Brennan has five acres, set last spring, also. It is the best stand of young vines we have ever seen, and this year Mr. Brennan will get from one and one-fourth to two tons. He is building a nice, new hop house, the cost of which will be much more than covered by this year's crop. His field is in a high state of cultivation, which fact, coupled with the further fact that he selected none but good roots for planting, accounts for his splendid success.

The present high prices are based upon an almost total failure of crops in Europe. In Great Britain, where there are 70,000 acres devoted to hop raising, and which ordinarily net to the producers about \$17,000,000 when the price received is \$25 per hundred, this season, at the present high prices, the crop will not be worth more than \$700,000, thus indicating an almost total failure. The same is also true of other European countries; hence our people need have no fear in holding on for a short time.—*Healdsburg Enterprise*.

SIGNS OF WINTER.—The *Sacramento Bee* says: The past week was one of almost unprecedented (for September) heat in the interior of California, in some localities the mercury going up high among the nineties. There was little or no air stirring, and the atmosphere was thick and heavy, and therefore very oppressive. It was probably the last really hot spell of the season, as from this date forward the weather gradually cools with the rapid shortening of the days and lengthening of cool nights. Already the mountain springs have begun to increase their flow of water at night, and within a week or two the same effect will be noticeable in the valleys. But a couple of months now remain in which people may make the usual necessary preparations for the rainy season, and this is a matter that wise persons never neglect. Fuel and other household commodities are higher in winter than summer, and good sense should prompt persons of moderate means to lay in certain supplies while they are low in price.

Hemp Culture in Yucatan.

A correspondent of the *Textile Record* gives some interesting information concerning the culture of hemp in Yucatan. It is one of the largest and, also, speaking comparatively, one of the poorest of the 27 States of the Mexican republic. It does not export either silver or gold. Its rich coast lands, where a fine quality of sugar-cane is perennial, are scarcely made use of at all. Its grain product is not sufficient for the home supply, and a considerable import trade goes on in wheat and corn. Its population in 1880 was officially estimated at but 302,000, and its landed property was assessed for taxation at \$2,763,641. And yet this out-of-the-way fraction of Mexico has built up for itself a spirited trade in henequin, its one important product, that already has caused one railroad to be built; that is causing, at the present time, the construction of several others; and that rapidly is making the country rich instead of poor.

Henequin is propagated from cuttings about 18 inches high, which are set in rows 10 ft. asunder and two or three feet from plant to plant. The period of cultivation is about six years. After this period has passed, the leaves may be cut twice a year for 20 years, each cutting yielding about 15 leaves. Preparation of the fiber for market is simple and rapid. The leaves are cut in the morning; the fleshy part is removed and the fiber cleaned by a wheel which drags or beats them through a narrow opening; the cleaned fiber is dried for two hours in the sun, and is then baled and is ready for shipment.

The essence of the henequin trade is its certain and abundant profit. The fiber costs the planter, by the time that he has it in the bale, about two-thirds of a cent per pound. The freight charge per pound by steamer to New York is three-quarters of a cent. Adding commissions and incidental expenses, the total charge on each pound sold is close upon one and a half cents, and the selling price per pound is from five to seven cents. With profits such as these to be had from hemp, it is not surprising that the cane culture is neglected, and that wheat and corn are imported.

Local Fairs.

At this season of the year, when fairs are being held in various parts of the State, an opportunity is offered for people who are desirous of posting themselves on local products to do so. Those who think of settling here, and all on the lookout for homes, will find this a good time to go about the country. By visiting these fairs, they will be enabled to converse with representative residents and see what the neighborhood produces, and can make up their minds as to what particular branch they think will be most lucrative.

In San Francisco, our annual fair is that of the Mechanics' Institute, now in progress. Here the exhibits are mainly of a local nature, as far as manufactured products are concerned, and a glance at the displays will give a pretty fair idea of the variety and scope of our manufactures. But it will not give a perfect idea. The largest manufactories we have among us are our foundries, and they are not represented at all. Most of the products of these institutions are made to order, and are wanted as soon as made, so that the manufacturers are unable to exhibit them, because they must be delivered on completion.

But the other manufactories, such as must keep stocks on hand, are enabled to show us what they can do. Rope and cordage, wire, work, canned goods, agricultural implements, hardware, brass goods, machine tools, barrels, belting, lead works, paints and oils, furniture, carriages, carpets, mattresses, frames, glass, pianos, mantels, stoves, and all the hundred and one other things may be seen which indicate our manufacturing prosperity. And it is a subject of congratulation that not only is this list extended each year, but the older branches are widening and increasing.

San Francisco, as the metropolis of the coast, has, of course, a larger show than other places, but all the other fairs are worth visiting by those who wish to see the progress of the State exemplified.

Stop My Advertisement.

Insert a Co., San Francisco.—GENTLEMEN: Your letter asking if I wish my sulky advertisement continued is at hand. In reply, I would say that I do not at present, for the reason that what advertising I have already done in the *RURAL* has brought me more orders than I was prepared to meet. I have on file in my office not less than 50 letters, received since your issue of July 27th (about one month) relative to my Piano Box and Phaeton Sulky, and nearly all of them commence with the formula "Please send me description and price list of your sulky," advertised in the *RURAL*. First, I have always received numerous responses to my advertisements in the *RURAL*, but my experience with the sulky advertisement is a little ahead of anything else, and the end is not yet, for the letters are still coming at the rate of four or five per day. I do not give the *RURAL* quite all the credit, for my latest Phaeton Sulky is pronounced by all who have seen it the most elegant, graceful and easy riding two-wheeled vehicle yet produced, and that fact may have something to do with their popularity. I have recently traded my force and facilities for turning out these carts (or, as they should properly be called, two-wheeled buggies and phaetons), so that I shall soon catch up to orders, when you may be assured I shall again avail myself of the *RURAL*'s pages. San Leandro, Cal. JACOB PRIER.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

MANUFACTURERS OF

AGRICULTURAL IMPLEMENTS,

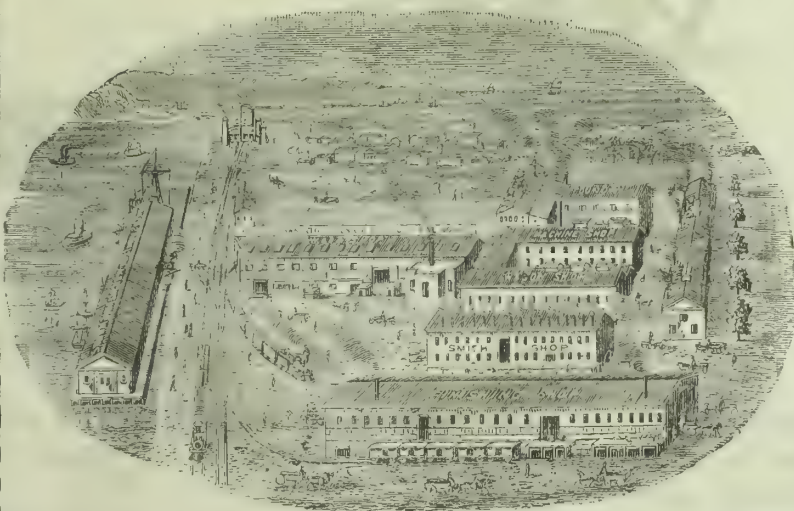
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

SPRING & THOROUGHBRACE WAGONS,

OF ALL KINDS:

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly $2\frac{1}{2}$ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square feet, including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the



interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium of \$100.

The Largest and Most Complete Agricultural Works on the Coast.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.
 " " " " Tule Plow.
 " Improved Granger Gang.
 " Im'd Single Sod and Tule Plow.
 " Single Plows.

Hill's Sweepstake Road and Breaking Plows.
 " Side Hill Gang.
 " Double Deep Tiller.
 Fresno Ditching and Grading Plow.

Gillis' Improved Horse Powers.
 Cultivators.
 Gem Seed Sowers.
 Hill's Improved Headers.
 Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited, that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento, Cal.

HOME PRODUCTION.

JUDSON MANUFACTURING CO.'S

VICTOR MOWING MACHINE.

The First and Only Mower Made on this Coast.

WE CLAIM THAT
THE VICTOR IS THE BEST MACHINE

Ever Offered to the Farmers on this Coast, and the following are a few of the Reasons why it is so:

1st. Because it has great strength and durability, yet is very simple in its construction.
2d. The **COMPOUND DRAFT ATTACHMENT** is one of the best inventions ever applied to a Mowing Machine, and renders it entirely free from side draft.

3d. The Finger Bar always being in line with the Pitman, admits of the knives working with the Bar in any position, even when folded, thus obviating all danger of breakage by raising the Bar to pass obstructions when in gear, and adding greatly to the strength of the cutting apparatus by doing away with a joint in the Finger Bar.

4h. It has the best and strongest Pitman ever used on any machine, with two pauls in each wheel, it will always cut its way out.

We have testimonials from some of the best farmers in California, who have used the VICTOR, and in every instance they recommend it over any Machine ever sold on this Coast.

The fact that it is made here, where Extras can always be obtained, is worthy of the consideration of every farmer who contemplates purchasing a Mower.

But we wish it distinctly understood that we ask no favors on account of its being a home production. If it does not, under all circumstances, prove equal to—and in cutting Alfalfa or Grain, the *superior* of—any Mower ever used, it may be returned to the Agent of whom it was purchased, and the money refunded.

The following are a few of the Testimonials received from those who have used the VICTOR MOWER the past season:

JUDSON MFG CO., San Francisco.

GENTS:

I am very well pleased with the Victor Mower purchased of you: 1st, Because there is no side draft, the horses pulling direct from the cutting apparatus. 2d, Because the pitman is shielded from any obstruction, and not liable to be broken. 3d, Because you can stop and start without backing, and turn without increase of speed. 4th, The wheels carrying the cutting bar remove much of the friction. 5th, The floating apparatus lets it run over very rough ground with ease and without breakage, (which is no small item in parts remote from the city). Also, the boxes are better than I ever saw before; in fact, the whole machine, for simplicity, strength, durability and light running, make it the best Mower of the day. Yours respectfully,

A. G. RUDDOCK.

BOONVILLE, Mendocino Co., Aug. 3, 1882.

JUDSON MFG CO.

GENTLEMEN:

I can truthfully testify to the excellent qualities of your Victor Mower. I purchased one last May, and have cut 120 acres over very rough ground. It is the lightest draft Mower I ever ran. Wishing you success,
I am your obedient servant,
WILLIAM PRATHER.

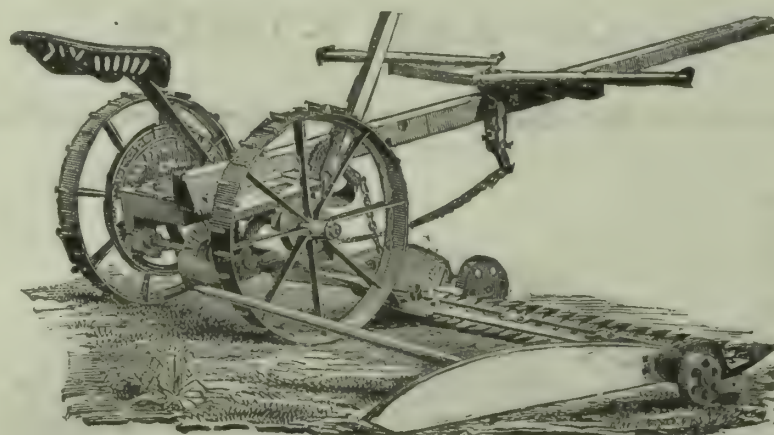
CENTERVILLE, Alameda Co., Aug. 30, 1882.

JUDSON MFG CO., San Francisco.

GENTS:

I have used one of your Victor Mowers during the past season, and consider it the best machine ever made. It is by one-third the lightest draft machine I ever used, and I have

Made by the



chine, and revolving gun metal boxes instead of Babbit.

5th. Being geared from both wheels it will cut a circle either way, one wheel acting as a pivot, thus doing away with stopping and backing on corners, saving time, and avoids fretting the horses.

6th. Backing up to get under motion, so objectionable in other machines, is entirely done away with in the VICTOR. Being

run mowing machines for the past 20 years. There is no side draft whatever, and it is a very easy machine to operate. My boy, who is only 10 years old, cut over 60 acres during this season, of Burr clover, wheat and wild oats, mixed, that cut over four tons to the acre. Success to the Victor.

JOSEPH ROSE.

HEALDSBURG, Aug. 28, 1882.

We, the undersigned, having used the Victor Mower made by the Judson Manufacturing Co., of San Francisco, can testify to its superior qualities, and conscientiously recommend it to the farmer as an excellent machine, and the best adapted for use on this coast of any mower that has ever come under our observation.

H. M. WILSON,

President Bank of Healdsburg.

WM. MATHORN, Healdsburg.

E. TEUAER,

A. H. BARTH, Windsor.

WEST POINT, CALAVERAS Co., Aug. 4, 1882.

JUDSON MFG CO.

The Victor Mower I purchased of you has given perfect satisfaction, both in heavy alfalfa and fox-tail; as I had the machine on trial, you may be sure that I gave it a good test. It is the lightest running and best adapted for all purposes of any machine I ever saw. One of my neighbors, Mr. Ham, has a Victor, and he thinks there is no machine like it.

FRED. GREIVE.

VANCOUVER, W. T., Aug. 10, 1882.

JUDSON MFG CO.

One of the Victor Mowers sold by us cut 170 acres and never stopped a minute for repairs.

GRIDLEY & WHITNEY.

JUDSON MANUFACTURING CO.,
Office, 402 Front Street,
Factories at Oakland. SAN FRANCISCO.

THE APIARY.

The Bee Pastures of California.

Mr. John Muir, the well-known writer on out-of-door themes, gave, in a recent issue of the *The Century*, a sketch of the natural bee pastures of California, which will be read with interest by many of the *RURAL* constituency, and we take occasion to reproduce it as follows:

When California was wild, it was one sweet bee garden throughout its entire length, north and south, and all the way across from the snowy Sierra to the ocean.

Wherever a bee might fly within the bounds of this virgin wilderness—through the redwood forests, along the banks of the rivers, along the bluffs and headlands fronting the sea, over valley and plain, park and grove and deep, leafy glen, or far up the piney slopes of the mountains—throughout every belt and section of the climate, bee flowers bloomed in lavish abundance. Here they grew more or less apart in special sheets of no great size; there, in broad, flowing folds, hundreds of miles in length, zones of polly forests, zones of flowery chaparral, stream-tangles of rubus and wild rose, sheets of golden composite, beds of violets, beds of mint, beds of bryanthus and clover, and so on, certain species blooming somewhere around all the year.

But of late years, plow and sheep have made sad havoc in these glorious pastures, destroying tens of thousands of the flowery acres like a fire, and banishing many species of the best honey plants to rocky cliffs and fence corners, while, on the other hand, culture thus far has given no adequate compensation, at least of kind—acres of alfalfa for miles of the richest wild pasture, ornamental roses and honeysuckles around cottage doors for cascades of wild roses in the dells, and small, square orchards and orange groves for mountain belts of chaparral.

Only ten years ago, the great central plain of California, during the months of March, April and May, was one smooth, continuous bed of honey-bloom, so marvelously rich that, in walking from one end of it to the other, a distance of more than 400 miles, your feet would press more than 100 flowers at every step. Mints, gillias, memophilas, castilleias, and innumerable composite were so crowded together that, had 99 in every 100 been taken away, the plain would still have seemed extravagantly flowery to any but Californians. The radiant, honeyful corollas, touching and overlapping, and rising above one another, glowed in the living light like a sunset sky—one glorious blaze of purple and gold. Down through the midst flowed many a river, the Sacramento from the north, the San Joaquin from the south, with noble tributaries sweeping in at right angles from the mountains, dividing the plain into sections fringed with trees.

Along each river and tributary there is a strip of bottom-land, countersunk beneath the general level, and wider towards the foothills, where magnificent oaks, from three to eight feet in diameter, cast grateful masses of shade over the open, prairie-like level. And close along the water's edge there is a fine jungle of tropical luxuriance, composed of white rose and bramble bushes, and a great variety of climbing vines, wreathing and interlacing the branches and trunks of willows and alders, and swinging across from summit to summit in heavy festoons. Here the wild bees revel in fresh bloom long after the flowers of the drier plain have withered and gone to seed. And in midsummer when the "blackberries" are ripe, the Indians come from the mountains to feast—men, women, and babies, in long, noisy trains, oftentimes joined by the farmers of the neighborhood, who gather this wild fruit with commendable appreciation of its superior flavor, while their home orchards are full of ripe peaches, apricots, nectarines and figs, and their vineyards are laden with grapes. But, though these luxuriant bottoms are thus distinct from the smooth, treeless plain, they make no heavy dividing lines in general views. The whole appears as one continuous sheet of bloom, bounded only by the mountains.

My first view of this central garden, the most extensive and best defined of all the bee pastures of the State, was obtained from the summit of the Pacheco pass, about the middle of April, 1868, when it was rejoicing in all its glory. Along the eastern horizon rose the mighty Sierra, white and jagged with snowy peaks along the top, dark with forests in the middle region, and purple with grasses and flowers and chaparral at the base, and blending gracefully in smooth hill undulations into the glowing yellow plain, which, like a cloth of gold, was seen flowing away to north and south as far as the eye could reach; hazing and vanishing in the distance, distinct as a new map along the foothills at my feet—the sunny sky arching over all.

Descending the eastern slopes of the Coast range, through beds of gillias and lupines, and around many a hillock and bush-crowned headland, I at length waded out into the midst of the glorious field of gold. All the ground was covered, not with grass and green leaves, but with radiant corollas, about ankle-deep next the foothills, knee-deep or more five or six miles out. Here

opsis, corethrogyne, grindelia, etc., growing in close social congregations of various shades of yellow, blending finely with the purples of clarkia, orthocarpus and cenothera, whose delicate petals were drinking the vital sunbeams without giving back any sparkling glow.

Because so long a period of extreme drouth succeeds the rainy season, most of the vegetation is composed of annuals which spring up simultaneously and bloom together at about the same height above the ground, the general surface being but slightly ruffled by the taller phacelias, pentstemons and groups of *Salvia carduacea*, the king of the mints.

Sauntering in any direction, hundreds of these happy sun-plants brushed against my feet at every step, and closed over them as if I were wading in liquid gold. The air was sweet with fragrance, the larks sung their blessed songs, rising on the wing as I advanced, then sinking out of sight in the polleny sod, while myriads of wild bees stirred the lower air with their monotonous hum—monotonous, yet forever fresh and sweet as every-day sunshine. Hares and spermophiles showed themselves in considerable numbers, and small bands of antelope were almost constantly in sight, gazing curiously from some slight elevation, and then bounding swiftly with unrivaled grace of motion. Yet I could discover no crushed flowers to mark their track, nor, indeed, any destructive action of any wild foot or tooth whatever.

The great yellow dais circled by uncounted, while I drifted toward the north, observing the countless forms of life thronging about me—lying down almost anywhere on the approach of night. And what glorious botanical beds I had! Oftentimes on awaking I would find several new species leaning over me and looking me full in the face, so that my studies would begin before rising.

About the 1st of May I turned eastward, crossing the San Joaquin between the mouths of the Tuolumne and Merced, and by the time I had reached the Sierra foothills, most of the vegetation had gone to seed and become as dry as hay.

All the seasons of the great plain are warm or temperate, and bee flowers are never wholly wanting; but the grand spring-time—the annual resurrection—is governed by the rains, which usually set in about the middle of December or the beginning of January. Then the seeds, that for six months have lain on the ground dry and fresh, as if they had been gathered into barns, at once unfold their treasured life. The general brown and purple of the ground, and the dead vegetation of the preceding year, give place to the green of mosses and liverworts and myriads of young leaves. Then one species after another comes into flower, gradually overspreading the green with yellow and purple, which lasts until May.

The "rainy season" is by no means a gloomy, soggy period of constant cloudiness and rain. Nowhere else in North America, perhaps in the world, are the months of December, January, February and March so full of bland, plant-building sunshine. Referring to my notes of the winter and spring of 1868-69, every day of which I spent out of doors, on that section of the plain lying between the Tuolumne and Merced rivers, I find that the first rain of the season fell on the 18th of December. January had only six rainy days—that is, days on which rain fell; February three, March five, April three, and May three, completing the so-called rainy season, which was about an average one. The ordinary rain-storm of this region is seldom very cold or violent. The winds, which in settled weather come from the northeast, veer round into the opposite direction, the sky fills gradually and evenly with one general cloud, from which the rain falls steadily, often for several days in succession, at a temperature of about 45° or 50°.

More than 75% of all the rain of this season came from the southeast. One magnificent storm from the northwest fell on the 21st of March. A massive, round-browed cloud came swelling and thundering over the flowery plain in most imposing majesty, its mossy front burning white and purple in the full blaze of the sun, while warm rain poured from its ample fountains like a cataract, beating down flowers and bees, and flooding the dry water-courses as suddenly as those of Nevada are flooded by "cloud-bursts." But in less than half an hour not a trace of the heavy mountain-like cloud structure was left in the sky, and the bees were on the wing as if nothing more gratefully refreshing could have been sent them.

By the end of January four plants were in flower, and five or six mosses had already adjusted their hoods and were in the prime of life, but the flowers were not sufficiently numerous to affect greatly the general green of the young leaves. Violets made their appearance on the first week of February, and toward the end of this month the warmer portions of the plain were already golden with myriads of the flowers of rayed composite.

This was the full spring-time. New species bloomed every day. The sunshine grew warmer and richer. The air became more tuneful from day to day with humming wings, and sweeter with the fragrance of the opening flowers. Ants were getting ready for their summer work, rubbing their benumbed limbs, and sunning themselves on the husk-piles before their doors, and spiders were busy mending their old webs or weaving new ones.

In March, vegetation was more than doubled in depth and splendor; claytonia, calandrinia, a large white gillia, and two memophilas were in bloom, together with a host of yellow com-

posita, tall enough to bend in the wind and show wavering ripples of shade.

In April, plant-life as a whole reached its greatest height, and the plain over all its varied surface was mantled with a close-furred plush of purple and golden corollas. By the end of this month most of the species had ripened their seeds, but undecayed, still seemed to be in bloom from the numerous corolla-like involucre and whorls of chaffy scales of the composite. In May, the bees found only a few deep-set liliaceous plants and eriogonums in flower.

June, July, August and September was the season of rest and sleep—the winter of dry heat—followed in October by a second outburst of bloom at the very driest time of the year. Then, after the shrunken mass of leaves and stalks of the dead vegetation crinkle and turn to dust beneath the foot, as if it had been baked in an oven, *Hemizonia virgata*, a slender, unobtrusive little plant, from six inches to three feet high, suddenly makes its appearance in patches miles in extent, like a resurrection of the bloom of April. I have counted upward of 3,000 flowers, five-eighths of an inch in diameter, on a single plant. Both leaves and stems are so slender as to be nearly invisible amid so showy a multitude of flowers. The ray and disk flowers are both yellow, the stamens purple, the texture of the rays being rich and velvety, like the petals of garden pansies. The prevailing wind turns all the heads round to the southeast, so that in facing northward we have the flowers looking us in the face. In our estimation, this little plant, the last-born of the brilliant host of composite that glorify the plain, is the most interesting of all. It remains in flower until November, uniting with two or three species of wiry eriogonums, which continue the floral chain around December to the spring flowers of January. Thus, although the main bloom and honey season is only about three months long, the floral circle, however thin around some of the hot, rainless months, is never completely broken.

How long the various species of wild bees have lived in this honey garden nobody knows; probably ever since the main body of the present flora gained possession of the land, toward the close of the glacial period. The first brown honey bees brought to California are said to have arrived in San Francisco in March, 1853. A beekeeper by the name of Shelton purchased a lot, consisting of 12 swarms, from some one at Aspinwall, who had brought them from New York. All the hives contained bees when landed at San Francisco, but they finally dwindled to one hive, which was taken to San Jose. The little emigrants flourished and multiplied in the bountiful pastures of the Santa Clara valley, sending off swarms the first season.

The bee pastures of the Coast ranges last longer, and are far more varied than those of the great plain, on account of difference of soil and climate, moisture and shade, etc. Some of the mountains are upwards of 4,000 ft. in height, and small streams and springs, oozy bogs, etc., occur in great abundance and variety in the wooded regions, while open parks, flooded with sunshine, and hill-girt valleys lying at different elevations, each with its own peculiar climate and exposure, possess the required conditions for the development of species and families of plants widely varied.

Next the plain, there is, first, a series of smooth hills, planted with a rich and showy vegetation that differs but little from the plain itself, as if the edge of the plain had been lifted and bent into flowing folds, with all its flowers in place, only toned down a little as to their luxuriance, and a few new species introduced, such as the hill lupines, mints and gillias. The colors show finely when thus held to view on the slopes—patches of red, purple, blue, yellow and white blending around the edges, the whole appearing at a little distance like a map colored in sections.

Above this lies the park and chaparral region, with evergreen oaks planted wide apart, and blooming shrubs from 3 to 10 ft. high—manzanita and ceanothus of several species, mixed with rhamnus, cercis, pickeringia, cherry, amelanchier and adenostoma, in shaggy, interlocking thickets, with many species of bosackia, clover, monardella, castilleia, etc., in the openings.

The main ranges send out long spurs somewhat parallel to their axes, inclosing level valleys, many of them quite extensive, and containing a great profusion of sun-loving bee flowers in their wild state; but these are, in great part, already lost to the bees by cultivation.

Nearer the coast are the giant forests of the redwoods, extending from near the Oregon line to Santa Cruz. Beneath the cool, deep shade of these majestic trees, the ground is occupied by ferns, chiefly woodwardia and aspidiums, with only a few flowering plants—oxalis, trientalis, erythronium, fritillaria, smilax, and other shade lovers. But all along the redwood belt there are sunny openings on hill slopes looking to the south, where the giant trees stand back and give the ground to the small sun flowers and the bees. Around the lofty redwood walls of these little bee acres, there is usually a fringe of chestnut, oak, laurel and madrona, the last of which is a surpassingly beautiful tree, and a great favorite with the bees. The trunks of the largest specimens are 7 or 8 ft. thick, and about 50 ft. high, the bark crimson and chocolate, the leaves plain, large and glossy, like those of *Magnolia grandiflora*, while the flowers are white and urn-shaped, in well-pro-

portioned panicles from 5 to 10 inches long. When in full bloom, a single tree seems to be visited at times by a whole hive of bees at once, and the grand hum of such a multitude of wings makes the listener guess that more than the ordinary work of honey-winning is going on.

How perfectly enchanting and care-obliterating are these withdrawn gardens of the woods—long vistas opening to the sea, sunshine sifting and pouring upon the flowery ground in a tremulous, shifting mosaic, as the light-ways in the leafy wall open and close with the swaying breeze—shining leaves and flowers, birds and bees, mingling together in spring-time harmony, and nectarous fragrance exhalant from 1,000 fountains! In these balmy, dissolving days, when the deep heart-beats of nature are felt, thrilling rocks and trees and everything alike, common business and friends, children and wives, are happily forgotten, and even the natural honey-work of bees, and the care of birds for their young, seems slightly out of place.

To the northward, in Humboldt and the adjacent counties, whole hillsides are covered with rhododendron, making a glorious melody of bee-bloom in the spring. And the western azalea, hardly less flowery, grows in massy thickets three to eight ft. high around the edge of groves and woods as far south as San Luis Obispo, usually accompanied by manzanita, while the valleys, with their varying moisture and shade, yield a rich variety of the smaller honey flowers, such as mentha, lycopodium, microseria, audibertia, trichostema, and other mints, with yuccinum, wild strawberry, geranium, calais, and golden rod; and in the cool glens along the stream banks, where the shade of trees is not too deep, spiraea, dog-wood, photinia, and calycanthus, and many species of rubus, form interlacing tangles, some portion of which continues in bloom for months.

Though the coast region was the first to be invaded and settled by white men, it has suffered less from a bee point of view than either of the other main divisions—chiefly, no doubt, because of the unevenness of the surface, and because it is owned by individuals, instead of lying exposed to the flocks of the "sheepman." These remarks apply more particularly to the north half of the coast. Further south there is less moisture, less forest shade, and the honey flora is less varied.

The Sierra region is the largest of the three main divisions of the bee lands of the State, and the most regularly varied in its subdivisions, owing to their gradual rise from the level of the central plain to the alpine summits. The foothill region is about as dry and sunnily from the end of May until the setting in of the winter rains as the plains. There are no shady forests, no damp glens, at all like those lying at the same elevations in the coast mountains. The social composite of the plain, with a few added species, form the bulk of the herbaceous portion of the vegetation up to a height of 1,500 ft. or more, shaded lightly here and there with oaks and sabine pines, and interrupted by patches of ceanothus and buckeye. Above this, and just below the forest region, there is a dark, heath-like belt of chaparral, composed almost exclusively of *Adenostoma fasciculata*, a bush belonging to the rose family, from five to eight feet high, with small, round leaves in fascicles, and bearing a multitude of small white flowers in panicles on the ends of the upper branches. Where it occurs at all, it usually covers all the ground with a close, impenetrable growth, scarcely broken for miles.

Up through the forest region, to a height of 9,000 ft. above sea-level, there are ragged patches of manzanita, and five or six species of ceanothus, called deer brush or California lilac. These are the most important of all the honey-bearing bushes of the Sierra. *Chamaebatia foliolosa*, a little shrub about a foot high, with flowers like the strawberry, makes handsome carpets beneath the yellow pines, and seems to be a favorite with the bees; while the pines themselves furnish unlimited quantities of pollen and honey-dew. The product of a single tree, ripening its pollen at the right time of the year, would be sufficient for the wants of a whole hive. Along the streams, there is a rich growth of lilies, larkspur, pedicularis, castilleias, and clover. The alpine region contains the flowery glacier meadows, and countless small gardens in all sorts of places full of potentilla of several species, spraguea, ivesia, epilobium, and golden-rod, with beds of bryanthus and the charming cassiope covered with sweet bells. Even the tops of the mountains are blessed with flowers—dwarf phlox, polemonium, ribes, bulsea, etc. I have seen wild bees and butterflies feeding at a height of 13,000 ft. above the sea. Many, however, that go up these dangerous heights never come down again. Some, undoubtedly, perish in storms, and I have found thousands lying dead or benumbed on the surface of the glaciers, to which they had perhaps been attracted by the white glare. From swarms that escaped their owners in the lowlands, the honey-bee is now generally distributed throughout the whole length of the Sierra, up to an elevation of 8,000 ft. above sea-level. At this height, where the snow falls to a depth of 15 or 20 ft., they flourish without care. Even higher than this several bee-trees have been cut which contained over 200 pounds of honey.

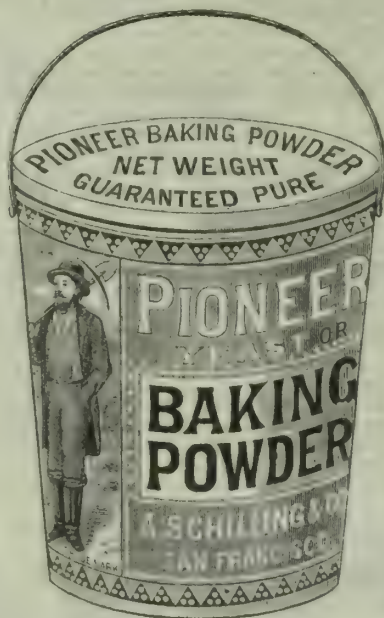
The destructive action of sheep has not been nearly so universal on the mountain pastures as on those of the great plain, but in many places it has been more complete, owing to the more friable character of the soil and its sloping po-

(CONTINUED ON PAGE 181).

Old Reliable!!

CREAM TARTER
AND
BI-CARBONATE OF SODA
ONLY.

The favorite of the
Housekeeper.



COMBINED
—ON—
SCIENTIFIC PRINCIPLES.
—
THE QUEEN
OF THE
KITCHEN!

HOLD FAST TO THAT WHICH IS GOOD,

And Let No False Advertisements Mislead You.

The Best Is The Cheapest!

AVERILL MIXED PAINT.



Manufactured by the California Paint Company.

THE BEST, MOST DURABLE,

Most Beautiful and Cheapest Paint in the World

For Buildings, Outside and Inside, on Wood, Brick, Iron or Tin,

AND FOR ALL PURPOSES FOR WHICH PAINT IS USED

IT IS WITHOUT AN EQUAL!!!



This Paint is prepared in liquid form, **READY FOR USE**, requiring no further addition of oil or spirits. It is of Pure White, and of any shade or color. It is composed of Pure Linseed Oil, strictly Pure White Lead and Zinc, which by our process of manufacture, are so thoroughly united that they cannot separate. Hence, **IT WILL NEVER CHALK, CRACK, OR PEEL OFF**, and for Brilliancy of Color and Beauty of Finish it has no rival. Buildings painted with this Paint Five Years ago look bright and fresh as if newly painted. Of no other Paint can this be said. It is put up in convenient packages, containing from one quart to ten gallons. Be sure and send for Sample Cards of Colors and Price Lists, which are mailed free on application.

O. S. ORRICK, General Agent,

Also Dealer in Paints, Oils, Varnishes, Brushes, etc. And Sole Agent for the

GENUINE SAN FRANCISCO RUBBER PAINT.

No. 403 Market Street,

SAN FRANCISCO, CAL.

The Bee Pastures of California.

(CONTINUED FROM PAGE 179).

sition. The slant-digging and down-raking action of hoofs on the steeper slopes of moraines has uprooted and buried many of the tender plants from year to year, without allowing them time to mature their seeds. The shrubs, too, are badly bitten, especially the various species of ceanothus. Fortunately, neither sheep nor cattle care to feed on the manzanita, spiraea or adenostoma; and these fine honey bushes are too stiff and tall, or grow in places too rough and inaccessible, to be trodden under foot. Also, the canyon walls and gorges, which form so considerable a part of the area of the range, while inaccessible to domestic sheep, are well fringed with honey shrubs, and contain thousands of lovely bee gardens, lying hid in narrow side canyons and recesses fenced with avalanche taluses, and on the top of flat, projecting headlands where only the bees would think to look for them.

But, on the other hand, a great portion of the woody plants that escape the feet and teeth of the sheep are destroyed by the shepherds, by means of running fires, which are set everywhere during the dry autumn, for the purpose of burning off the old fallen trunks and underbrush, with a view to improving the pastures, and making more open ways for the flocks. These destructive sheep fires sweep through nearly the entire forest belt of the range, from one extremity to the other, consuming not only the underbrush, but the young trees and seedlings on which the permanence of the forests depends, thus setting in motion a long train of evils which will certainly reach far beyond bees and beekeepers.

The plow has not yet invaded the forest region to any appreciable extent, neither has it accomplished much in the foothills. Thousands of bee ranches might be established along the margin of the plain, and up to a height of 4,000 ft., wherever water could be obtained. The climate at this elevation admits of the making of permanent homes, and by moving the hives to higher pastures, as the lower pass out of bloom, the annual yield of honey would be nearly doubled. The foothill pastures, as we have seen, fail about the end of May, those of the chaparral belts and lower forests are in full bloom in June, those of the upper and alpine region in July, August and September. In Scotland, after the best of the Lowland bloom is past, the bees are carried in carts to the Highlands, and set free on the heather hills. In France, too, and in Poland, they are carried from pasture to pasture among orchards and fields in the same way, and along the rivers in barges, to collect the honey of the delightful vegetation of the banks. In Egypt, they are taken up the Nile, and floated slowly home again, gathering the honey harvest of the various fields on the way, timing their movements in accord with the seasons. Were similar methods pursued in California, the productive season would extend nearly all the year.

The average elevation of the north half of the Sierra is considerably less than that of the south half, and small streams, with the bank and meadow gardens dependent upon them, are less abundant. Around the headwaters of the Yuba, Feather and Pitt rivers, there are extensive tablelands of lava, sparsely planted with pines, through which the sunshine reaches the ground with little interruption, and here flourishes a scattered, tufted growth of golden applepappus, linosyris, bahai, wyetheia, arnica, artemisia, and similar plants, with manzanita, cherry, plum and thorn in ragged patches on the cooler hill slopes. At the extremities of the great plain, the Sierra and Coast ranges curve around and lock together in a labyrinth of mountains and valleys, throughout which the Coast and Sierra floras are mingled, making at the north, with its temperate climate and copious rainfall, a perfect paradise for bees—though, strange to say, scarce a single regular bee ranch has yet been established in it.

Cling-Comb Bees and Moths.

EDITORS PRESS:—It has been some considerable time since my last on beekeeping, and I have been thinking lately, as the peach crop is

all off, except a few canning clings, and the bees do not give us much to do in the way of extracting, I might take time to report some of my experience. Last year we had such a hard fight with the moth worm, I made a special study of the subject, and observed that those bees that cling to the comb and keep themselves spread all over it all the time are the ones to keep out the worm. The year before I had been giving the preference in breeding to bees that shook readily from the combs, because it was so convenient in extracting not to have to brush them off; but seeing the advantage those cling-tight bees had over the others, and finding one queen, the daughter of a dollar Cyprian, whose bees were rather remarkable in that respect, as well as good honey gatherers, I used eggs from her for test frames, and to supply queens wherever they were needed; we also decided to keep every swarm as strong as possible, by putting the new swarms between the old ones, and doubling them in as soon as the swarming fever was over. During the swarming season we examined below every week for queen cells, and took them away; but since that was over, we do not look below more than once a month, but keep plenty of frames above, where the queen can go and lay if she gets crowded below. The result of such management has been an increase of honey, and very little sign of moth worms, and none in the swarms where the bees cling to and cover the comb well.

Bakersfield, Cal. ISAAC B. RUMFORD

The Mazurka Tribe of Short Horns.

We give on this page an engraving of the Short Horn cow, Mazurka 11th, owned by Hon. D. W. Smith, of Bates, Ill. This cow is the representative of a famous family, which, though

Northern Kentucky Importing Co. in 1853, and sold at their sale to Mr. R. A. Alexander. She is said by Mr. Wardell to have been "one of the most perfect cows ever in America. Her ribs sprang out with a noble arch, that gave room within for sound lungs and heart, and seemed to give room enough without to set a dining table on." Her back and flank excited the admiration of all who saw her. At Woodburn she was bred to Orontes 2d (11,877), a bull imported by the Northern Kentucky Co., and sold to Mr. Alexander for \$4,525. He was sired by Baloo (9,918), the highest priced Wild Eyes of the Bates sale, dam imp. Goodness, by Orontes (4,623), the ancestress of Mr. Bedford's famous Duchesses of Goodness. Orontes 2d possessed a wonderful loin and thigh, and was let in October, 1855, for one season to W. R. Duncan. The product of this union in 1853 was Mazurka 2d, the cow that produced the celebrated Muscaton (7,057). To imp. Duke of Airdrie, in 1856, Mazurka 2d produced Mazurka 5th, a cow which Mr. Alexander bred to his afterwards exported Albion (2,492), a son of imp. Grand Turk (12,968), he by Grand Duke (10,284), out of a Leonard (4,210) cow. The resulting calf, Mazurka 8th, was sold to the late Hon. Geo. Brown, of Canada, who bred from her Mazurka 10th, by imp. The Doctor (13,021), a bull full of Booth blood, and an excellent animal. In this connection it may be stated that the \$4,005 Mazurka 36th (the highest priced Mazurka we believe ever sold) was by the Booth bull Star of the Realm (11,021), the sire of Breastplate (11,431). Mazurka 10th, daughter of The Doctor, was bred to the Wild Eyes bull imp. Underley Wild Eyes (31,312), the produce being Mr. Smith's Mazurka 11th, illustrated on this page. While not what is called "bred in line," as are many of the tribe, she is well worthy of bearing the family name

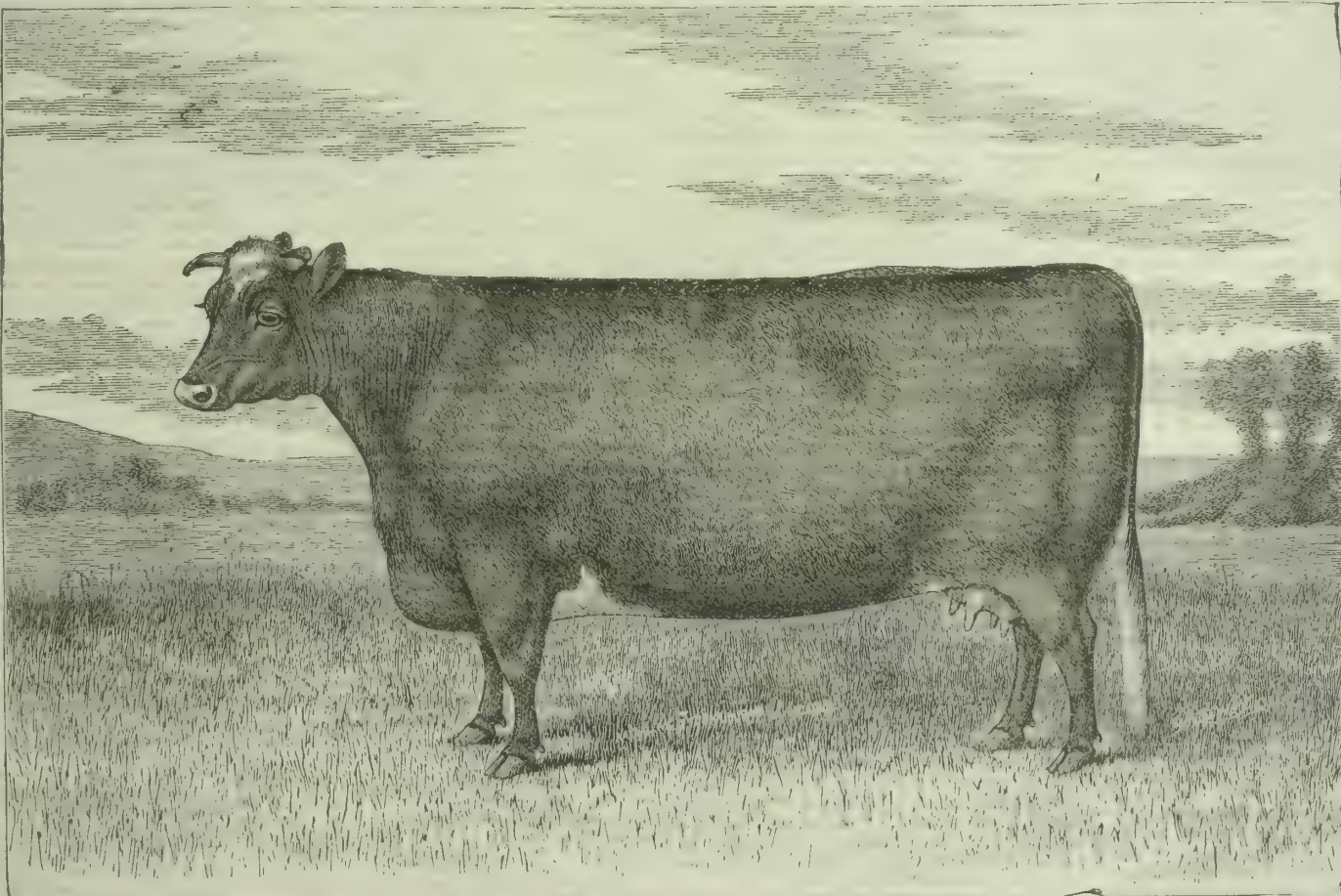
The Teasel Business.

At the California State fair, two or three years ago, there was an exhibit of teasels by a grower who believed that the teasel business might be developed in this State. The State is full of wild teasels. We had specimens from all parts while the subject was under consideration in the RURAL. The fact of the matter is, apparently, that the local demand for teasels is comparatively small, although all woolen mills use them. The growers in western New York have learned how to grow and grade them to suit the manufacturers, and the latter say they cannot afford to waste time experimenting with unclassified teasels. However, if any one wants to know how it is that the New York teasel growers operate, they will find the information in the following, which we take from a correspondent of the *Gardeners' Monthly*:

The farmers of the towns of Marcellus and Skaneateles, Onondaga Co., N. Y., are quite extensively engaged in the cultivation of the teasel, and that they are annually realizing on the product half a million of dollars. The plant was introduced into that section about 50 years ago by Dr. John Snook. His attempts at cultivation were successful from the start, but such was the prejudice at that time against everything American, that he was obliged to sell his production as French growth, and it was not until 20 years ago that the American teasel was admitted to be the best grown in the world.

The seed is sown about the beginning of May, and about one month afterward is given its first hoeing. In another two weeks it is ready to

thin out, which is done by hand, one plant being left every six inches in the row, and the rows three feet apart. In August, the ground is again hoed, for the last time in the first season. The second season the horse cultivator is kept at work pretty steadily for two weeks, and the plants that were formed from the seed the first year throw up a main stalk the second year, and when about two feet high a leaf makes its appearance, which gradually forms a cup around the stalk; from the base of this other branches arise, and these in turn repeat the process, until the plant has from 40 to 50 stalks. On the end of each stalk is a teasel. The cups act as reservoirs, with a capacity of from three to five quarts of water, and thus keep the plant supplied from one rain-storm to another. The main stalk teasel is called the "king," and is the male part of the



SHORT HORN COW, MAZURKA 11th, OWNED BY D. W. SMITH, BATES, ILL.

beginning with imported blood, has been brought to great perfection by intelligent breeding in this country. The *Breeders' Gazette* gives an account of Mazurka 11th and her breeding, from which we shall quote as follows:

After Mr. John Thornton had returned to England from his American tour, he embodied, in a series of articles in the *Circular*, his impressions of Short Horn breeding in this country, and pays a marked compliment to Mr. Alexander's Mazurka family, the great excellence of which he attributed to the breeding of the imported cow. He called attention to the fact that she was sired by "Mr. Booth's Harbinger, and her dam by Mr. Lax's Baron of Ravensworth, bulls that imparted short legs and heavy flesh to most of their offspring." On page 500 of Vol. X of Coates' "Herd Book" we find the following entry:

MOSLE, roan, calved 8 pt. 30, 1847; bred by and the property of Mr. W. Smith, West Raseen; got by Baron of Ravensworth (7,811), dam Magnet, by Mariner (7,294); g. d. by Mina (2,316); gr. g. d. by Commodore (1,658); — by Rival (553).

Produce, 1850, roan b. c. Matadore by Hopewell (10,332); 1851, roan c. c. Mazurka, by Harbinger (10,297).

It will thus be observed that Mazurka was a sister to Matadore (11,800), a prize bull of high personal merit, used by Mr. Amos Cruickshank on the famous Sittyton herd in Scotland. While Mazurka was got by Harbinger and Matadore by Hopewell, yet those sires were both bred at Warlabry from the same cow, Hope, by Leonard (4,210); thus rendering the two calves of almost identical blood.

Mazurka was a roan cow, imported by the

of Mr. Cruickshank's Matadore, Mr. Wardell's Muscaton, Mr. Hampton's Gereva Lad, and Judge Jones' Mazurka Duke of Airdrie.

The Fair Season.

For the information of our readers, we give below a list of the coming exhibitions on this coast in the order of their occurrence:

Bay District Association races, San Francisco, August 5th to August 12th.
Mechanics' Institute fair in the new pavilion, San Francisco, August 15th to September 16th.
Santa Cruz County fair at Santa Cruz, August 16th to August 19th.
Sonoma Park Association races at Santa Rosa, August 22d to August 26th.
Golden Gate District fair at Oakland, September 4th to September 9th.
Mendocino County fair at Willitsville, September 4th to September 10th.
Butte District fair at Chico, September 5th to September 8th.
Eldorado District fair at Placerville, September 5th to September 8th.
California State fair at Sacramento, September 11th to September 16th.
Contra Costa County fair at Pacheco, September 11th to September 16th.
Modoc, Plumas and Lassen District fair at Greenville, September 18th to September 22d.
Humboldt and Mendocino District fair at Robnerville, September 19th to September 23d.
San Joaquin District fair at Stockton, September 19th to September 23d.
San Mateo and Santa Clara District fair at San Jose, September 25th to September 30th.
Lake County fair at —, September 26th to September 29th.
Monterey District fair at Salinas City, October 2d to October 6th.
Shasta and Siskiyou District fair at Yreka, October 4th to October 8th.

plant. It blossoms first, beginning at its apex and gradually going toward the base, and while this is in operation it sheds a fine pollen over the other teasels, called queens, by which they are impregnated. They all blossom with a white flower, and as soon as this drops they are fit to cut. When taken from the fields, they are placed in drying sheds built for the purpose, and cured. When they are ready for market, they are bought by dealers, who take them into their factories and prepare them for the woolen mills. The preparation consists in clipping off, by hand, the beard that grows at the base of the teasels, cutting the stems to about three inches in length, sorting them into four different qualities, into eight different lengths, and gauging them by machinery into 36 different diameters. The different lengths, diameters, and qualities are packed systematically in separate boxes, measuring 3½x3½x5 ft. There are seven different houses engaged in shipping, employing from 20 to 50 hands each throughout the year, with trade extending from San Jose, Cal., on the west, to St. Petersburg, Russia, on the east, including the Canadas and Mexico.

HOW TO PRESERVE SUN-DRIED FRUIT.—The Visalia Delta is furnished the following method of protecting sun-dried fruit from insects. One of our experienced fruit men, Mr. Joseph Thomas, assures us that it is always effective. Make a strong decoction of red peppers. Soak in it the sack in which the dried fruit is to be kept. Ring and dry, and fill it, and no insects will appear in your fruit.

The State Fairs of California.

Twenty-eight years ago next month the first State fair was held in California. A bill to incorporate the State Agricultural Society was approved by the Governor May 13, 1854, and \$5,000 per year for five years was appropriated, the money to be used for the payment of premiums and not for other purposes. The first officers were named in the charter, and were as follows: F. W. Macondray, of San Francisco, President; Vice-Presidents, E. L. Beard, of Alameda, J. K. Rose, of San Francisco, D. W. C. Thompson, of Sonoma, H. C. Malone, of Santa Clara, W. H. Thompson, of San Francisco, and C. I. Hutchinson, of Sacramento; Corresponding Secretary, J. L. L. F. Warren, of San Francisco; Recording Secretary, C. V. Gillispie, of San Francisco; Treasurer, David Chambers, of San Francisco.

The first fair was held October 4, 1854, in San Francisco—the cattle show at the Mission, and the agricultural and horticultural exhibition in Musical Hall. This exhibition embraced specimens of nearly all of the grains, vegetables and fruits, and though not large, excited the wonder and astonishment of all who beheld it. At the Mission were shown horses, cattle, sheep, swine and poultry, and there were a few animals in each department that would have done credit to any State in the Union. No exhibition at all comparable in extent, variety and excellence had heretofore been held in any State so young since the organization of the American Union. Its effects in stimulating the material industries of the State were very great, and nothing had occurred since the first discovery of gold that attracted so much interest generally in California history as this exhibition of the agricultural resources. The amount of premiums awarded and paid at this fair was \$4,660. At the annual meeting of the society, held during the fair, C. I. Hutchinson, of Sacramento, was elected President of the society for the ensuing year, and W. W. Stow, of Santa Cruz, John A. Sutter, of Sacramento, Sherman Day, of Santa Clara, James Allen, of Yuba, A. P. Smith, of Sacramento, Vice-Presidents; Rev. O. C. Wheeler, of Sacramento, Recording Secretary; J. L. L. F. Warren, Corresponding Secretary; Angus Frierson, of Sacramento, Treasurer.

The Second State Fair.

The second annual fair of the society was held in Sacramento, commencing September 25, 1855; the general exhibition at the State House, and the cattle show at the Louisiana race-track. The exhibition in every respect was a very great improvement on the first.

President Beard, in his opening address, made, among others, the following statements: Never before was there a commonwealth six years old that could make such an exhibition as he saw before him. As regards the amount of production per acre, our soil surpasses that of any other State in the world. Small as is the amount of our improved lands, we already raise the breadstuffs to feed our population and to report a large surplus. We excel all the other States in the production of barley. The amount raised this year is worth more at present than the entire crop of all the States in 1850. California is at this time the ninth State in the production of wheat, and was, as early as 1853, the tenth in the amount of potatoes raised.

The premiums awarded and paid at Sacramento amounted to \$6,550. At the annual meeting of the society, held in Sacramento during the fair, San Jose was selected as the place for the fair of 1856. E. L. Beard, of Alameda, was elected President, and S. J. Hensley, of Santa Clara, C. K. Garrison, of San Francisco, J. C. Yount, of Napa, John A. Sutter, of Sutter, A. H. Meyers, of Alameda, George H. Beach, of Yuba, and W. W. Gift, of Solano, Vice-Presidents; C. I. Hutchinson, of Sacramento, Corresponding Secretary; Eli Corwin, of Santa Clara, Recording Secretary, and L. H. Bascom, of Santa Clara, Treasurer.

The Third Fair, at San Jose.

Was held Oct. 7, 1856, and ensuing days. The premiums paid amounted to \$6,746. The annual meeting of the society was held at San Jose, Oct. 10th, when the city of Stockton was selected for holding the annual fair for 1857. C. M. Weber was elected President, and the following gentlemen Vice-Presidents: William Garrard, of San Joaquin; William Daniels, Santa Clara; P. B. Redding, Shasta; W. B. Osborn, Los Angeles; A. H. Meyers, Alameda; H. D. McCarthy, Calaveras; John A. Sutter, Sutter. Corresponding Secretary, George H. Sanderson, San Joaquin; Treasurer, A. Wolf, San Joaquin.

The Fourth Fair, at Stockton.

Commenced September 29th, 1857, and continued four days. The exhibition was in many respects a long way ahead of any State fair which had preceded it, especially in manufactured articles and livestock. The amount of premiums paid was \$7,991.

The annual appropriation to the aid of the society made by the Legislature in 1854, having been exhausted in 1857, this appropriation was renewed at the session of 1858 for the term of five years longer, from the 15th day of May, 1858.

John C. Fall, of Marysville, was elected President of the society for 1858, and G. N. Sweezy, of Yuba, G. C. Yount, of Napa, John Bidwell,

of Butte, Dr. C. M. Hitchcock, of San Francisco, Dr. H. W. Carpenter, of Alameda, Jose M. Covarrubias, of Santa Barbara, and J. D. Morley, of Stanislaus, Vice-Presidents; Corresponding Secretary, O. C. Wheeler, of Sacramento; Recording Secretary, Geo. H. Beach, of Yuba; Treasurer, J. A. Paxton, of Marysville.

At this meeting was also adopted an amendment to the Constitution, permanently locating the office of the society at Sacramento, and requiring the Corresponding Secretary to reside at that place.

The Fifth Fair, at Marysville.

The fifth annual fair of the society was held at Marysville, commencing August 23, 1858, and continuing six days. As evidence of the increasing interest in these fairs on the part of farmers and the public, it may be here stated that the admission fees to the exhibition, including season tickets, amounted to \$9,420; membership tickets, at \$10 each, to \$5,990. The exhibition of agricultural and horticultural products at this fair fully sustained the reputation of the State in this department.

The officers elected at this meeting for the ensuing year were: C. I. Hutchinson, of Sacramento, President; Vice-Presidents (one for each judicial district, as per new constitution), E. B. Crocker, Sacramento; J. W. Osburn, Napa; J. R. Painter, Sutter; Cary Peebles, Santa Clara; J. F. Pinkham, Nevada; A. H. Meyers, Alameda; J. C. Davis, Yolo; John McConahue, Siskiyou; D. J. Staples, San Joaquin; Levi H. Towers, Shasta; J. W. Thompson, Plumas; J. R. Crandall, Placer; Wm. Blackburn, Santa Cruz; L. H. Bascom, Santa Clara; T. J. White, Los Angeles; C. H. Howard, San Mateo; John Center, San Francisco; Corresponding Secretary, O. C. Wheeler, Sacramento; Recording Secretary, A. G. Richardson, Sacramento; Treasurer, A. Reddington, Sacramento; Additional Managers—P. A. McRea, of Butte; J. S. Silver, of San Francisco; A. P. Smith, of Sacramento.

The Sixth Fair, at Sacramento.

The sixth annual fair was held at Sacramento Sept. 13 to 23, 1859, in the new pavilion erected by tax upon the property of Sacramento city and county. The magnitude of the sixth annual fair of the society is indicated by the number of exhibitors competing and articles exhibited. Of the former there were 754, and of the latter 4,635, counting all the specimens of one variety exhibited by one person, whether of mechanism, vegetables or fruit, as only one article. The members of this society numbered 1,100, including about 40 life members. The receipts of the society for membership and entrance fees to the exhibition were \$28,639.50. Measured by these criterions, the fair was much larger than any of its predecessors. The amount paid in premiums was \$8,139.

The first annual meeting of the society under the new charter and constitution was held in the pavilion, in Sacramento, January 18, 1860, and was the occasion of much interest and no small degree of excitement. The meeting was largely attended and lasted four days. The election of officers of the society resulted as follows:

T. G. Phelps, of San Mateo, President; and J. J. Warner, Pablo de la Guerra, Cary Peebles, R. B. Woodward, Caswell Davis, L. B. Harris, Nathan Coombs, J. T. Ryan, P. B. Redding, Chas. Justice, S. S. Curtis, Wm. Rabbe, Wm. Thompson, A. J. Laird, R. J. Walsh, E. B. Harris, G. W. Coulter, the gentlemen representing the judicial districts of the State in the order of their names. Corresponding Secretary, O. C. Wheeler, Sacramento; Recording Secretary, N. A. H. Ball, Sacramento; Treasurer, D. O. Mills, Sacramento. Additional managers, Wilson Flint, Sacramento; P. J. Devine, Sacramento; T. Ogg Shaw, San Francisco, and the last three presidents of the society.

The Fair of 1860

Was held at Sacramento. The award of premiums in 1860 was \$9,254.

The eighth annual meeting of the society was held at the pavilion on the 13th of January, 1861. The first business transacted was the adoption of the amendment of the constitution spread upon the minutes at the last annual meeting, providing that "the society shall hold an annual fair at the city of Sacramento." This amendment was adopted by a unanimous vote.

The following were elected officers of the society for the ensuing term: Jerome C. Davis, of Yolo county, President; and Vice-Presidents, Abel Stearns, Los Angeles; Pablo de la Guerra, Santa Barbara; F. F. Fargo, Alameda; M. D. Boruck, San Francisco; E. S. Holden, San Joaquin; A. P. Smith, Sacramento; A. Haraszthy, Sonoma; J. F. Ryan, Humboldt; J. P. Haynes, Del Norte; C. Justis, Sutter; J. R. Crandall, Placer; J. A. Banks, San Francisco; Samuel A. Merritt, Mariposa; A. Delano, Nevada; R. J. Walsh, Colusa; A. Hayward, Amador; John Thompson, Plumas. Additional Managers, Peter Donahue, San Francisco; Thomas Hansbrow, Sacramento; W. W. Light, Sacramento. Corresponding Secretary, O. C. Wheeler, Sacramento. Recording Secretary, N. A. H. Ball, Sacramento. Treasurer, A. K. Grim, Sacramento.

The fair of 1861 and all following fairs were held at Sacramento. Measured by the receipts for membership, tickets and admittance fees to the park and pavilion, the attendance to the fair of 1861 was much greater than at any of its predecessors. These receipts amounted, including the life memberships sold, to \$22,452.50. The society met with a very serious loss this year from the flooding of the city and the de-

struction of its library, many of its records, its mineral cabinet, its collection of mechanical models and specimens in natural history, and manuscripts. The ninth annual meeting of the society was called for January 27th, 1862. On account of the high water, an adjournment was had to the 23d of April. A. Haraszthy, of Sonoma, was elected President, and the following gentlemen Vice-Presidents: A. Stearns, Los Angeles; J. J. Warner, Los Angeles; S. J. Hensley, San Jose; Samuel Brannan, San Francisco; E. S. Holden, Stockton; C. H. Grimm, Sacramento; J. B. Frisbie, Solano; Walter Van Dyke, Humboldt; H. C. Stockton, Red Bluff; G. N. Sweezy, Yuba; Isaac Davis, Yolo; Stephen Card, San Francisco; Thomas Baker, Visalia; A. Delano, Nevada; R. J. Walsh, Colusa; John Vogan, Ione; T. B. Shannon, Plumas. O. C. Wheeler, Corresponding Secretary; E. B. Ryan, Sacramento, Recording Secretary; J. W. Hatch, Sacramento, Treasurer. Additional managers, P. Donahue, San Francisco; C. S. Lowell, Sacramento; W. F. Knox, Sacramento.

The Fair of 1862.

The annual fair of 1862 was commenced on the 31st day of August and closed on the 4th of September. President Haraszthy, in his opening address, recapitulated some of the disasters and destruction that were visited upon the State and her industries by the floods of December and January, and reverted to the open-handed generosity of every class of society in administering quick and substantial relief to the sufferers.

The Fair of 1863.

On the 12th of March, 1863, the Legislature passed an act supplemental to the act of incorporation, providing for the election of a Board of Agriculture, consisting of a president and nine directors, to be entrusted with the affairs of the State Agricultural Society. Under this act, Judge Isaac Davis, of Yolo, was elected President; James McClatchy, of Sacramento, G. R. Warren, of San Joaquin, Mike Bryte, of Yolo, R. J. Walsh, of Colusa, C. H. Grimm, of Sacramento, Robert Beck, of Sacramento, Wm. H. Parks, of Sutter, Charles Holbrook, of Sacramento, and N. L. Drew, of Sacramento, were elected Directors. The Board elected for Treasurer E. B. Ryan, of Sacramento, and I. N. Hoag, of Yolo, Secretary.

The Legislature having appropriated the sum of \$4,000 for the payment of premiums, the Board commenced preparations for holding an annual fair, and fixed the time September 25th to October 3d, 1863. The fair was a success, and the finances of the society were greatly improved.

The Fair of 1864.

The eleventh annual meeting of the society was held at the pavilion on the 29th of January, 1864. At this meeting the constitution of the society was unanimously amended, so as to reduce the price of annual memberships from \$10 to \$5. C. F. Reed, of Yolo, was elected President of the society. T. L. Chamberlain, of Placer, I. H. Culver, of Sacramento, and J. J. Owen, of Santa Clara, were elected Directors for three years, to supply the places of James McClatchy, G. R. Warren and Mike Bryte, terms expired. The Board elected I. N. Hoag, of Yolo, Secretary, and E. B. Ryan, of Sacramento, Treasurer.

On account of the failure of the Legislature to make any appropriation for the use of the society, and the unprecedented drouth throughout the State, cutting short the crops and compelling the owners of stock to drive their herds to the mountains for pasture, and the general scarcity of money, the Board decided not to hold a general fair in 1864, but simply a stock show, and to confine this to horses. In this department the fair was quite successful.

The Fair of 1865.

The twelfth annual meeting of the society was held January 25th, 1865. C. F. Reed, of Yolo, was re-elected President of the society; and R. J. Walsh, of Colusa, A. G. Richardson, of Sacramento, and Robert Beck, of Sacramento, were re-elected as Directors. I. N. Hoag, of Yolo, was re-elected Secretary, and R. T. Brown, of Sacramento, was elected Treasurer. Some changes had been made in the Board in 1864, so the new Board was composed of the following gentlemen: C. T. Wheeler, of Sacramento, John H. Carroll, of Sacramento, Edgar Mills, of Sacramento, E. B. Crocker, of Sacramento, T. L. Chamberlain, of Placer, W. P. Coleman, of Sacramento, A. H. Richardson, of Sacramento, Robert Beck, of Sacramento, and R. J. Walsh, of Colusa.

The Board for 1865 found themselves in the same condition as their predecessors of 1864—without a cent in the treasury and no appropriation from the State. The citizens of Sacramento, by subscription, raised \$4,478.40. Preparations were commenced at a late day for a general fair, which was held from the 18th to the 23d of September, and a gratifying success was the result.

The Fair of 1866.

The thirteenth annual meeting of the society was held at the pavilion on the 30th of January, 1866. C. F. Reed, of Yolo, was re-elected President of the society, and Edgar Mills, J. H. Carroll and C. T. Wheeler were re-elected Directors. The Board re-elected I. N. Hoag Secretary, and R. T. Brown Treasurer. The State appropriated for the use of the society this year the sum of \$4,000. The time for holding the annual fair was set for the 10th to the 15th of September.

The Fair of 1867.

The fourteenth annual meeting of the society

was held on the 29th of January, 1867. C. F. Reed was re-elected President; E. B. Crocker, T. L. Chamberlain and W. P. Coleman were re-elected Directors, and the Board re-elected I. N. Hoag Secretary, and R. T. Brown Treasurer. The time for holding the annual fair for 1867 was fixed from the 9th to the 14th of September inclusive. In the mechanical department the exhibition of 1867 was the best that has ever been made under the auspices of the society. The same may be said of the manufactured products, mill fabrics, etc.

The Fair of 1868.

The fifteenth annual meeting was held January 30, 1868. C. F. Reed was re-elected President, and H. R. Covey, of San Francisco, R. S. Carey, of Sacramento, H. M. Larue, of Sacramento, were elected Directors. I. N. Hoag was re-elected Secretary, and R. T. Brown, Treasurer, by the Board.

The fair of 1868, though not so full in the mechanical and manufacturing department, was on the whole quite equal to the exhibition of the preceding year.

The Fair of 1869.

The 16th annual meeting of the society was held on the 28th of January, 1869. C. F. Reed was again re-elected President, and Edgar Mills and C. T. Wheeler were re-elected Directors. Robert Hamilton, of Sacramento, was elected the third Director. At the meeting of the Board, I. N. Hoag declined the election of Secretary, and the Board elected Robert Beck, of Sacramento, Secretary, and R. T. Brown Treasurer. The fair was held from September 6th to September 11th, and was successful. The appropriation from the State was \$4,000.

The Fair of 1870.

The 17th annual meeting of the society, on the 26th of January, 1870, re-elected C. F. Reed President, and E. J. Lewis, of Tehama, William Blanding, of San Francisco, and W. P. Coleman, Directors; and Robert Beck and R. T. Brown, were re-elected Secretary and Treasurer. The fair was held from Sept. 12th to 17th, inclusive. The exhibition was fully up to the last as a whole. The stock department was superior.

The Fair of 1871.

The 18th annual meeting of the society was held on the 27th of January, 1871. C. F. Reed was re-elected President; Coleman Younger, of Santa Clara, H. R. Covey and R. S. Carey were elected Directors—the two latter being re-elected. The board elected I. N. Hoag Corresponding Secretary of the society, and Robert Beck Secretary of the Board, and re-elected R. T. Brown Treasurer. This year the eastern hall at the Pavilion was built by the society, with the aid of the county, and added one-half more space on the upper floor of the Pavilion. The fair was held from the 18th to the 23d of September, inclusive. In many special departments it was much superior to any ever held by the society. An appropriation of \$8,000 was made by the State.

The Fair of 1872.

The 19th annual meeting of the society was held January 24, 1872. C. F. Reed was re-elected President, and Edgar Mills, C. T. Wheeler and Robert Hamilton were re-elected Directors. The board re-elected, by unanimous vote, I. N. Hoag, Robert Beck and R. T. Brown to the respective offices held the previous year. An addition to the grand stand was built south of the main entrance to the park this year, and many other improvements made. The fair was a success. An appropriation of \$5,000 was made by the State.

The Fair of 1873.

The twentieth annual meeting of the society was held at the pavilion on the 22d of January, 1873. C. F. Reed, of Yolo, declined to be a candidate, and R. S. Carey was unanimously elected President. Frederick Cox, of Sacramento, M. D. Boruck, of San Francisco, Marion Biggs, of Butte, and T. L. Chamberlain were elected Directors. Robert Beck was elected Secretary, and R. T. Brown, Treasurer. The fair of 1873 began September 15th and held six days. This year the Board purchased the grounds east of the brick wall of the park, inclosed the same, and erected cattle stalls and other buildings thereon. They also issued and sold over 100 life memberships.

The Fair of 1874.

At the annual meeting of 1874, held January 27th, R. S. Carey was re-elected president. The fair was held from Sept. 15th to Sept. 26th. The stock exhibits were very good, but in other departments the show was rather restricted. The Legislature refused to make appropriations.

The Fair of 1875.

Of this fair the Directors say: "The recent fair, both at the park and pavilion, gave gratifying evidences of the increased interest taken by exhibitors and contestants for premiums in every department, and may be justly pronounced to have been the most valuable and satisfactory one recorded in the annals of our society, and to have afforded renewed proof of the present value of our organization, as well as the promise of future usefulness."

The Fair of 1876.

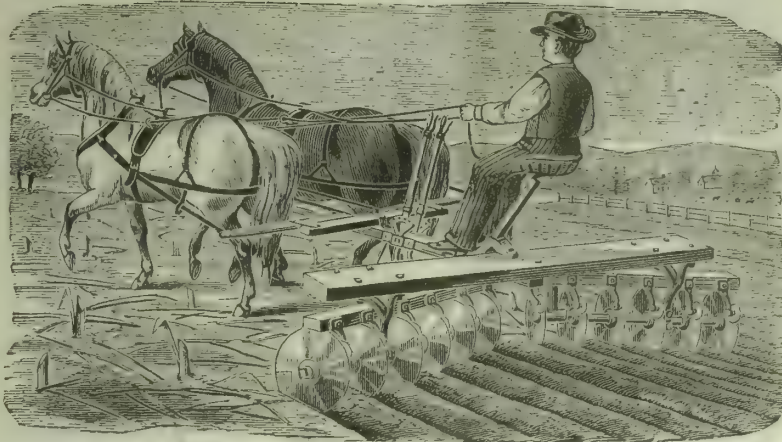
At the twenty-third annual meeting of the Society, held January 26, 1876, R. S. Carey was re-elected President, and Frederick Cox, M. D. Boruck and Marion Biggs Directors. Robert Beck was re-elected Secretary, and L. H. Upson, Treasurer.

A law was passed at this session of the Legislature, appropriating the sum of \$16,141.89 to pay the whole indebtedness of the Society at

(CONTINUED ON PAGE 185).

HAWLEY BROS.' HARDWARE CO.

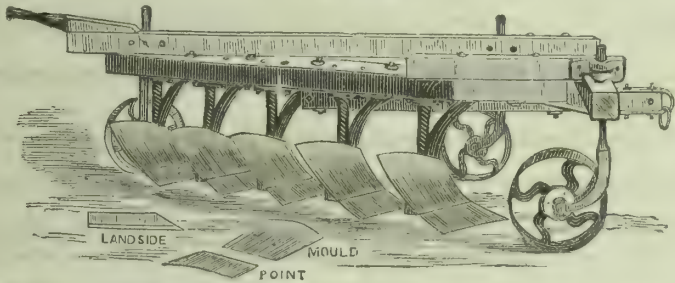
Successors to
Marcus C. Hawley & Co.



THE CORBIN STEEL DISC HARROW.

THE "GRANGER" GANG PLOW.

These Plows are Cheap and Effective, Strong and Durable, varying from 3 to 6 gangs, to a plow, and each Plow in the Gang cutting from 8 to 10 inches and from 3 to 6 inches deep. Simplicity, Cheapness and Durability are combined in these Plows. All the parts are interchangeable. They are indispensable to the Economical farmer. The cut shows a 5-gang "Granger" Plow.



The "Granger" Gang Plow, with Slip-Share Landside and Moldboard.

FOR SALE BY

Hawley Bros.' Hardware Co.,

Sole Agents for the

CORBIN STEEL DISC HARROW.

WHAT IT WILL DO.

It will thoroughly pulverize the soil by lifting and turning it.
It will pulverize, cover and mix manure with the soil.
It will cover all kinds of grain as no other Harrow will.
It works equally well in the hollows and on the knoll tops.
Its use with a little grass seed will thoroughly renovate worn out meadows and pastures.
It will actually save plowing in many instances.
Fall crops can be sown broadcast on stubble land, and every kernel of grain covered by it.
It cuts and pulls out the weeds.
It is valuable for summer following the land.
It crushes, cuts and pulverizes clod or clay lumps.
It takes the soil from below and rolls it upward to the fertilizing effects of sun and rain.
It will produce a better crop by reason of its thorough work.
It will save its cost in seed grain alone, as it covers every seed.
Seed can be covered by it to any desired depth for proper germination.
It will work on wet or stony land where no other implement will.
It will more than save its cost in one season.



Kalamazoo Patent Improved Spring-Tooth Harrow.

Kalamazoo Improved Spring Tooth Harrows.

The above cut represents our Improved Adjustable Spring-Tooth Harrow—The latest and best in the market. It has all the good points and none of the defects of other Harrows. We claim as follows: THE SHAPE OF THE TOOTH is the best form possible to pass over a stone or root easily. IT IS VERY EASY TO ADJUST. Loosen the bolts that hold the Teeth, then lift up or set down the teeth as desired, from 1 to 8 inches. IT DOES NOT TRAIL. If a tooth rests in a wood or chair or seat it will soon wear and mark loose. It cannot be held in place very long. This Tooth rests in an iron chair and can not wear nor mark. IT DOES NOT CLOG. There is no place for rubbish to rest. The shape of the Tooth prevents clogging. THE TEETH ARE MADE OF THE BEST OF SPRING-STEEL AND TEMPERED IN OIL, and tested severely before sending out. THE DRAFT IS LIGHTER than any other Spring-Tooth Harrow.

"ENTERPRISE" FRUIT PRESS.

The cut on this page gives a full view of our COMBINATION FRUIT PRESS in operation. We guarantee it superior to all other presses, as it saves all the rehandling necessary with them; is simple in principle, and extracts the entire substance or juice from all kinds of Fruits and Berries, in one operation, uncooked, delivering the refuse uniformly dry. It can be used for numerous purposes in the Household, Store, Restaurant, and by Confectioners in making Fruit Syrups, Butters, Wines, Jellies, etc. It is in STRAWBERRIES, RASPBERRIES, GOOSEBERRIES, ELDERBERRIES, BLACKBERRIES, CRANBERRIES, CHERRIES, CURRANTS, PEACHES, PLUMS, PEARs, APPLES, TOMATOES, QUINCES, GRAPES, PINEAPPLES, LEMONS, ORANGES. In using this press, the hand-picking and separation of stems from Fruits and Berries is avoided, the press extracting all the juice, and delivering the refuse matter, seeds, stems, etc., into a separate vessel. For pressing Lard it has no equal; working continuously, it makes more lard in less time than any other press.



The "Enterprise" Combination Fruit Press, Price \$1.00.

Corner Beale & Market Streets,
SAN FRANCISCO.

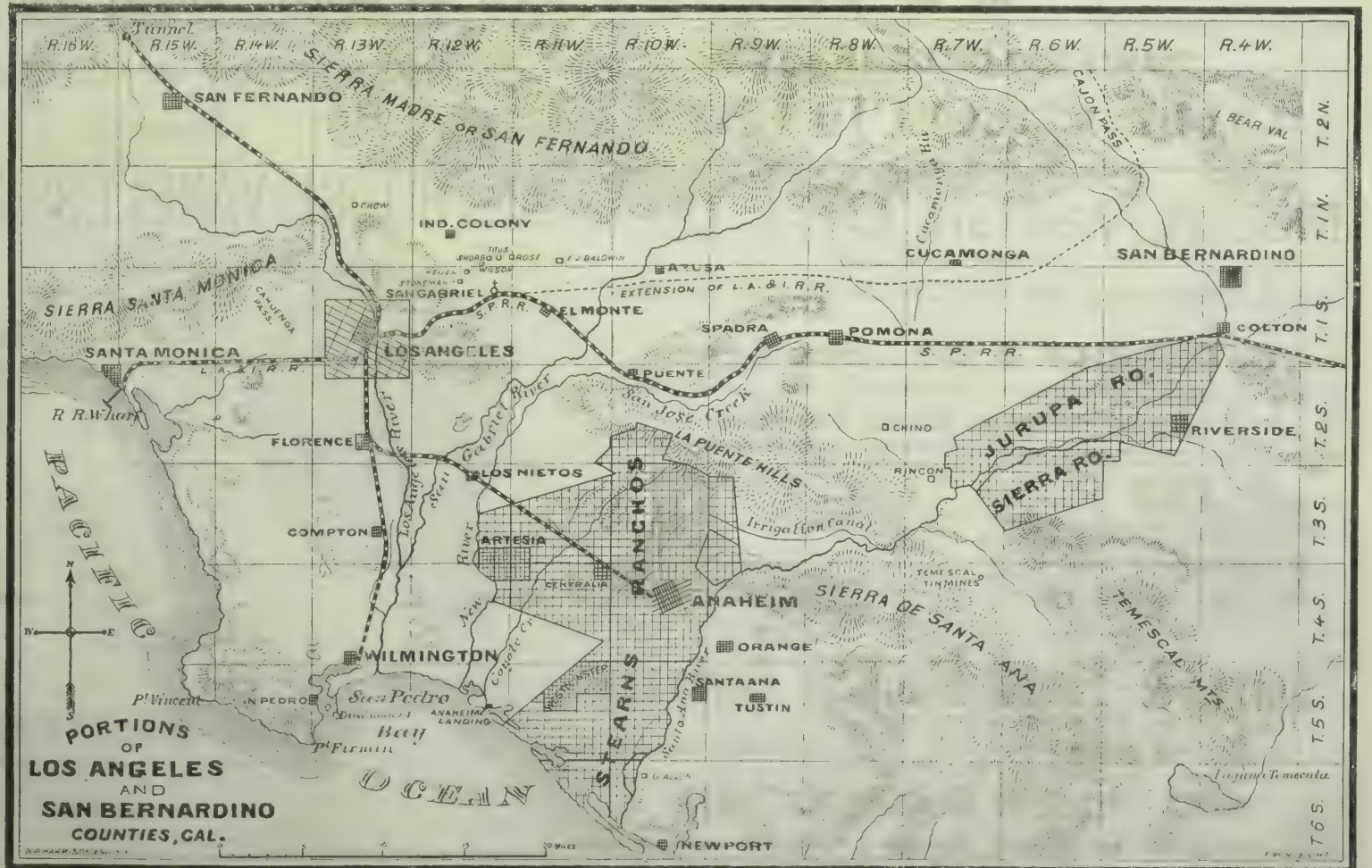
"Abel Stearns RANCHOS."

The Center of Los Angeles Valley.

Embracing Anaheim, Westminster, Artesia, Garden Grove, etc. Thirteen miles southeast of Los Angeles City, within the Artesian Well Belt. Hundreds of flowing pipe wells. Water near the surface. Rivers on two sides; ever-flowing creek runs through the tract. Front on the Ocean. Transportation and passage by Steamships or Railroad. Southern Pacific Railroad through the tract. Twenty-one hours from San Francisco. The unsold land for sale or lease in sections or fractions. Apply to Trustee A. ROBINSON, 318 California St., San Francisco.

Or to ROBERT J. NORTHAM, Anaheim, Cal., or concerning Westminster Colony, to REV. ROBERT STRONG, Westminster, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent. per annum. Send for Circulars and Maps.



AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.**, 163 Tremont Street, Boston, Mass.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the **MINING AND SCIENTIFIC PRESS**, San Francisco, at favorable rates.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, **Z. C. Atkinson, Sec'y, Cal.**

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO. Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the **SCAB OF THE SHEEP**. The BEST and CHEAPEST remedy known. Reliable testimony is at our office. For particulars apply to **CHAS. DUSENBERG & CO.**, Sole Agents, 513 Sacramento Street, San Francisco.



BOONE & MILLER, Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

THE WORLD-FAMOUS



"Osborne" Self-Binding Harvester.

HIGHLY IMPROVED FOR THE SEASON OF 1883.

TO THE FARMERS OF THE PACIFIC COAST. GENTLEMEN: We congratulate you upon the favorable results of the successful harvest now closed, and hope the prices realized for crops will fully meet your expectations.

We take pardonable pride in the conspicuous part borne by our machinery in garnering the harvest of 1882. A feeling appreciated by thousands of farmers using them throughout the entire Pacific Slope.

Our No. 1. Front-cut Mower, has maintained its reputation for durability and lightness of draft.

Our No. 2. New Pattern Front-cut Mower, encased gearing, has taken front rank this season and sprung into immediate and deserved popularity. The sales of this machine exceeded any other this year, and none ever gave more general satisfaction.

Our No. 3. Independent Reaper, has filled the expectations of ourselves and friends, and fully met the requirements of the trade for such a machine. It is more generally used than any machine ever made.

Our No. 5. Rear-cut Mower, is the best of its class, as innumerable testimonials from farmers using them amply prove; simplicity, compactness and strength being its essentials.

Our No. 6. Mower and Reaper combined—has no equal in its class. Any farmer who has ever used one will convince the most skeptical of its many points of superiority over any similar machine made.

Last but not Least, The now famous "Osborne" Self-Binding Harvester stands without a peer in the entire range of the machinery world. Their lightness of draft, simplicity and great durability—leading features in all our machine—are so well known that we need not enlarge upon them here, their immense sale throughout the grain-producing world being sufficient proof of their merit. Add to this several very important improvements made in our Binder for the season of 1883, is an assurance to our friends and patrons that we will maintain our position at the head of our respective line by our varied inventions and improvements.

We trust it will be no digression to say here that grain cut with our Binders, in every portion of the coast, is graded higher than any cut with headers or reapers, and commands a better price and readier market.

Grateful for the generous patronage accorded us in the past, our ambition shall be to merit a continuance of the same. Respectfully,

D. M. OSBORNE & CO., 33 Market Street, San Francisco.

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

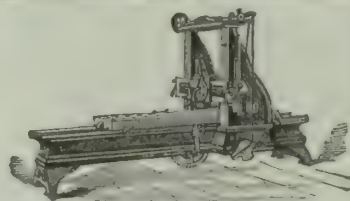
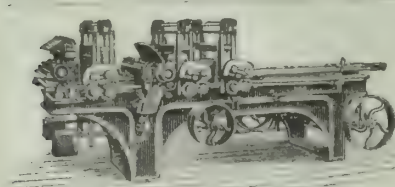
All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

BAGS, TENTS, HOSE, TWINES.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - - San Francisco, Cal

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. KIDMOUR & CO., 10 Barclay St., N. Y.

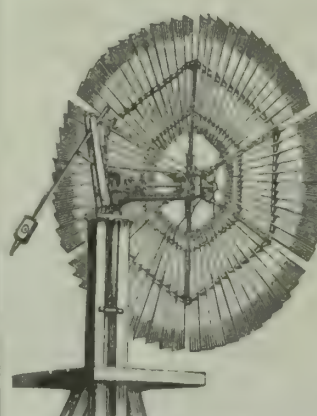
E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

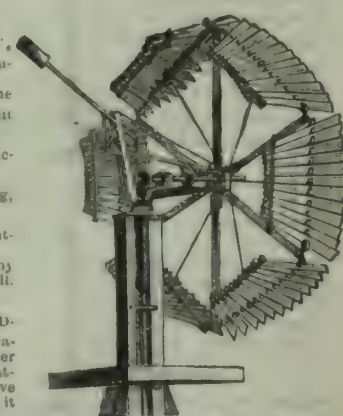
WOODIN & LITTLE'S

IMPROVED

ALTHOUSE VANELESS WINDMILL



IN A LIGHT WIND.



IN A GALE.

HAS
Superior points of merit.
It is a perfect Self-Regulator.
It will withstand the heaviest gales without danger of being injured.
It is simple in construction.
It is made very strong, and is durable.
It will run in the lightest wind.
It costs less than any other first-class windmill.

The ALTHOUSE WINDMILL has gained a reputation for itself that no other Windmill has ever attained, and all who have used it unite in giving it unlimited precedence.
It is especially adapted

to the wants of Farmers, Stockmen, Rail Roads and all who desire a constant and efficient water supply for PRIVATE RESIDENCES, etc. It is very ornamental and attractive. Buy one of our Improved Windmills and let the water do your pumping.

JUST RECEIVED.

A large stock of the popular "STAR" Lift Suction and Force and Deep Well Standards and Cylinders, both in Brass and Iron.

Importers and Manufacturers of

Pumps, Iron Pipe, Fittings, Brass Goods, Lawn Mowers, Lawn Sprinklers, Hose, Etc.

Call and see us or send for our Illustrated Catalogue and Price List.

WOODIN & LITTLE,

421 Market Street,

San Francisco

The State Fairs of California.

(CONTINUED FROM PAGE 182).

that date. The fair of 1876 was generally well sustained, though the cattle show was not so full as in several previous years, on account of dissatisfaction among some of the cattle breeders, arising from want of accommodations and alleged lack of attention on the part of the Board.

The Fair of 1877.

The 24th annual meeting of the society was held January 25, 1877. Marion Biggs, of Butte, was elected President, and Wm. P. Coleman, of Sacramento, L. U. Shippee, of San Joaquin, and W. Dana Perkins, of Placer, were elected for the full term of three years; E. C. Singleterry, of Santa Clara, and Mike Bryte, of Sacramento, to fill vacancies for two years; and G. A. Johnson, of San Diego, to fill vacancy for one year. The fair of 1877 was one of the most successful ever held in the State, exceeding, in a marked degree, the revenue of the one held in 1876. More and increased interest seemed to be manifested in the well-being of the society, and every effort was put forth by all classes to add to its importance and place it on a strong foundation.

The Fair of 1878.

The twenty-fifth annual meeting of the society was held on the 23d of January, 1878. Marcus D. Boruck, of San Francisco, was unanimously elected President. Directors—L. U. Shippee, Stockton; Dana Perkins, Placer county; W. P. Coleman, Sacramento; L. J. Rose, Los Angeles; Albert Gallatin, Sacramento; Mike Bryte, Sacramento; Daniel Flint, Sacramento; G. W. Colby, Butte county; E. C. Singleterry, Santa Clara. Robert Beck, Secretary; L. A. Upson, Sacramento, Treasurer. The fair was held Sept. 15th to Sept. 21st, and was a grand success in point of attendance and exhibits.

The Fair of 1879.

The annual meeting was held January 28th. The meeting was stormy. H. M. Larue was elected President, and the Directors as follows: L. J. Rose, R. H. Newton, G. W. Hancock, Cyrus Jones, W. P. Coleman, Daniel Flint, L. U. Shippee, Daniel Perkins and G. W. Colby. G. W. Gilbert was elected Secretary and L. A. Upson Treasurer. The fair was held September 8th to September 14th. The fair, as a whole, was pronounced a brilliant success.

The Fair of 1880.

The annual meeting was held January 20th. H. M. Larue was elected President without opposition. The following Directors were chosen: L. U. Shippee, W. P. Coleman, P. A. Finnigan. The balance of the list held over from the preceding year. L. N. Hoag was elected Secretary. The fair of 1880 was a notable success. The Pavilion was too small to hold the throngs of people. President Hayes was present.

In May, 1880, the Board was reorganized under the new law making the society a State institution. Gov. Perkins appointed as Directors the gentlemen who had been chosen by the society in January preceding.

The Fair of 1882.

There was no election of Directors at the annual meeting of 1881, as the officers had become appointive. In the choice of officers, J. Mc. M. Shafter was elected President, and E. F. Smith, Secretary. The fair of 1881 was held on September 19th to September 24th. The death of President Garfield cast a shadow upon the sport of the occasion, but the fair was well attended and successful.

The Fair of 1882.

At the annual meeting last January, H. M. Larue was chosen President, and E. F. Smith re-elected Secretary. The fair of 1882 is now at hand, with excellent prospects of success. The RURAL PRESS issues a special edition to be distributed at the fair, and it is the hope of the publishers that the paper will commend itself to the patronage of many who may view its pages for the first time.

The Benicia Agricultural Works.

The Benicia Agricultural Works are now the scene of great activity, as there is a great amount of work to be prepared for the opening of the plowing and cultivating season. The standard implements of the Benicia make are each year becoming more widely known and more generally called for. They have tools for nearly all agricultural purposes, and bring out the latest improvements which prove valuable. The works at Benicia are very accessible from all the interior of the State, and are worth a visit from all who delight in the upbuilding of the manufacturing interests of California. Some of the manufactures of the Benicia Agricultural Works will be found described in their advertisement on another page.

The Benicia Agricultural Works will have a general exhibit of their implements and machinery at the State Fair, and all visitors should look for it. In previous years most excellent exhibits have been made by the firm, and we are sure that this year they will do something very handsome.

A LITTLE lady, of two and a half years, had picked up a cane in the corner of the room, and was playing with it—a plain stick bent at the end. Papa asked, "What are you doing with the cane?" "It isn't a cane." "What is it, then?" "It's an umbrella, without any clothes on it."

MISCELLANEOUS.

Primitive and Modern Inventions.

While it is true that the tendency is, or should be, from complex machinery to simpler forms, the fact still remains that all varieties of labor-saving machinery of the present day are large compared with the primitive forms. We do not mean by this that they are unwieldy or difficult to manage, but one is apt to be struck with the comparative increase of size in modern machines, when placed by the side of the implements originally used for the same purposes.

The primitive form of grinding grain was with the pestle and mortar. Compare this with the ponderous millstones of the present day, and the disparity is very great indeed. The tendency of invention is to simplify and lighten. It will certainly bear it in the case of the millstone. The thrashing machine is another instance. A full-grown machine is from 12 to 18 ft. long and from five to eight feet high, many of them requiring 10 horses with a suitable power to operate. The primitive implement was simply two pieces of hard wood joined together loosely, one of them being used as a handle, while the other was impelled against the scattered straw. The sewing machine of 20 years ago was a clumsy affair compared with the present neat and light machines; still, the iron in any of the present-day machines would make 30,000 needles used in hand work. The planer is a machine of three or four tons weight, and a giant beside the little plane.

So many others might be mentioned, all of large structure, gradually being lessened, so that we may expect a time in the near future when perfected machines will again more nearly approach the size originally used, and beendowed with the vigor and capacity of those in use.

Edge-Tools.

All cutting and piercing edge-tools operate on the principle of the wedge. A brad-awl furnishes an example which all can readily understand. The cutting edge of the awl severs the fibers of wood as the instrument enters, and the particles are compressed into a smaller compass, in the same manner as when a piece of wood is separated by a wedge. A chisel is a wedge in one sense; and an ax, drawing knife, or jack-knife is also a wedge. When a keen-edged razor is made to clip a hair or to remove a man's beard, it operates on the principle of the wedge.

Every intelligent mechanic understands that when a wedge is dressed out smoothly, it may be driven in with much less force than if its surface were left jagged and rough. The same idea holds good with respect to edge-tools. If the cutting edge be ground and whet to as fine an edge as may be practicable with a fine-gritted whet-stone, and if the surface back of the cutting edge be ground smooth and true, and polished neatly, so that one can discern the color of his eyes by means of the polished surface, the tool will enter whatever is to be cut by the application of much less force than if the surfaces were left as rough as they usually are when the tool leaves the grindstone. All edge-tools, such as axes, chisels and planes, that are operated with a *crushing* instead of a *drawing* stroke, should be polished neatly clear to the cutting edge, to facilitate their entrance into the substance to be cut.

THE PASSIVITY OF IRON has been studied under new conditions by M. Bibart, who considers that it is not produced by a layer of insoluble sub-nitrate, as some physicists have thought, since the previous action of nitric acid is not necessary. Still less is it due to a formation of bioxide of nitrogen. It is produced by any cause which tends to oxidize iron, and destroyed by any cause which tends to deoxidize it. It is due, then, either to a layer of oxide or a layer of oxygen. The oxides formed on the surface may preserve it by their very presence, furnishing a sort of unattackable varnish, or they may preserve it like platinum, liberating, on the denuded parts, a protective layer of oxygen. The passivity of iron from contact of platinum seems to be produced at first by the platinum layer of oxygen condensed on a simple surface (a simple shock destroys it). But by degrees a layer of oxide is formed, and the iron then loses its passivity much less readily than before.

EFFECTS OF COMPRESSION ON THE HARDNESS OF STEEL.—Mr. Lau reports that at the works of Saint Jacques, at Montlucon, France, the method of compressing cast steel has been applied on a large scale. The process consists of submitting the molten metal to the action of a hydraulic press which can exert a pressure of from about 15,000 to 22,000 pounds per square inch, the pressure being kept up until the ingot has solidified and cooled. The result of this method is similar to that obtained by M. Clemandot's process, a brief account of which was given a short time since. It is said that numerous analyses, made with a view of ascertaining the quantity of carbon, have shown that the quantity of combined carbon in proportion to the total quantity of carbon is greater in the compressed than in the ordinary steel.

In a suburban town lives a relative of that immortal Mrs. Malaprop. The other evening a caller asked if Mr. — was at home and could be seen. "I think not," was the reply, "I believe my husband has expired for the night."

Digestion of Food.

Dr. E. M. Hunt, of Metuchen, N. J., in a paper read before the Sanitary Association, thus generalizes the facts of digestion:

"Food should pass into the stomach in a finely divided state. The rapidity with which digestion is performed depends upon the various circumstances. Strong emotion, as anger or grief, will retard it; moderate exercise hastens it, and thus the state of both body and mind influences it. A usual meal is generally digested in a healthy person in from three to five hours. A mixture of food is not especially objectionable, except as by variety it encourages the appetite, and often leads us to consume more than is needful. Animal food is digested more quickly than vegetable, and solid food more speedily than soups. Oily food is more quickly appropriated by the system than muscular fiber, when agreeing with the stomach. Uncooked oil is more digestible than cooked. Cream and butter are the purest of oils. Boiled meats are the most digestible, roasted next, broiled and fried the least so.

Bulk is necessary to digestion. The people of cold climates, who live much on fat meats, mix crude matters—sometimes even sawdust—with them, and thus find them more readily digested. Milk is among the most nutritious and digestible of foods. It is considered constipating, but the chief reason is that it is almost entirely taken up by the system, and no residue left. With the same exertion, we need richer food in cold weather than in warm. Never eat between meals, unless extra exertion or exposure require it, and then select hearty and quickly digestible food.

As a rule, ripe fruits or vegetables are more digestible than green, and green fruit stewed more digestible than when eaten in the raw state. Smoked meats are less digestible than fresh; and of smoked or salted meats, the inner portion is more easily digested than the outer part. The inner part is preserved as much by the saltpeter and the exclusion of the air as by the salting and smoking process, and is in a state more allied to preserved fresh meat. Dried fruits, as prunes, raisins, apples, etc., are unfit to eat unless well cooked, and all unbroken seeds are indigestible. Alcoholic stimuli, or condiments of any kind, are not necessary in healthy conditions of the stomach.

MAKING BELTS.—A mechanic gives the following directions for managing belts. He says: "I have for the last 25 years, on every Saturday evening, turned the inner side of my engine-belt outside, let the engine run slowly, and washed the belt well with warm water and soda, applied with cotton waste. Next I take a piece of sheet-metal and scrape the belt well, then wash with clean warm water and dry off. I collect the waste oil from the shafting and apply as much of it to the belt as possible. The washing must be done as quickly as possible, so as not to dissolve the glued parts. I let the belt stand on the pulleys till Monday, then give another scraping and turn the belt as before. I keep the pulleys very clean. I have long been surprised at the economy I have effected with very little trouble. I have not bought a new belt for the last 10 years. There is an engine near me 14 inches by 36 inches (mine is 12 inches by 36 inches). I have nearly double the shafting and belt, and my neighbor cannot run with less than 35 lbs. of steam when all the belts are on the loose pulleys. Mine will run at full speed with five pounds."

RESTORING FADED INK.—A valuable discovery has been recently made, whereby the faded ink on old parchments may be so restored as to render the writing perfectly legible. The process consists in moistening the paper with water and then passing over the lines in writing a brush which has been dipped in a solution of sulphide of ammonia. The writing will immediately appear quite dark in color, and this color, in the case of parchment, it will preserve. Records which were treated in this way in the Germanic Museum in Nuremberg, 10 years ago, are still in the same condition as immediately after the application of the process. On paper, however, the color gradually fades again; but it may be restored at pleasure by the application of the sulphide. The explanation of the action of this substance is very simple; the iron which enters into the composition of the ink is transformed by the reaction into the black sulphide.

POTASH SALTS AND ALUM FROM FELDSPAR.—A recent procedure for manufacturing salts of potash and alum from feldspar consists in treating the pulverized mineral with sulphuric acid and fluospar. The hydrofluoric acid liberated by the action of the sulphuric acid on the fluospar, decomposes the silicate, and the potassa and alumina set free combine with the excess of sulphuric acid to form sulphates. It is only necessary, when the action is complete, to add a certain quantity of water, and then to decant off the supernatant liquid, when the alum will crystallize out. Large quantities of alum are at present manufactured in this manner.

FAMILY CONFUSION.—An old darkey was endeavoring to explain his unfortunate condition: "You see," remarked he, "it was in dis way, as far as I can remember. Fust, my fadder died, and my mudder married agin, and den my mudder died, and den my fadder married agin, and somehow I doesn't seem to have no parents at all, nor no home, nor nuffin."

Go to the Fairs!

The term "Fair" may not always be the most appropriate one for the autumn shows. Exhibition is a better word, but far less frequently used. Not only should the farmer go to the fair, but he ought to take his family with him. The going, simply, is not enough. All members of the household should make it a point to take something to exhibit. One of the boys may take a fine colt, and if it is his own, there will be all the more pride in obtaining a prize. Another son may have a yoke of steers that he has trained for the exhibition. As for the girls, there are a thousand different things that can be made with the needle that will grace the walls of the "woman's pavilion," or the rooms of the household department. Even so common a thing as bread may be baked with special care, and will attract much attention. Then there are the garden vegetables, potatoes—a new kind, perhaps—pumpkins, squashes, etc., and the products of the farm and orchard. It is not wise to leave all these things at home, and then criticise the exhibition because you can say: "We have better things at home." To go and take things to the fair is not enough. The exhibition should become a school at which all exhibitors and visitors make a study of the implements, cattle, poultry, fruit, grain, etc., that are there. A farmer may owe his success in growing some crop to the knowledge gained at a town fair. The farmer that has a real pride in the farm will take great interest in the local fair, and will exhibit the best products of farm life in the boys and girls, who are interested exhibitors at the fairs. The day at the fair should be a social one, every one making it a point to meet many neighbors and others with a pleasant word. It is a place for asking and answering questions, and the person who goes through the exhibition without opening his mouth is certainly not getting all the good that is within his reach. It is our advice that all go to the fair—all take something to show, and all find out as much as possible about all the various exhibits that are made by others. In this way the day at the fair will be a most profitable one. It may be that a premium will not be taken by every one, but the prize money is only a small part of the value that an exhibitor may receive from a fair, that has been used as a means for a better understanding of the products of the farm, garden and household.—*American Agriculturist for September.*

SINGULAR PROPERTY IN STEEL.—It is well known that a steel that is very flexible when cold often breaks at the blue annealing temperature. It has generally been considered that the purer the iron is the less subject it becomes to this defect; but the workmen of the Ural mountains, who use iron of remarkable purity, have often observed the same fact. Mr. Adamson has found that the metal becomes powdery at a temperature between 260° and 370° C., (500° and 698° Fah.), or the temperature at which willow twigs take fire. This phenomenon seems to explain a large number of accidents, as for example, the breaking of tires under the action of brakes and the fracture of riveted molds and of machine arbors which become heated by friction.—*Ann. du Gen. Civ.*

HEAVY MODERN MACHINERY.—A mass of melted iron of a ton weight was unknown before the Christian era. Now those in cast iron up to 150 tons, in wrought iron to 40 tons, and in steel or bronze to 25 tons, are made in any desired form, and turned or bored with the most perfect accuracy. Two years ago I saw the largest lathe in England, which swings 22 ft., and will take in a shaft 45 ft. long. Six months ago I saw one in this country which swings 80 ft., and will take in a shaft of 50 ft. There are planers which will plane iron 50 ft. in length; others of 18 ft. in width; others of 14 ft. in height, taking off metal shavings of two and a half inches in width and a quarter thick.—*Hon. W. J. McAlpine.*

A WOUNDED VETERAN.—The average Washington claim-agent is not a man to be disturbed by any scruples of conscience. "You say you were wounded during the late war?" "That's what I said," returned the applicant for a pension. "Do you remember what year it was?" "In 1864, I think." "Where were you wounded?" "In the wrist." "Was it a minnie ball?" "Not exactly. Her name was Minnie, but it was a corset-bone that wounded me." "All right," exclaimed the agent, "we'll call it a bayonet stab." And to-day the corset-soared veteran is occupying a lucrative place on Uncle Sam's pension roll.

MRS. BROWN.—"Dear me, Mrs. Jones, are those tall young ladies really yours? I had no idea you had daughters grown up." Mrs. Jones (who is still possessed of considerable personal attraction)—"Oh, yes! I was married at 15, you know." "And is that young gentleman really your son?" Mrs. Brown (who is also possessed of ditto)—"Yes—a—I was married at 12."

WHITE MOUNTAIN CAKE.—One cup of sugar, one-half cup of butter, one-half cup of sweet milk, one-half cup of corn starch, one cup of flour, the whites of six eggs, a little vanilla, two teaspoonfuls of baking powder. Bake in layers. Frosting for above: Take the whites of five eggs, twenty tablespoons sifted sugar beaten very light; a little vanilla. Spread between layers and outside of cake.

POULTRY YARD.

Poultry Notes.

We glean from the pages of William Niles' "Pacific Coast Poultry Book," a collection of useful hints and valuable considerations concerning the care and handling of fowls in this State which will be of interest to those of our readers who have not read the book in question: Keeping Poultry on a Large Scale.

When one begins to entertain thoughts of poultry on a large scale, and pictures in his imagination a large fowl house, with 400 birds perched at night in long rows close together, only waiting for the morning to seek their nests, lay eggs and cackle, all healthy, bright and productive, he is on dangerous ground. He must not use the rule of three in this wise: "If 20 hens in a snug, warm house, receiving odd bits of meat, potato and fat, besides regular feed of grain, will produce \$20 profit in a year, how much will 400 hens produce in a large hen house?" This problem has been wrought out and believed in, as the unerring result of mathematics, but in the end, after expensive experiments, produced, almost uniformly, disappointment and loss. But how can a man keep 400 hens profitably? I answer: Just as 20 men keep 20 hens each in a village, each man keeping a few separately, each flock having a snug warm place in winter, and a variety of food, "odds and ends," such as every housekeeping establishment furnishes. If 400 hens are kept together in one building, the result is sterility, egg-eating, feather eating and the prevalence of some fatal type of disease, as roup or cholera. This has been the general experience of those who have made the experiment. If a man wishes to keep 400 hens, let him make a "hen village." Build it on dry soil, placing the buildings eight rods apart; have them tight, but not necessarily expensive; treat each family of fowls just as any man who is successful treats his small flock, giving the same feed of grain, flesh, fish, fat, vegetables and shells.

Keep Accounts.

Perhaps there is nothing more necessary to success than a record of our poultry receipts and expenditures; noting the number of eggs laid and the average price per month, the number and prices of chickens, turkeys, ducks and geese during the year, together with any observations or suggestions which may be noted from time to time. By reference to such a record, we may learn what months are the best in which to sell eggs and poultry, and manage so as to reap the benefit of high prices; also buy grains, etc., at the cheapest seasons of the year; thus making all transactions to as good advantage as possible.

Old Mortar

In all cities, towns and villages, old mortar can be had for the taking away from torn-down buildings or buildings undergoing repairs, and poultry raisers should attend to it and lay in a supply whenever an opportunity offers, as it is one of the very best things that can be given to laying hens. Besides it acts as a disinfectant, and also as a destroyer of lice in the poultry house. Altogether, it is one of the best things you can get for your poultry, and you should not neglect an opportunity of laying in a good supply whenever you can.

Catching Hawks.

Whenever you see a hawk fly off with a chicken, follow him at sufficient distance to allow him to get well agoing with his repast before you molest him; but be sure and frighten him away before he has devoured the whole chicken; then set your steel trap where you found the chicken, covering it well with the feathers for bait, and in a few minutes after you are out of sight, the unsuspecting pirate will pounce down and take possession of that trap in a way that will allow you to carry it home at your leisure.

Gravel.

Fowls differ from animals in many ways, but particularly so in the way in which they reduce their food preparatory to assimilating it. Nature has supplied animals with teeth, as well as powerful gastric juices, to aid in preparing and reducing the food, but birds resort to different agencies for the accomplishment of the same. Gravel, sand, or some other similar substance, is almost as essential to the fowl's well-being as is food, and if fowls are kept in confinement and not supplied with this, no matter how much grain you may supply, they will not thrive, or even keep healthy, for any length of time. Unless supplied in liberal quantities at long intervals, fine gravel or coarse sand should be regularly supplied, so the fowls will not be compelled to use the same several times over, which they will otherwise be obliged to do. It is surprising to see how the small gravel or pebbles will be worn even by the fowls using them once in helping them in the process of ginding, and, when used several times, they become so smooth as to be of little practical use. If fine gravel is not convenient, take time and screen out some coarse sand; put away safely in a barrel, in some convenient place, and it is ready for use whenever desired.

How Many Hens in One Lot?

I frequently have the above inquiry. Of the large breeds, not more than 30, and of the

smaller, never to exceed 50—better not more than 40. As a rule, the fewer hens there are together the greater the profits from them. It is well to so arrange that the house can be divided into two parts, and use them alternately. This gives a chance to seed the vacant yard with growing grain, and when well up, turn the fowls upon it, and serve the other in the same way. Doing this enables the breeder to afford his flock fresh green food constantly. A great many people make the mistake of arranging their roosts like stairs, or a ladder, which the fowls will all want to climb, to occupy the topmost one, and crowd for it. It is better to make the roosts low and level. There will then be no crowding for places, and the birds will not get practice in flying up, so as to teach them more readily to scale high fences. To be profitable, hens must be well fed, with a good variety of grain, meat, and vegetables. When they are well cared for, they are like a machine power "turned on"—it must work. Eggs they must lay, and cannot help it.

Handling Improved Poultry.

One of the important principles in breeding of improved poultry, and the principle will apply as well to the breeding of stock of any kind, is the necessity that each individual should be absolutely without fear of those who care for them. Many clutches of eggs are ruined every year by inattention to this matter. The birds should be used to being handled, and should be taught to come freely to the breeder or the attendants at a call. If birds are early taught this lesson, and are never allowed to be frightened, they will have no fear whatever of those about them, and will soon come to be as much attached to the attendants as the house dog. On the other hand, if allowed to be driven and goaded about, they never forget it. If properly handled, they will not only give uniform satisfaction while sitting and rearing their flocks, but will also thrive better and fatten more easily.

Your Very Best.

Honest work will tell in the end, no matter how jealousies or petty intrigues may retard its progress. Honest work, a continuous strife for perfection, is what has triumphed over obstacles and bitter struggles and brought its fitting reward of success. The poultry business has only been fairly recognized as a real industry of national interest for a brief 10 years or even less. Yet what grand results have been effected by men who, starting with no fixed aim beyond doing their very best, have acquired the reputation of successful fanciers solely by persistent endeavors. Honest care is the only real foundation for success in the poultry business, and we would earnestly advise all would-be-eminent poultry breeders to commence squarely with the determination to first of all be honest, and trust in that sure touchstone to give them their due portion of success. Honesty pays in any business; but in none more than ours is it beyond question "the best policy."

How Many Varieties?

Keep no more than can be kept well. A breeder who keeps but one variety may be otherwise engaged, so as to neglect it more than the breeder who keeps two or more, and makes poultry a thorough study and business. The number of varieties one keeps is no criterion by which to estimate the grade of his stock; more depends on skill, thorough management and application. We are not of those who believe no person capable of successfully keeping but one breed, and making a specialty of it. I do believe one breed is all a great many people ought to keep; and more, too, while there are others who can keep a large variety and breed them all well. I hold there is no limit to man's capacity to acquire knowledge and develop the mind in any given direction. With ample room, where poultry breeding is made a business and study, no one can afford to run one breed only, and no one breed will satisfy the desires or gratify the tastes of a mind large and active.

Number of Hens for a Cock.

Of Asiatics, 6 to 10; of Games, Leghorns, Houdans, Spanish and the smaller breeds, 10 to 20. All breeding cocks should be strong and vigorous. When eggs fail to hatch, the cock is invariably blamed, which is not necessarily the case. Too few hens with the cock, want of exercise, over-fattening and over-feeding are all certain and prolific causes of sterility.

Mating and Breeding.

The breeder must be the architect of his own success. He must form in his mind the ideal, the kind of bird he desires to produce, and breed for it; to a limited extent, he may draw upon the skill of others, but if he has no skill of his own, or love for the business, failure will likely follow his undertaking. When the breeder selects and mates up his breeding yards, he is molding for better or worse the young stock of another year. There is much in care and feeding, but it is in mating the breeding stock that science and skill are most apparent. In this we form the shape and develop the bird in any given direction, or in all essential points. A mistake, and the outlay of a season is lost. A hit in improving upon the parent stock, and a step is made in the line of progress that will benefit all interested in the breed. The rule of like producing like cannot be ignored, but we do not always obtain the best results, either in shape or color, by breeding together exhibition birds. It is important, then, for the breeder to know what he wants, and then mate his birds to attain it. As a rule, the best results are

produced by mating so as to balance the defects on one side, with high perfection on the other, avoiding as much as possible all serious defects.

Poultry Keeping a Science.

It is time to speak plainly, and let it be understood, that the poultry business is not simply a pastime, but a science which must be learned by study and experience, just as any other science is learned. Knowledge and skill are requisite to success here as elsewhere. The public must, therefore, get rid of the idea that poultry keeping requires no knowledge, skill or experience. It is time that less enthusiasm and nonsense and more skill and science were seen in the business. When this comes to pass, we shall hear much less complaint of loss and trouble from the ordinary hindrances. There can be no question that much of the trouble complained of is caused by the poultry-keeper not knowing, or not practicing the best management, or even good management.

The Irishman makes a savings bank of his pigs, but a number of months must elapse before butchering time comes and dividends are declared. Raising cattle is still slower work. But a chicken is eatable at three months old, and money paid for corn can be turned to cash again in three days through the medium of the well-filled egg basket.

THE DAIRY.

Cheese Making at Home.

No doubt there are many farmers who would like to have a few cheeses for family use, and made from the milk of their own cows; but living away from any cheese factory, and the good wife not knowing how, perhaps never having seen a cheese made, the family goes without, except as a few pounds are purchased at occasional intervals. W. H. White gives the *Country Gentleman* an account of home cheese making, which may be useful to some of our readers:

The things actually needed are a cheese tub to "set" the milk in, a good basket and strainer cloth for draining the curd, a press and hoops of different sizes to accommodate the different-sized cheeses to be made. Take pieces of well-cured calves' rennet, soak them in warm water a few hours, pour off and add more, rubbing them occasionally, adding as much salt as will readily dissolve, strain off the liquor, and put it with the first into a bottle or jar, adding so much rock salt that all will not dissolve, but some always remain; cork tight and keep cool. When the night's milk is brought in, strain immediately into the tub and put in sufficient of the rennet extract to bring the curd in from 10 to 20 minutes. As soon as firm enough it should be cut into checks or cubes with a wooden cheese knife. After waiting as long, it is again cut finely and left to settle till bedtime, when it is dipped into the strainer, spread in the basket and left through the night to drain. If from any cause the curd should not come sufficiently to separate the whey before bedtime, it may be left in the tub, but this is not so well, as it may sour.

In the morning, the tub, having been washed the previous evening, is rinsed in cold water, unless the weather is cool, when warm water is used; the morning's milk is strained into it, and the same process is again gone through with until it is ready to drain, when it is dipped in with the night's curd, and then both are treated together. The whey which runs off in the morning is carefully heated over a slow fire, not so hot as to scorch, but as warm as the hand will bear. When the curd has become sufficiently firm to cut into slices, which condition may be hastened by frequent cutting with a knife, and by a light weight laid on it, it is cut in thin slices, into the tub, and warmed whey poured over it, sufficient to cover the curd well, and the whole is carefully stirred, so that all the curd shall be evenly scalded; and in from 15 to 20 minutes it will be sufficiently scalded to be dipped off into the strainer basket to drain and cool. In about half an hour, by occasional turning and cutting, it will be sufficiently cool to return to the tub, be chopped fine, and be salted with the best of fine dairy salt. A teaspoonful of salt to curd sufficient for a cheese of 10 to 12 lbs. is about right, and should be evenly stirred and mixed with the curd, which is then dipped into the hoop, having a cheese cloth spread in it, and then put to press, subject to a moderate pressure until toward night, when it is turned, and an increased pressure added until the press is wanted for the next cheese the following morning, when it is ready to go into the curing-room.

Care is to be used not to press too heavily, or a milky-white liquid will flow from the cheese, which will drain away the best part of the cheese. This method has advantages over some others, in that it prevents the cream from separating from the night's milk, which can never be so well incorporated again; saves labor in cooling and again warming the milk, and, if judiciously and properly done, it makes good cheese. It is pleasant, also, to know of what and how it is made.

Eastern Factory Cheese.

Many of those now engaged in factory cheese making in this State came to this State from the cheese region of New York State, and of other States, where they manufacture especially for export to Great Britain. Others have taken up the business here, or have come from regions not tributary to the English market. To this latter class a short statement of the chief points of the method used in making this fine factory cheese will be of interest. Prof. X. A. Willard recently gave the *Rural New Yorker* such a statement, which we quote as follows:

The most popular cheese for export is the cheddar. It is from 14 to 15 inches in diameter and from 10 to 12 inches high. It is free from porosity, firm and solid in texture, yet is mellow and plastic when a piece is pressed between the thumb and finger. Its flavor is clean, mild and nutty, and its meat is rich and easily dissolves under the tongue.

The leading characteristics in the production of fine cheddar are, in the first place, good, sound, whole milk, or milk containing all its cream, and free from any filth or offensive odors. It is then set at a low temperature, say from 82° to 84° Fahr., and a sufficient quantity of rennet added to coagulate the mass in from 40 to 60 minutes. In the cheddar practice the curds are cut and broken into fine particles, that heat may act on all parts alike. In the first stirring and breaking the curds are handled very carefully, and this part of the process is done without any additional heat. After breaking, heat is applied and the temperature gradually raised to 98° or 100°, according to circumstances of weather, etc., the mass meanwhile being carefully stirred. It is then left at rest and only occasionally stirred, until a scarcely perceptible change towards acidity is indicated in the whey; the whey is then immediately drawn, and the curds allowed to develop the proper acidity while being well exposed to the atmosphere. The curds are now ground in a curl-mill and salted, and then put to press. In the English practice the curds are put to press before salting for about 10 minutes, and then taken out and run through a curd-mill, when they are salted at the rate of two pounds of the best salt to a hundred-weight of curds. In the American practice, the curds being more moist than in the English practice, they are salted heavier—the proportion at the factories ranging from two and one-half to two and seven-eighths lbs. to 100 lbs. of curd or 1,000 lbs. of milk.

The principles of the *English practice* (the main parts of which are now copied by first-class factories in America) may be briefly stated as follows:

1. Studying the condition of the milk.
2. Setting at a temperature of from 78° to 82° Fahr.
3. Drawing the whey early on the near approach of acidity.
4. Exposing the curd for a long time to the atmosphere, and allowing it to perfect acidity after the whey is drawn.
5. Putting in press for a short time before salting to expel surplus moisture.
6. Taking it from the press and grinding in the curd mill and then salting.
7. Returning the curd to press, and when sufficiently pressed removing the cheese to the curing room, where it is kept at a uniform temperature of about 70° Fahr.

I have not attempted to go into all the details of cheddar manufacture, as this would have required a long article. I have only alluded to the leading principles of the practice, from which cheese makers may perhaps draw some useful hints.

A Commendable Enterprise.

An instance of progress in the right direction is found in the operations of the Judson Manufacturing Co. They are home manufacturers, and are now erecting large shops in Alameda county, and will employ a large number of men, whose wages will be spent among us, and thus go to build up our markets for farm produce. Another item of interest in this connection is that the Judson Company gives to the public a California-made mower—the "Victor"—which is said to be an embodiment of the latest improvements in mowing machinery and a model of simplicity. It has been tried in the field the past season and is highly commended. Some points are noted as of especial value, to wit: Doing away with a joint at the end of the cutting bar. This allows them to fold the bar to pass obstructions while in motion; also the pitman is in direct line with the knife, instead of working with one end much above the level. This is said to be a great advantage, as it is not lifting the knife away from the guards. When mowing on a ridge or levee, the outer end of the bar can drop 18 inches below the level of the wheels; this no jointed bar can do. The Victor mower is claimed to be the best ever made for cutting alfalfa. The Judson Manufacturing Company are now manufacturing large numbers of the Victor, and anticipate a brisk demand for the machine.

THE moon, like some men, is brightest when it is full.

A. W. SANBORN & CO.,

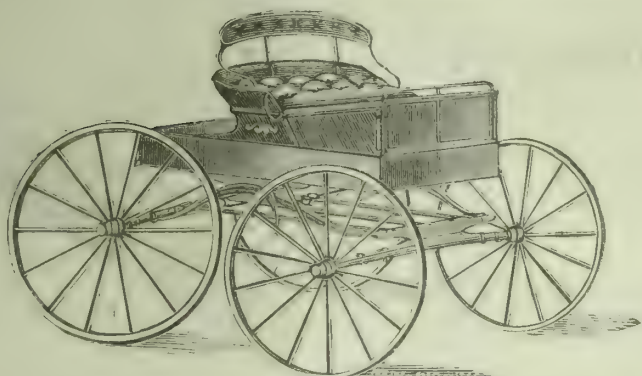
Manufacturers and Dealers in

CARRIAGES, EXPRESS, THOROBRACE & BUSINESS WAGONS,

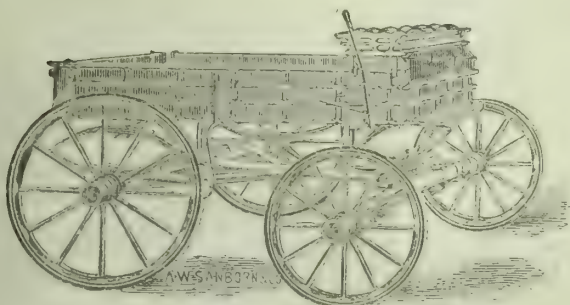
From their own Manufactory in Manchester, N. H. Also Agents for the

MITCHELL FARM AND SPRING WAGONS,

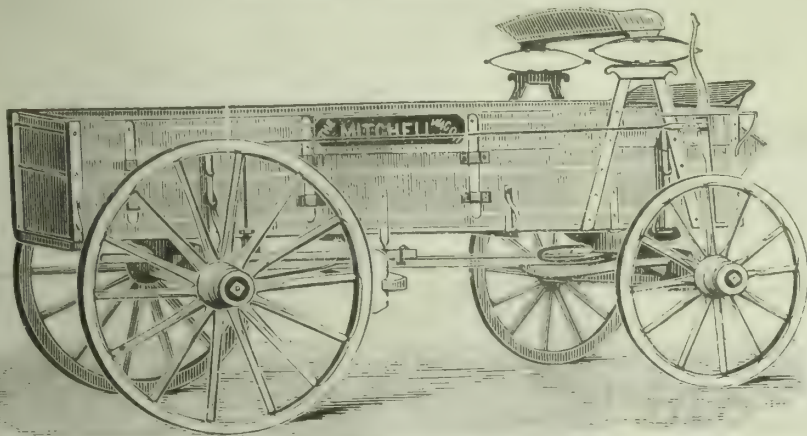
Nos. 24 and 26 Beale Street, San Francisco.



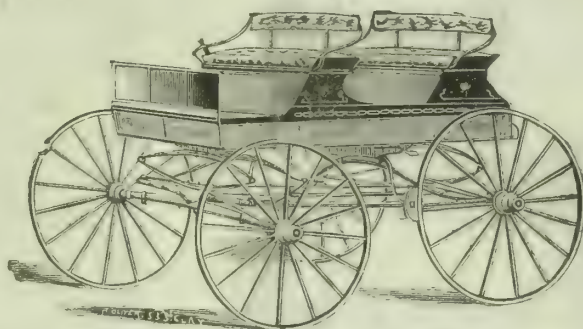
SIDE SPRING BUSINESS WAGON—THREE SIZES.



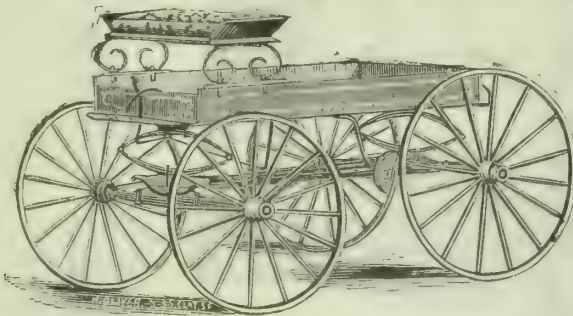
EXPRESS WAGON—Five Sizes.



MITCHELL FARM WAGON



FOUR SPRING WAGON FOR RANCH AND FAMILY USE—THREE SIZES.



MILK AND DELIVERY WAGON—Six Sizes



THOROBRACE WAGON TWO OR THREE SEATS—THREE SIZES.

A. W. SANBORN & CO. CLAIM FOR THEIR WAGONS SUPERIORITY IN DURABILITY, ESPECIALLY IN TRYING CLIMATES.
Price Lists and Catalogues Sent Free on Application.

PATENT STEEL WIRE BALE TIES.



Why do you waste Time making Ties in the field when you can buy them Ready Made Almost as Cheap as the Wire in the Coil?

We have on hand a large quantity of steel wire bale ties ready for immediate delivery which we will sell at the prices named in the following table.

No. 15 wire, 8 ft. 6 inches long.....	\$18.00 per 1,000
No. 14 wire, 8 ft. 6 inches long.....	22.00 per 1,000
No. 14 wire, 9 ft. long.....	23.50 per 1,000

For Dederick Presses, 17x22 bale, use ties 8 ft. long, No. 14 for heavy work, No. 15 for light. For Dederick Presses, 14x18 bale, use No. 15 wire 8 ft. 6 inches long.

For the California Chief and Economy Presses use No. 14 wire, 9 ft. long. For the Price or Petaluma Press use No. 15 wire, 9 ft. long. For all other upright presses use No. 15 wire of such length as may be required by the size of the bale.

Advantages of Adjustable Steel Ties.

1. They are adjustable, hence sure, and no delay.
2. When secured, they stay, and never come loose.
3. They hold the bale closer, hence more hay in a car.
4. They require no needle to pass them through.
5. They require no stretcher.
6. Yet are the only tie adapted to the use of the stretcher.
7. They may be run over from the bale and used over again.
8. Hence will all be returned at low prices.
9. They may be worked with heavy gloves without inconvenience.

Comparative Cost of Coil Wire and Prepared Bale Ties

Experience will teach that the same number of tons of hay can be more safely secured, and at less cost by our prepared ties, than by the use of coil wire. In the use of coil wire one or two sizes larger is required, and then, the wire is not reliable at the fastening; add to this, the bother and loss of time in its use, the loss of wire, cost of repressing and loss of hay, in transit and in the market by reason of broken bales, and we are certain coil wire cannot be economically used.

JACKSON & TRUMAN,

Cor. Sixth & Bluxome Sts., S. F.

JACOB PRICE,

San Leandro, Cal.

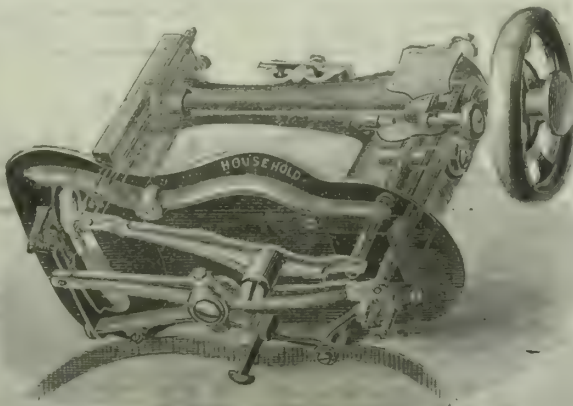
SEND FOR PRICE LIST OF THE

Easy Running, Simple and Beautiful



“HOUSEHOLD.”

This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



THE SHUTTLE

Is very simple, of cylinder shape and open at one end. The

BOBBIN

Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

It has a loosely wheel for winding Bobbin without running the Machine. The

TREADLE

Sets on anti-friction bearings and never requires oiling. It is the Finest Finished Machine ever offered to the public.

MARK SHELDON,

Wholesale Agent,

9.11 & 13 First St., S. F.

HOUSEHOLD HEAD.

"THE EASY RUNNING," "THE SIMPLE AND BEAUTIFUL," "THE COMPLETE" "HOUSEHOLD," SEWING MACHINE.

(Manufactured by the Household Sewing Machine Company.)

"A TREASURE." "PERFECT IN WORKMANSHIP."

The "Household"

Has been perfected in all its details by some of the best mechanics in the country, who, with unlimited resources at their command have devoted years to its construction, and have produced a machine

COMBINING MORE GOOD POINTS

Than any ever before presented to public favor. All the parts of the "HOUSEHOLD" are made with the utmost care and are subjected to a thorough inspection with gauges before being assembled.

Among the features which recommend the "HOUSEHOLD" are the following:
It has a high arm, giving ample room for any kind of work.
It is the easiest running, butte machine ever made.
It is almost noiseless.

It has a cylinder shuttle of great simplicity, being opened one end, thus allowing the bobbin to be readily inserted without displacing any of the parts. The bobbin holds an extra large amount of thread and runs loose in the shell, without spring centers or point bearings, insuring an even and automatic tension.

It has a loose fly-wheel attachment for filling the bobbin without running the machine, and the fly-wheel is nickel plated on all styles above No. 24.

Every running part of the machine is made of cast steel, hardened, thereby insuring great durability.

We believe it to be the finest finished machine ever offered to the public.

It is provided with a complete outfit of Attachments for doing all the different kinds of plain and fancy work.

The Cabinet Work is made in the most thorough manner, and is built up of perfectly seasoned lumber, so it is not liable to warp or crack. It has a handsome gothic top, French finish cover, and presents a neat and attractive appearance.

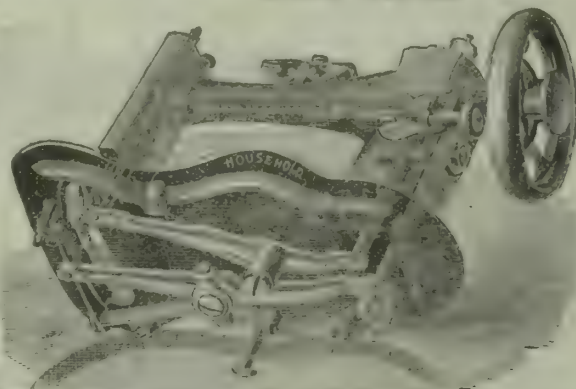
The treadle sets on anti-friction bearings that run very light, and never need oiling. This saves the carpet from dirty grease spots so often found under other machines.

The Stand is on four castors, so that the machine can easily be moved for sweeping, or convenience of position.

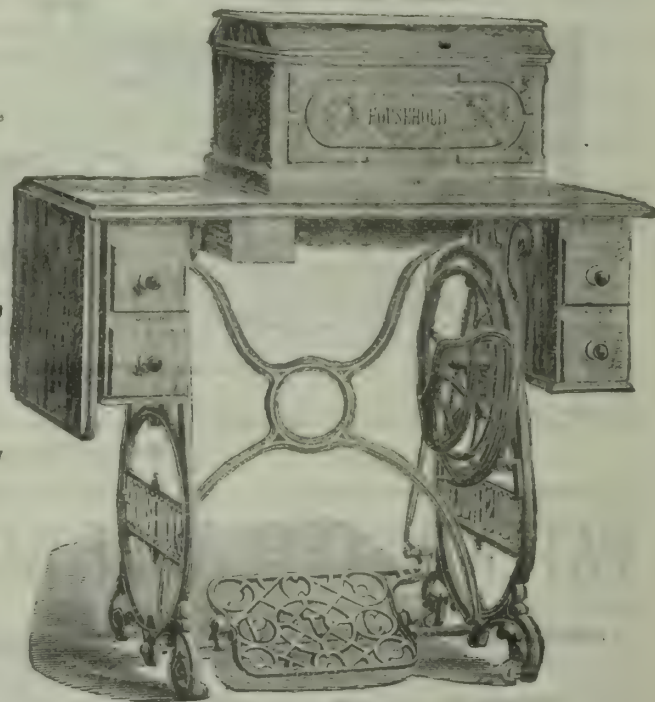


HOUSEHOLD SHUTTLE.

SEND FOR FULL PARTICULARS
AGENTS WANTED



HOUSEHOLD HEAD



HOUSEHOLD, STYLE No. 4

A Prominent Mechanical Expert,

testing the "HOUSEHOLD" Sewing Machine, in comparison with other sewing machines called "Light-Running," said: "It does seem as though that 'HOUSEHOLD' Treadle was running my foot, instead of my foot running the treadle."

The "HOUSEHOLD" Sewing Machine is believed to be the most perfect light-running Sewing Machine in the world.

MANY TESTIMONIALS

Have been received from parties who have thoroughly tested the "HOUSEHOLD" upon a variety of work, with great success.

Accessories

Furnished FREE with every

"Household"

SEWING MACHINE:

12 Needles, 6 Bobbins, 1 Screw Driver, 1 Screw Driver, for Shuttle Spring Screw, 1 Quilter, 1 Foot Hemmer, 1 Foot Braider, 1 Oil Can--filled, Cloth Guide and Screw, 1 Tucker, 1 Ruffler, 1 Set of 6 Hemmers.

Complete Instruction Book.

With every Machine.



HOUSEHOLD, STYLE NO. 1.

Style No. 1 Nickel Plated. Cash Price, \$45.00.

This machine will meet the want of Families who desire a perfectly constructed Machine with other spaces for furniture.

Style No. 11. Tailor's Machine. Cash Price, \$47.00.

Same as No. 1 except Table, which is 24 inches long, and has a drop leaf 6 inches wide on the backside, extending whole length.

Style No. 2. Black Walnut Table, with Drop Leaf. Gothic cover. Small Drawer. Polished.

Nickel Plated. Cash Price, \$50.00.

This machine is the same as No. 1, with drop leaf and cover added. It affords, therefore, better accommodations, with small addition to price.

Style No. 3. Black Walnut Table with drop leaf. Gothic cover. Nest of three drawers. Also, small tool drawer. Polished.

Full Nickeled. Cash Price, \$55.00.

A complete Family Machine with ample drawer accommodations. A handsome piece of Furniture.

Style No. 4. Black Walnut Table, with drop leaf. Gothic Cover. Two nests of two drawers each.

Full Nickeled. Cash Price, \$58.00.

Style No. 5. Black Walnut Table, with drop leaf. Gothic Cover. Two nests of three drawers each.

Full Nickeled. Cash Price, \$60.00.

ENTIRE SATISFACTION GUARANTEED.

If you buy a "HOUSEHOLD" you will never regret it.

IN ORDERING

Select the style of machine you prefer and so specify with order. Give address and place of residence plainly. If you want machine crated, add \$1. If boxed add \$2 to price. For shipping or wagon freightage, boxing is necessary for rail and of boat, crating is sufficient.

THE "HOUSEHOLD"

Stand on its own legs, and its testing is free. All inquiries and orders carefully and promptly attended to.

MARK SHELDON, General Agent,

NOS 9, 11 & 13 FIRST ST., SAN FRANCISCO, CAL.
Largest wholesale dealer in Sewing Machines and Supplies in the United States.

USE "EXCELSIOR" Sperm Sewing Machine Oil,

PUT UP BY

MARK SHELDON,

No. 9, 11, and 13 First St., San Francisco.

25 Cents per Bottle.

For Sale by all Dealers.

California's Exposition for 1882

Sacramento, Cal.,

Opens Monday, September 11th; Closes Saturday, September 16th. A Holiday Week of Recreation and Sport.

\$40,000 in Cash
To be Awarded in Premiums.

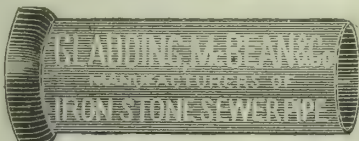
The Premium List is full and complete, and is divided into Seven Departments: The Society's Gold Medal, (valued at \$100) will be awarded to the most meritorious display in each department. The exhibition of Live Stock promises to be large and fully up to the standard in each class. The latest and newest designs in Agricultural Implements will be upon exhibition. The Products of the Soil, representing California's greatest interest, will be fully shown. The Speed Programme (for entries see small bills) is within itself a distinct exhibition, wherein the produce of California's Breeding Establishments will be shown in their respective classes. Wing Shooting, Ladies' Equestrianism, and other sports will be held daily at the Park during the Fair.

The C. P. R. R. Co., will transport articles to and from the Fair free of charge. Wells, Fargo & Co. will deliver packages free not weighing over 20 lbs. Application for space, both at Park and Pavilion, should be made at once to the Secretary.

Season Tickets, admitting self and family.....\$5.00
Single Admissions......50

HUGH M. LARUE, President.

EDWIN F. SMITH, Sec'y.



For the Drainage or Irrigation of Lands.

TERRA COTTA

CHIMNEY PIPE & TOPS

VASES, FLOWER POTS, FIRE BRICKS, &c.
MANUFACTORY AT LINCOLN, CAL.
SEND FOR ILLUSTRATED CATALOGUE

1310 Market Street, SAN FRANCISCO

Five Music Books

Of a very superior character, for use during the ensuing Fall and Winter.

The Peerless SINGING SCHOOLS.

(Price 75 cts.) A new, fresh and every way desirable book, with abundant material for the instruction of singing classes, and for social singing. By W. O. Perkins.

Song Bells. FOR COMMON SCHOOLS. Price 50 cts.

Has had a year's trial, with universal approval, in a multitude of schools. Large variety of wide-awake songs. By L. O. Emerson.

Light and Life. FOR SUNDAY SCHOOLS. (Price 35 cts.) Great success has attended this exceptionally fine collection, which has been before the public but a few months. Enthusiastic commendations wherever used. By R. M. McIntosh.

The Choral Choir. For Choirs & Conventions. (Price \$1.00) It is the companion book to THE PEERLESS, is larger, and has a much greater number of pieces for choir. The singing class course is the same as that in the smaller book. By W. O. Perkins.

The Welcome Chorus. FOR HIGH SCHOOLS. (Price \$1.00) This book, although of recent issue, has come to be regarded as a standard book for use in the higher schools. By W. S. Tilton.

Any book mailed, post-free, for the retail price.
OLIVER DITSON & CO., Boston.
C. H. DITSON & CO., 843 Broadway, New York.

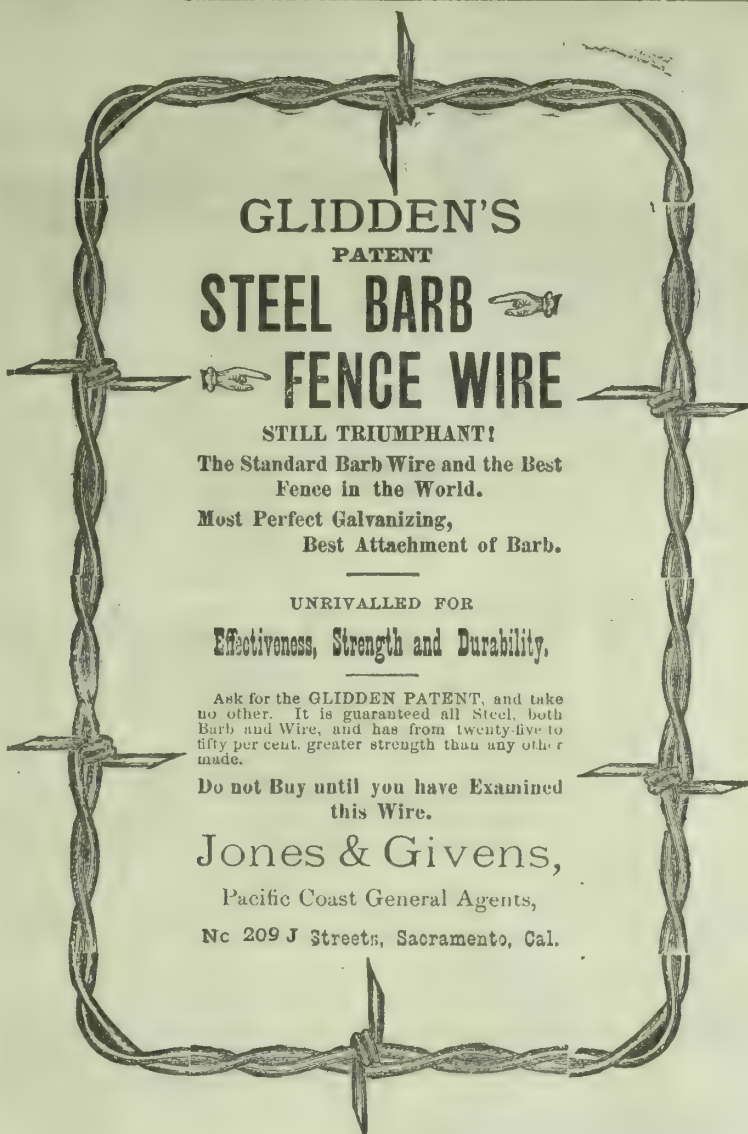


Artificial Garmore's Ear Drum.
An invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured.
JOHN GARMORE,
Fifth & Race Sts., Cincinnati, O.

PEARS WANTED.

Half Ton Seckles Pears wanted. Address, **LEONARD COATES,** Napa City, Cal.

Sacramento Advertisements.



**GLIDDEN'S
PATENT
STEEL BARB
FENCE WIRE**

STILL TRIUMPHANT!
The Standard Barb Wire and the Best Fence in the World.
Most Perfect Galvanizing,
Best Attachment of Barb.

UNRIVALLED FOR
Effectiveness, Strength and Durability.

Ask for the GLIDDEN PATENT, and take no other. It is guaranteed all Steel, both Barb and Wire, and has from twenty-five to fifty per cent. greater strength than any other made.

Do not Buy until you have Examined this Wire.

Jones & Givens,
Pacific Coast General Agents,
No 209 J Streets, Sacramento, Cal.

WE OFFER FOR SALE
10,000 Bundles Bessemer Steel Soft Annealed
BALING WIRE!

The Only Steel Baling Wire in Market

Ten Thousand Bundles Sisal Hay Rope,

Five Thousand Bundles Manila Hay Rope.

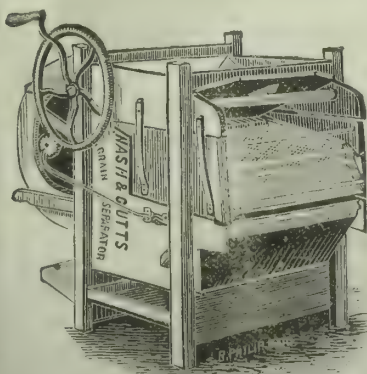
ALSO THE

CACTUS STEEL-BARBED FENCE WIRE,

The Best Barbed Wire Now in Market—Bright, Fresh and Clean Spools.

Spring Wagons, Buggies and Carriages, Barbed Wire, etc.

BAKER & HAMILTON, - - Sacramento, Cal.



1882. **CALIFORNIA** 1883.

Re-improved

NASH & CUTTS'

GRAIN SEPARATOR
And Fanning Mill

These Celebrated Machines will be on Exhibition at Agricultural Park, Sacramento, also at

JOHN KLEES & CO.,

824 K St., between Eighth & Ninth,

SACRAMENTO. - - CAL.

San Francisco Advertisements.

HARNESS, SADDLES, LEATHER & SADDLERY
Goods.
WHOLESALE AND RETAIL

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Fridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc.
W. DAVIS, 410 Market Street.

Educational.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study: Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers' Course, Preparatory Course, Telegraphy, Languages. The College Journal, containing full information, will be sent post paid to any address. **F. E. CLARK, Principal.**

The Harmon Seminary,
BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR YOUNG LADIES.

Will be conducted by **REV. S S HARMON** and **Mrs. F. W. HARMON**, for the last 10 years principals of Washington College.

The **HARMON SEMINARY** will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

The **HARMON SEMINARY** will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,
Or. E. J. WICKSON, 414 Clay st., S. F.



A Rapid and Permanent cure for

DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

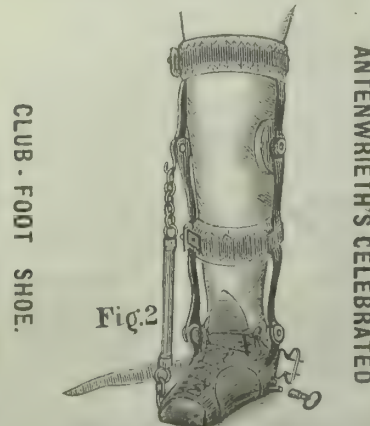
And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.

N. B.—Correspondence solicited from Wholesale Druggists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,

Sole Proprietors and Manufacturers,

295 Cutter Street, CINCINNATI, OHIO.



APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Antenwrieth's Club-Foot Shoe. Send for circulars. **WM. ANTENWRIETH,** 71 West Sixth Street, Cincinnati, Ohio.

Lands for Sale and to Let.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to

W. B. PARKER.
Vacaville, Solano, Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all level bottom land; very productive. Two thousand acres at the low price of \$50 per acre, not including the present crop, worth over \$30 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE.
410 Montgomery St.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$6 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

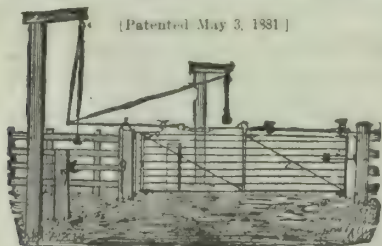
FOR SALE.

A farm of 418 acres, 5 miles southeast from Martinez, in Contra Costa county. Substantial improvements; well adapted to grain and stock. Reference, Judge Brown, Berry Baldwin, or S. Bennett, Martinez, and the proprietor on the place.

WM. C. PRINCE.

CAMPTON'S Self-Opening Automatic Gate,

(Patented May 3, 1881)



For Farm Use and Fancy Residences.

It is the Boss Gate where ladies have to do their own driving. For simplicity and durability the only reliable automatic gate in use. No complex machinery. By a single lever it is thrown out of the center of gravity and opens and closes itself by its own weight. A child six years old can open it. We manufacture different styles gates from \$25 to \$100, for a cheap farm gate made of Wood and Iron. \$20 for Iron. Tubular and Wire we charge from \$35 to \$500 according to the style wanted. For reference as to the merit of this gate we refer you to a few of the following gentlemen who have used the gate.

H. M. Lurie, President of the State Agricultural Society, Davisville, Yuba Co., Cal.; J. D. Carr, Salinas, Monterey Co., Cal.; Judge Weller, Milpitas, Santa Clara Co., Cal.; Juan Gallegos, Mission San Jose, Alameda Co., Cal. For further particulars and Illustrated Price List, address JOHN AYLMER, P. O. Box 85, Livermore, Alameda Co., Cal. or JAMES STANLEY, Mission San Jose, Alameda Co., Cal.



On 50 large size CARDS. Remembrance, Sentiment, Handkerchief, etc. No. 24 like, 10c, 14 pks, \$1. Please send 20c for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine gilt Bevel Edge Cards, turned corner, 10c.

Your Name in the morning. *Minnie R. Pose*

Agents make all per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cardstock wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

25 Gold, Crystal, Lace, Perfumed & Chromo Cards, name in gold and jet, 10c. Clinton Bros., Clintonville, Co.



THE PACIFIC BUSINESS COLLEGE, 320 POST STREET.

This is the oldest and most efficient Business College on the Pacific coast. It is first class in all its appointments. It possesses superior facilities for imparting a first-class Commercial Education, a practical knowledge of Telegraphy, and thorough instruction in the English and Mathematical branches.

RATES OF TUITION.

Life Scholarship—Complete Business Course	\$70 00
Three Months, Day Sessions	40 00
One Month, Day Sessions	15 00
Three Months, Evening Sessions	25 00
One Month, Evening Sessions	10 00

For full particulars, call at the College Office, 320 Post Street, or address as above.



PARKER SHOT GUN.

IMPROVED.

Shooting Qualities -
UNSURPASSED!

Send Stamp for 50-Page Catalogue

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION Large Stock and Fine Assortment

Send for Circular and Prices, and mention this paper.

E. T. ALLEN, Agent for the Pacific Coast.

NO. 416 MARKET STREET.

SAN FRANCISCO, CAL.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. F. MERRILL, Florin, Sacramento Co., Cal.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewey & Co., at published rates.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,
111 Leidesdorff St., S. F.
P. S. A sample can be seen at this office.

CHEAP CASH GROCERIES

— AT —
NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —
1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

THE CHORAL CHOIR.

A NEW CHURCH MUSIC BOOK,

By W. O. PERKINS.

DITSON & CO. take pleasure in introducing to the public their new Choral Book for 1882-1883. Not only a Choir Book, but a Singing Class and Convention Book. Not only these, but a capital collection of easy Glee and Song music, of Home-tune and Anthem music, easy, pleasing and thoroughly musical. Just out.

It would be well to send early for a copy for examination.

PRICE, \$1.00.

THE PEERLESS.

A New Singing School and Convention Book.

By W. O. PERKINS.

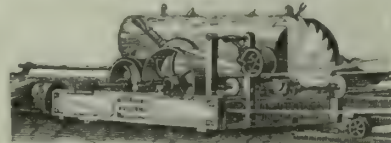
While the Choral Choir is one of the best of Singing Class Books, it seems necessary to provide for the wants of those who prefer to use a cheaper, lighter and smaller book. The Peerless is similar in arrangement and quality to its larger companion, differing only in its size, and in the number of pieces of a kind which it contains. Beginners cannot but be delighted at the large number of very easy and very pretty exercises and songs. PRICE, 75 CENTS. Send early for specimen copy. Mailed to any address for above prices.

OLIVER DITSON & CO., BOSTON.

C. H. Ditson & Co., 843 Broadway, N. Y.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately thick-set country can find profitable employment the year round by purchasing one of these Mills.

Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the work is done on the spot.

Write for Circulars and Price Lists, and address of nearest Agent.

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO.,
Agents for the Pacific Coast.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-and-Aft Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of the shooting. 12 Gauge, \$32; 16 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Firearms and Sporting Goods, 416 Market Street, San Francisco, Cal.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

Dewey & Co. 252 Market Street; Patent Agts

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAKS & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

H. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors, STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Mission Rock Dock and Grain Warehouse, San Francisco, Cal.

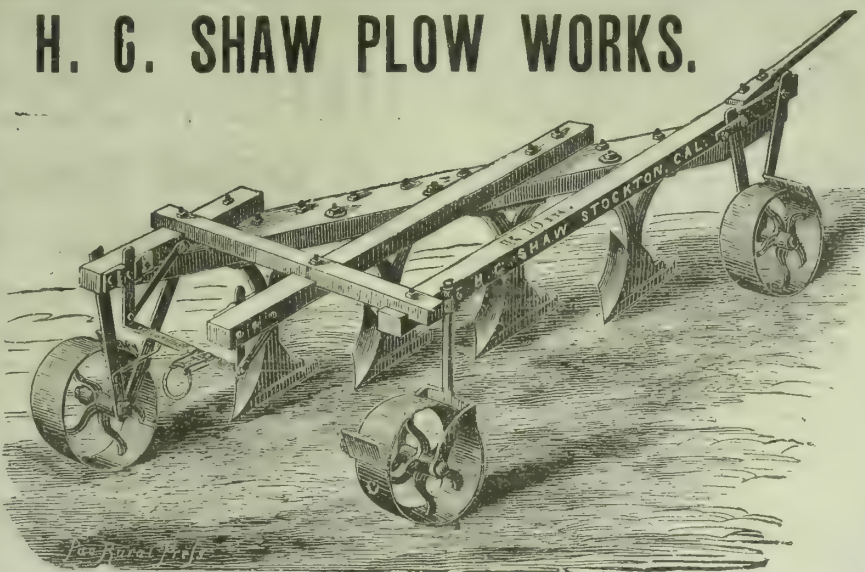
65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - Proprietors. Office—318 California Street, Room 2.

This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorsey, 527 Commercial St., S. F.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal.; October 22, 1881. PETER SAKS & HOMER P. SAKS. Write or call on us.

PETER SAKS & SON

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to GEO. B. BAYLEY, Box 1771, San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. L. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco. January, 1882.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL DOMESTIC & MUNICIPAL PURPOSES. Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal.

Breeder of pure bred Poland China pigs of the Black Beauty, Black Bass, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs with Success.

For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento St., San Francisco.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to FALKNER BELL & CO., San Francisco.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

BUCKS FOR SALE.



Spanish Merino, French Merino, LEICESTER.

Apply SHOOBERT & BEALE,

405 Montgomery St., San Francisco.



Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of leading Ranch, Anderson, Shasta County, Cal.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTEPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA BOWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls,

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers, and, since the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address G. G. WICKSON, 319 Market St., S. F.

NEARLY 1,000

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois,

35 miles West of Chicago, on C. & N. W. R'y.

250 OF THE FINEST

Imported from France

by him

THIS YEAR.



NEARLY 400 NOW ON HAND,

The Largest and Most Select Stud ever collected, and making it possible to

SEE MORE FINE SPECIMENS IN A DAY than one could see in their native country in months.

Come and see for yourselves. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn. Send for Catalogue

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 4, 1882.

Trade has been rather slack this week, and grain values a little off. Foreign advices are rather depressing just at the moment. The latest is the following:

LIVERPOOL, Sept. 5.—California spot Wheat, rather easier, at 9s 7d to 9s 10d. Cargoes, lower, at 4s 6d for just shipped, and 4s for nearly due and off coast.

LIVERPOOL, Sept. 6.—Wheat—California spot lots are dull at 9s 7d to 9s 10d. Cargo lots, 4s 6d for just shipped; 4s for nearly due, and 4s 3d for off coast.

The Foreign Review.

LONDON, Sept. 5.—The *Mark Lane Express*, in its review of the British grain trade for the past week, says: Disaster equal to that of last year is not now possible, but it is evident a large proportion of the crop may be seriously damaged. Prices of Wheat are 1/3s lower. Foreign Wheat is inanimate, stocks large, and prices have fallen slightly. For off coast there is scarcely any inquiry. There were 39 arrivals and 6 sales. Business in cargoes on passage and for shipment is dull, and values are lower. Floating bulk has increased prices are higher. Sales of Irish Wheat the past week, 23,610 quarters, at 47s 3d, against 21,320 quarters, 55s 2d in the corresponding period last year.

London Wool Market.

LONDON, Sept. 5.—At the Wool sales 9,700 bales of Sydney, Queensland and Victorian were disposed of, with a good demand at fair prices.

Eastern Wool Markets.

BOSTON, Sept. 5.—The market is steady, with a good demand, especially for reasonable grades. Ohio and Pennsylvania fleeces have sold at 40¢ to 42¢ for X and XX; Michigan X fleeces at 39¢ to 40¢, and No. 1 fleeces, 42¢ to 45¢. Unwashed fleeces are in demand. Western Territory and Texas Wools are most inquired for, and may be quoted at 18¢ to 23¢ for low and coarse, 25¢ to 35¢ for good average lots, and 32¢ to 35¢ for choice selections of fine and medium. California Wool is quiet at 25¢ to 32¢ for Northern and Spring, the latter price being for choice. Combing and delaine selections are in demand at 43¢ to 45¢ for fine delaine, and 40¢ to 45¢ for choice Eastern and Maine super, and at 25¢ to 40¢ for common to good. Foreign Wool is quiet, and the sales are confined to small lots of Australian and Mediterranean. Carpet Wool, at previous prices.

Eastern Grain and Provision Markets.

CHICAGO, Sept. 5.—Wheat, firmer, regular, 98¢ September; 96¢ October; red, 98¢; Spring, 95¢. Corn, firm, higher; 71¢ cash; 68¢ October. Pork, strong, higher; \$21.60 cash; \$21.70 October; \$20.25 November; \$19.20 January. Lard, strong, higher; \$12.05 cash; \$12.10 October.

CHICAGO, Sept. 5.—The arbitration committee, after a session of several weeks, during which testimony of unparalleled length has been taken, this morning fixed the settling price at \$1.35 for July Spring Wheat. This is a victory for the Armour clique, the price fixed being near the closing rate on the 31st of July.

Freights and Charters.

Freights are weaker, owing to the decline in the foreign markets, and on Monday several vessels were taken on a basis of £2 11s 3d, iron, for orders, which shows a decline of a shilling from last week's rates. The charters reported during the week, both spot and prior to arrival, number 8 vessels, of a register of 9,391, or a carrying capacity of 14,080 short tons, or 281,720 cts. The chartered Wheat fleet now in port has a register of 44,390, or an export capacity of 66,594 short tons, or 1,331,880 cts, against 62,479 tons at the same time last year. The disengaged tonnage now in port has a register of 50,038, or a carrying capacity of 75,057 short tons, or 1,501,140 cts, against 5,256 tons at the same time last year. There is also a disengaged register of 4,140 at adjacent ports. Tonnage now on the way to this port has a register of 290, 093, against 277,369 at the same time in 1881, and 189, 062 in 1880.

BAGS—Small consignments of Wheat Bags and Burlaps arrived by a London ship yesterday. Sales of 5,000 Calcutta Wheat Bags at 8½¢.

BARLEY—Barley has been a shade lower. Chevalier was let alone severely. There has now a reaction set in with a quick speculative demand and advanced rates. On 'Change call, sales include 50 tons No. 1 Feed, September, \$1.31; 100 do, \$1.32; 300 do October, \$1.32; 100 do, \$1.32; 100 do, November, \$1.32; 100 do No. 2, September, \$1.28; 100 do, \$1.29; 100 do, October, \$1.29; 100 do, December, \$1.27; 300 do, seller 1882, \$1.26; 100 do, \$1.25; 200 do, \$1.25; 300 do, \$1.26 per cwt. Sales at the Grain Exchange embrace 100 tons No. 1 Feed, October, \$1.32; 200 do, \$1.31; 50 do, \$1.31; 100 do, November, \$1.32 per cwt.

BEANS—Beans are lower and dull.

CORN—Corn is unchanged. Reports still come of the failure of the crop in Central America, and the prospective importation from the United States.

DAIRY PRODUCE Butter has held its recent advance, until now a slightly weaker feeling is reported, but no change in prices. Cheese is unchanged, and in abundant supply.

EGGS—Eggs have advanced sharply to 45¢ per dozen for choice fresh, with less desirable selling down to 37½¢.

FEED—Hay has reacted a little, owing to liberal receipts, and the best is now rated at \$15.50. Bran is doing better. Call sales of 100 tons, December, \$15 75, and 100, seller 1882, \$15.60. For spot, \$17 was bid; September, \$16.25 bid; October, \$15 bid; November, \$16 bid, \$16.50 asked; buyer 1882, \$15.50 bid. Sale at 3 o'clock of 100, November, \$16.25.

FRUIT—The rush seems to be over, and Plums, Pears, etc., are returning to better values. There are large consignments of fine mountain Peaches arriving, which are selling well. Melons are still cheap; even too many Casabas have arrived some days. Grapes are still in moderate supply and sell well. Prices may be found in our table.

FRESH MEAT—Prices are unchanged. Mutton is reported a little more abundant, but is no cheaper yet. HOPS—Interesting notes from the growing regions will be found on other pages. City rates are still firm, and any good Hop is rated at 50¢ per lb. We hear that many growers are disposed to hold for better rates.

OATS—Supplies are large and prices depressed. We

note sales of 50 tons No. 1 October, \$1.55. Bids and offers were: No. 1, September, \$1.55 bid, \$1.57 asked; seller 1882, \$1.50 bid \$1.54 asked; No. 2, September, \$1.47 bid; October, \$1.49 bid; seller 1882, \$1.43 bid \$1.45 asked.

ONIONS—Silverskins are a shade lower.

POTATOES—Potatoes are unchanged except Early Rose, which gain a little higher average than last week.

PROVISIONS—There is a good trade at unchanged prices.

POULTRY AND GAME—Market men anticipate a better trade soon. Ducks and turkeys have gained slightly.

VEGETABLES—Tomatoes have been at the bottom this week, retailing at 25¢ per box part of the time. Green corn is cheap and plentiful. Marrowfat Squash has dropped to 5¢ or 6¢ per ton.

WHEAT—Wheat is dull and quotable at 2½ to 5¢ lower per cwt. There has been an active trade in choice milling, 1,000 sds selling this morning at \$1.70 per cental. At the Grain Exchange this afternoon the sales included 300 tons No. 2, September, \$1.62; 100 do October, \$1.63; 400 do, \$1.63; 300 do November, \$1.64; 300 do December, \$1.64; 100 do January, \$1.65 per cwt.

WOOL—Wool is quiet and sales few. Prices are therefore nominal and without change.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Sept. 6, 1882.

BEANS & PEAS.		ONIONS.	
Bayo, Cal.	25 @ 100	Red.	30 @ 40
Butter.	35 @ 40	Red.	50 @ 70
Castor.	35 @ 40	Oregon.	50 @ 60
Peas.	25 @ 30		
Red.	25 @ 30	POTATOES.	
Pink.	25 @ 30	New.	50 @ 75
Large.	25 @ 30	Early Rose.	70 @ 85
Small White.	25 @ 30	Petaluma, Cal.	— @ —
Lima.	25 @ 30	Tonahill.	— @ —
Field Peas, 1/2 eye.	50 @ 75	Humboldt.	— @ —
do, green.	25 @ 30	Kidney.	— @ —

BROOM CORN.		POULTRY & GAME.	
Southern.	3 @ 31	Peacocks.	— @ —
Northern.	3 @ 31	Chickens.	— @ —

DAIRY PRODUCE, ETC.

BUTTER.		EGGS.	
Cal. Fresh Roll B.	35 @ 37	Sal. Lake.	150 @ 175
do Fancy Branda.	35 @ 37	Swiss.	150 @ 175
Pickle Roll.	30 @ 32	Roosters.	50 @ 70
Firkin, new.	25 @ 30	Broilers.	30 @ 40
Eastern.	18 @ 20	Ducks, tame, doz.	50 @ 60
New York.	— @ —	Geese, pair.	125 @ 150

CHEESE.		TURKEYS.	
Cal. Fresh, doz.	37 @ 45	White do.	50 @ 60
Ducks.	— @ —	do, dressed.	16 @ 20
Oregon.	— @ —	Turkey Feathers.	10 @ 20
Eastern, by express.	25 @ 28	tail and wing, lb.	75 @ 80
Pickled here.	— @ —	do, Common.	50 @ 75
Utah.	— @ —	Quail, doz.	75 @ 80

FEED.

FEED.		SEEDS.	
Brn. ton.	15 @ 17	Cal. Peas, extra.	15 @ 17
corn Meal.	— @ 30	clear, B.	17 @ 18
Hay.	10 @ 15	Medium.	17 @ 18
Middlings.	— @ 30	Light.	17 @ 18
Oil Cake Meal.	— @ 30	Lard.	15 @ 17
Straw, bales.	35 @ 40	Cal. Smoked Beef.	14 @ 15

FRESH MEAT.

FRESH MEAT.		HIDES.	
Beef, 1st quality, lb.	7 @ 8	Crude, lb.	8 @ 9
Second.	6 @ 7	Refined.	11 @ 12
Third.	5 @ 6		
Mutton.	4 @ 5	WOOL ETC.	
Spring Lamb.	6 @ 8	Shirley 1882.	— @ —
Pork, dressed.	10 @ 12	San Joaquin, free.	18 @ 20
Veal.	7 @ 8	do, fair.	18 @ 19
Milk, Cal.	7 @ 8	do, dusty.	15 @ 17
do, choice.	— @ 10	Southern Country.	20 @ 25

GRAIN, ETC.

GRAIN, ETC.		TALLOW.	
Barley, feed, cwt.	17 @ 17 1/2	Crude, lb.	8 @ 9
do, New.	15 @ 15 1/2	Refined.	11 @ 12
do, Brewing.	22 @ 23		
do, New.	13 @ 14	FRESH MEAT.	
do, Oats.	13 @ 14	Beef, 1st quality, lb.	7 @ 8
do, Buckwheat.	13 @ 14	Second.	6 @ 7
do, Corn, White.	— @ —	Third.	5 @ 6
do, Yellow.	17 @ 18	Mutton.	4 @ 5
do, Small Round.	— @ 75	Spring Lamb.	6 @ 8
Oats.	16 @ 17	Pork, dressed.	10 @ 12
Milling.	2 @ 20	Veal.	7 @ 8
Rye.	2 @ 20	Milk, Cal.	7 @ 8
Wheat, No. 1.	15 @ 16	do, choice.	— @ 10
do, No. 2.	14 @ 15	GRAIN, ETC.	
do, No. 3.	13 @ 14	Barley, feed, cwt.	17 @ 17 1/2
Choice Milling.	— @ 70	do, New.	15 @ 15 1/2

HIDES.

HIDES.		TALLOW.	
Crude, lb.	8 @ 9	Refined.	11 @ 12
Refined.	11 @ 12		

HONEY ETC.

HONEY ETC.		TALLOW.	
Beeswax, lb.	23 @ 25	Crude, lb.	8 @ 9
Honey in comb.	12 @ 20	Refined.	11 @ 12
Extracted, light.	8 @ 9		
do, dark.	7 @ 8	FRESH MEAT.	

HOPS.

HOPS.		TALLOW.	
Oregon.	40 @ 42	Crude, lb.	8 @ 9
California.	45 @ 50	Refined.	11 @ 12
Wash Ter.	40 @ 42		
Old Hops.	— @ —	FRESH MEAT.	

NITS—Jobbing.

NITS—Jobbing.		TALLOW.	
Walnuts, Cal.	11 @ 12	Crude, lb.	8 @ 9
do, Chile.	11 @ 12	Refined.	11 @ 12
Almonds, Cal.	8 @ 9		
Soft shell.	15 @ 17	FRESH MEAT.	
Brazil.	10 @ 12	Beef, 1st quality, lb.	7 @ 8
Pecans.	14 @ 15	Second.	6 @ 7

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Sept. 6, 1882.

FRUIT MARKET.		VEGETABLES.	
Apples, bz.	35 @ 100	Asparagus, bk.	25 @ 50
do, Basket.	40 @ 60	Beets, cwt.	— @ 75
Apricots, bz.	50 @ 75	Cabbage, 100 lbs.	87 @ 100
Bananas, bunch.	25 @ 40	Carrots, sk.	50 @ 65
Blackberries.	4 @ 5	Cauliflower, doz.	10 @ 12 1/2
Cantaloupes, cwt.	25 @ 30	Corn, green.	50 @ 60
Casaba, each.	— @ 12	Cucumbers, bz.	20 @ 40
Cherry Plum, bz.	25 @ 75	Eggplant, box.	50 @ 75
Cocoanuts, 100.	6 @ 7	Garlic, lb.	1 @ 2
Cranberries, bz.	50 @ 75	do, poor.	— @ 1 1/2
Currants, cwt.	4 @ 5	Lettuce, doz.	10 @ 12
Figs, box.	50 @ 60	Mushrooms, bk.	— @ 10
Grapes, bz.	40 @ 50	Okra, green, lb.	— @ 3
do, Rose Peru.	50 @ 75	Parsnips, lb.	— @ 2
do, Muscat.	60 @ 75	Peppers, sk.	50 @ 75
do, B. Ham's.	50 @ 75	do, Chile.	— @ 7
do, Tokay.	75 @ 125	Rhubarb, bz.	25 @ 75
do, Isabella.	10 @ 11	Squash, Marrow.	50 @ 60
Limes, Mex.	75 @ 80	String Beans.	2 @ 3
Lemons, Cal, bz.	50 @ 75	do, wax.	— @ 4
Sicily, box.	— @ 80	do, Lima, lb.	14 @ 2
Australian.	— @ 80	Summer Squash.	— @ 5
Nectarines.	50 @ 60	do, box.	40 @ 50
Oranges, Cal, bz.	40 @ 50	Tomatoes, box.	10 @ 30
do, Tahiti.	15 @ 20	Turkeys, cwt.	75 @ 100
do, Mexican.	15 @ 20		
do, Loreto.	— @ 10		
Peaches, box.	50 @ 125		
do, Crawford.	60 @ 90		
Pears, bk.	65 @ 75		
do, Bartlett.	15 @ 20		
do, do, bk.	50 @ 75		
Pineapples, doz.	60 @ 80		
Plums.	40 @ 60		
Quinces, box.	— @ 40		
do, box.	75 @ 100		
Prunes.	50 @ 75		
Raspberries, lb.	10 @ 12		
Strawb's, cwt.	10 @ 12		
Wat'mel's, 100.	50 @ 100		

DRIED FRUIT.

DRIED FRUIT.		VEGETABLES.	
Apples, sliced, lb.	41 @ 6	Asparagus, bk.	25 @ 50
do, evaporated.	9 @ 11	Beets, cwt.	— @ 75
do, quartered.	5 @ 6	Cabbage, 100 lbs.	87 @ 100

JOHN WIGMORE,
HARDWOOD LUMBER,
Cabinet Woods, and Veneers,
SHIP TIMBER, LOCUST TREENAILS, DECK PLUGS.
129 to 147 Spear St., and 26 & 28 Howard St.
San Francisco.

PACIFIC COAST LAND BUREAU.
President, Wendell Easton; Vice-President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank; Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo correspondents, C. H. Phillips & Co.
SAN LUIS OBISPO LANDS.
150,000 acres of land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous from stock raising or dairying down to fruit culture. On the coast of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length and, on an average 20 miles in width, unsurpassed in soil climate and varied resources well timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to and failures in diversified farming are unknown where industry, economy and intellect have been combined.
For sale. The price varies from \$2 to \$50 an acre. Some choice lands higher. We will sell on terms of one-fourth cash and balance at the end of two, three and four years, when desired. Interest equivalent to 5% per annum.
Good wheat lands at from \$12 to \$20 per acre. Good vine lands at from \$2 to \$20 per acre. Good grazing lands at from \$2 to \$10 an acre. 120 acres fine grazing land 5 miles from San Luis Obispo, \$50 an acre. 240 acres fine grazing land 7 miles from San Luis Obispo, \$50 an acre. 1,000 farms at from \$500 to \$5,000. All at low prices and easy terms.
These lands are offered at one-third the price of lands in other countries in the State and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.
Send for catalogue.

BUY LAND
Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasturage, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

FRUIT DRYING!
THE ZIMMERMAN
Portable Galvanized Iron
FIRE-PROOF DRIER!
Is the best thing yet introduced for fruit drying.
Fruit associated by the Zimmerman men process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials to
LINFORTH, RICE & CO.,
325 Market Street, S. F.
Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Lesh, Marysville; T. B. Watt, Salem; Or T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

Commission Merchants.
Grangers' Business Association,
SHIPPING and COMMISSION HOUSE.
No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.
Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,
At "THE GRANGERS," Contra Costa Co.
GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON RECEIPTMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,
No. 75 Warren Street, New York.
Commission Merchants in Cal. Produce
REFERENCES.—Trademen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

MOORE, FERGUSON & CO.,
COMMISSION MERCHANTS
Grain, Flour, Wool, Etc.
(Members of the San Francisco Produce Exchange)
211 and 213 Clay St., S. F.
Liberal advances made on Consignments.

Commission Merchants.
HATCH & BARCLAY,
Commission Merchants,
(Members of San Francisco Produce Exchange.)
20 California Street, San Francisco.
SEND YOUR CONSIGNMENTS TO
COMMISSION MERCHANTS
CALIFORNIA & OREGON PRODUCE
400 & 410
SAN FRANCISCO
"THE OLDEST HOUSE"

PETER MEYER. LOUIS MEYER.
MEYER BROS. & CO.,
—IMPORTERS AND—
Wholesale Grocers,
—AND DEALERS IN—
TOBACCO AND CIGARS.
412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco
Special attention given to country traders.
P. O. Box 1940.

JAN P. HULME. JACKSON HART.
Late Miller & Co.
HULME & HART,
(Successors to MILLER & CO.)
Wool, Grain,
AND GENERAL
Commission Merchants.
10 Davis Street, near Market,
SAN FRANCISCO.

1881.

GEO. A. DAVIS & CO.,

1882.

AGRICULTURAL IMPLEMENTS.

Plowing Season for 1882.



FURST & BRADLEY GANG PLOW.

We challenge any Sulky or Gang Plow to a Plow Trial. We sell our Gang Plow under a *Guarantee* to give satisfaction, or no sale. We will sell the Gang Plow to any responsible Farmer, Rancher, or any one wishing a Gang Plow, upon trial, and if the Plow does not give satisfaction it can be returned to us at our expense.

We have chilled iron bottoms for our Furst & Bradley Gang Plows. We have chilled iron shares, which will fit steel bottoms. We have steel shares, which will fit chilled iron bottoms. We have steel bottoms for our Furst & Bradley Gang Plows.

The Gang Plow above represented is the result of many years' experience in their manufacture, aided by a long series of practical tests in the hands of some of the best farmers on the Pacific Coast. They are extremely simple, strong and durable, and have several features superior to all other known Gang Plows. One feature of great importance is the **BRAKE** arrangement for raising the Plows out of the ground. By this means even a boy can raise them with perfect ease, since the horses do the raising as soon as the brake is applied to the wheel. Another desirable feature consists in having but **ONE** simple lever for regulating the depth of furrow, and raising or lowering the Plows.

Every Plow has a Land Gauge Lever Furnished Free.

It can be operated by the driver while the Plow is in motion. For plowing around circular corners, or curved furrows of irregular shaped lands, it works to perfection.

We also make a **JOINTED POLE**, which allows a free up and down play of same, and does away with any pressure upon the horses' necks, that may otherwise occur in plowing over uneven surfaces. They are guaranteed to do as good work as can possibly be done by any gang Plow in existence.

SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.



FURST & BRADLEY WROUGHT FRAME SULKY PLOW,

With Patent Friction Attachment for Raising the Plow out of the Ground by the Power of the Team

It draws light, it is easily handled, it is substantially made; and the best Sulky Plow in the market. **STEEL BEAMS** More sold during the last year than of any other kind.

DON'T let PRICE be the **ONLY** consideration when you go to buy a Sulky Plow. We believe in buying for as little money as possible, if you get the **BEST**, but be **SURE** before you close the bargain that you are not taking **SECOND QUALITY**. Poor goods can be afforded, and, from necessity, have to be sold **CHEAPER** than good ones. To the farmer who thinks one kind is as good as another, we have nothing to say; our remarks are intended for those who can understand that Sulky Plows, although they all have the same general appearance, vary as much in quality as do wheat, corn, oats, cattle, hogs, butter, cheese, or any other farm product.

Why should the "Furst & Bradley," with its Patent Friction Attachment and other valuable improvements, be sold for the same price as one that does not have them? The improvements are valuable to the farmer. Isn't it worth something to him to have a Plow that can be raised out of the ground by horse-power, instead of having to be pulled out by main strength and awkwardness? Isn't it worth something to have a Sulky that your BOY can do as much plowing with as you can? Isn't it worth something to have one on which the Main Lever locks to the PLOW, leaving the frame and pole perfectly free, so that there is no pressure on your horses' necks? And, isn't it worth something to have a Sulky that is well made of strong material, by an establishment that has many years of experience in their manufacture? Well, we think it is. Our Sulky Plow is the **ONLY ONE IN THE WORLD** having a Friction Attachment for throwing the Plow out, and the only one having its Main Lever lock to the Plow; which features are **PATENTED** and controlled by us.

Just think of these things when you go to buy a Sulky Plow, and don't let any Agent's "soft blarney" make you forget them either.

LA DOW'S JOINTED PULVERIZING HARROW!

Each Gang is Independent, with Patent Reciprocating Scraper Bar Attachment!

The most perfect device ever used for cleaning the wheels in **STICKY SOILS**. **EACH BAR IS INDEPENDENT**, **EACH SCRAPER IS INDEPENDENT**, and is made to shave to earth from each disc of each gang **ALL AT ONE TIME**, by simply drawing the Lever toward the driver. When not in use the Scrapers do not rub against the wheels and make the machine run hard. When the handle is released, the Scrapers are out of the way.

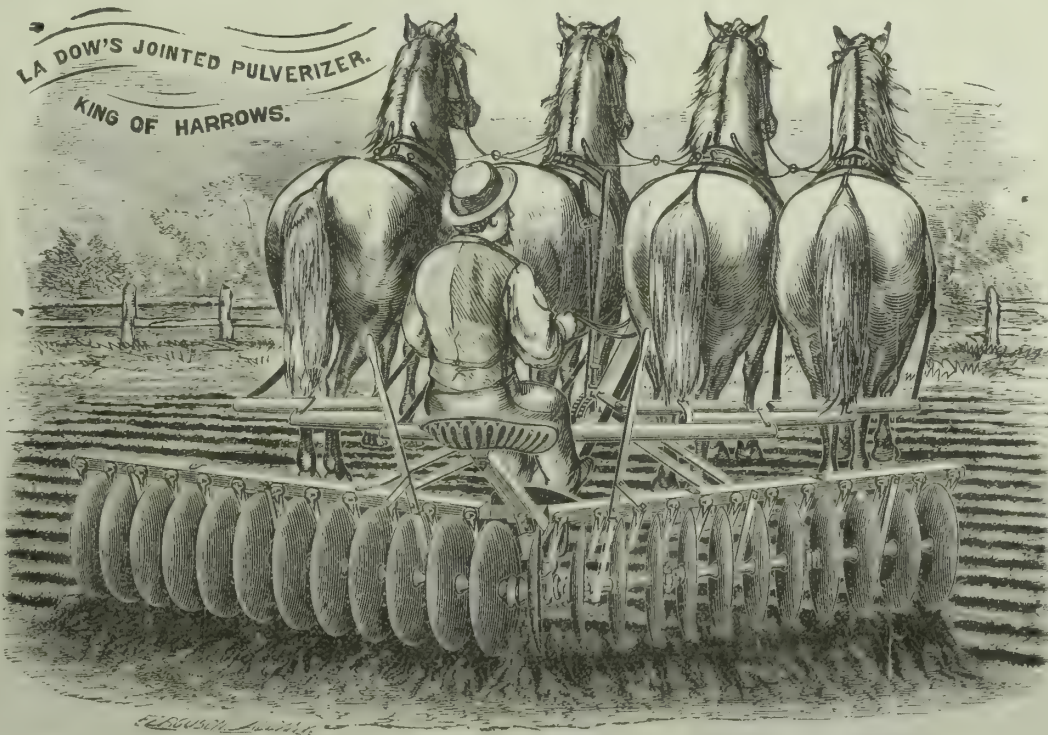
Each Gang Drawn by Three Journals. Cuts Uniformly Deep the Entire Length of Each Gang.

GROUND THOROUGHLY PULVERIZED IN ONCE GOING OVER.

Points of Superiority In which it Excels

It has a **LEVER** to change the angle. It is not heavy on the horses' necks. It has no side draft. It leaves no ridge at the center. It has self-feeding oil cups. It has a wrought-iron frame. Its chilled bearings cause it to wear longer and work easier.

LA DOW'S JOINTED PULVERIZER.
KING OF HARROWS.



It is easier to ride. It conforms to uneven surfaces perfectly. It can be made rigid if desired. Its journals are protected from dirt.

REMEMBER.

That this is the **ONLY HARROW** THAT HAS THE RIGHT TO USE A **LEVER** to change the angle, or that has the Axles of the Gangs hinged together, or that has Flexible Joint Bearings on the AXLES. USE NO OTHER, as you can see at a glance that this Harrow has the RIGHT PRINCIPLE.

Send for prices and descriptive circulars of our **SUPERIOR GRAIN DRILLS AND SEEDERS**, **FREIDEMAN HARROWS**, **SCOTCH HARROWS** AND **SQUARE HARROWS**. **WALKING OR HAND PLOWS** in endless variety and size. **CAST-IRON PLOWS**, **CHILLED IRON PLOWS**, **STEEL PLOWS**, ETC. We carry a large stock of Plows for our domestic and export trade; and in season our assortment of Plows CANNOT BE EQUALED upon the Pacific coast. Our stock of Implements is too varied to admit of advertising ALL continuously; therefore, we only present the different articles in their different seasons. For a full and complete description of all, send for our New Catalogue and Price List. Mailed free to any address.

GEO. A. DAVIS & CO.

327 & 329 Market Street,

SAN FRANCISCO, CAL., U. S. A.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the River-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measure-

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. J. Seymour, Redlands.....	20
P. R. Brown, Redlands.....	20
A. G. Simms, Redlands.....	20
Simon Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassady, Redlands.....	10
Oren Van Leusen, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	50
A. S. White.....	10
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
G. W. Boggs, Riverside.....	10
A. W. Boggs, Riverside.....	20
S. R. Weir, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Annabel, Riverside.....	50
J. P. Greeves, Riverside.....	10
D. U. Findlay, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. B. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10



side Press, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

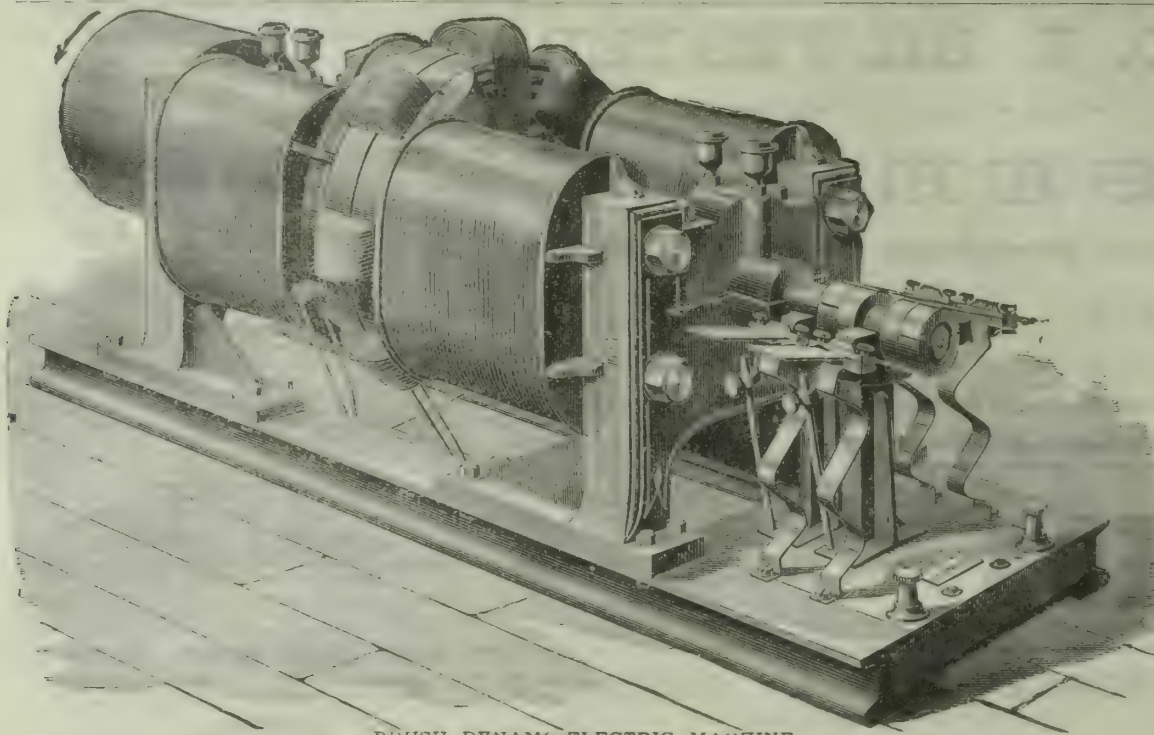
Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kidder, Redlands.....	10
J. F. Welsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Israel Reel, Redlands.....	10
C. E. Tinsdell, Redlands.....	20
R. B. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

B. F. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. E. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	20
Mrs. Sarah J. Morey, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	20
F. P. Morrison.....	25
A. T. Dewey, San Francisco.....	12
W. H. Ewer, San Francisco.....	10
B. F. Watrous.....	10
H. L. Rutgers.....	10
J. W. Bashford.....	5
S. Comey.....	5
Mrs. B. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cuts, Carson, City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20

Total sold.....1,004

Judson & Brown (San Bernardino, P.O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.



BRUSH DYNAMO-ELECTRIC MACHINE.

THE BRUSH ELECTRIC LIGHT.

Best and Only Practical System of Electric Lighting in the World.

For Mines, Mills, Manufactories, and all large spaces, it is the BEST, CHEAPEST and SAFEST Artificial Light.

And the New System of Storing Electricity, recently invented by Mr. Chas. F. Brush, to be used with an incandescent Electric Lamp, which is expected on this coast within a few months, will make the "BRUSH" Light as perfect an illuminator for domestic purposes and small rooms as it now is for large spaces and out-door lighting.

THE STORAGE BATTERY

Bears the same relation to electricity that the gasometer does to gas, or the reservoir to water.

Lighting Stations will be established in all the principal towns on the Coast. The Brush patents for the States of California, Oregon and Nevada and Washington Territory are controlled by the

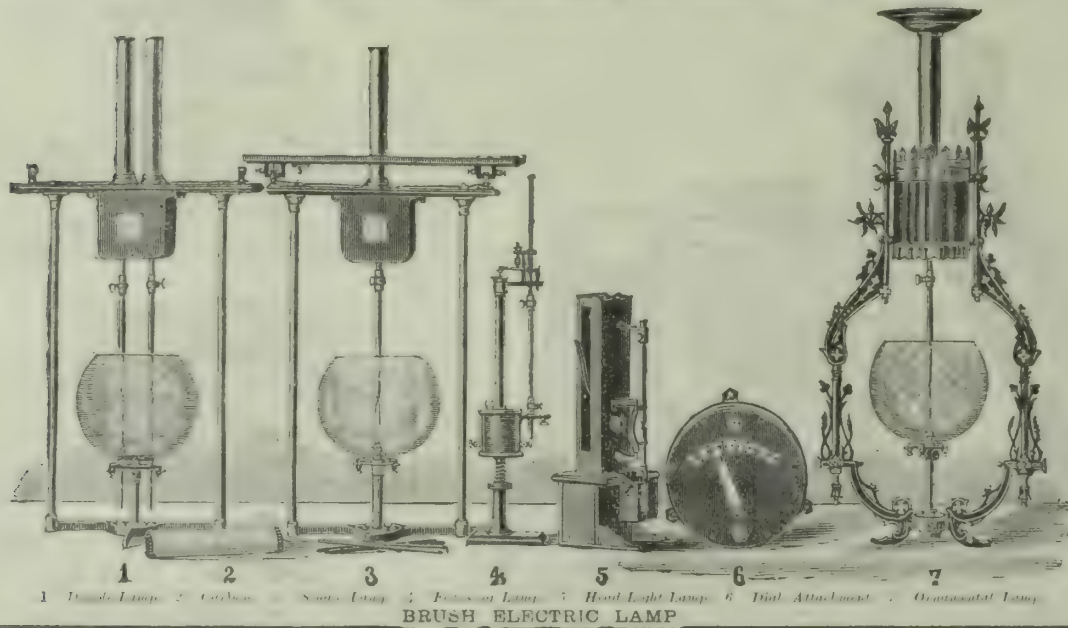
CALIFORNIA ELECTRIC LIGHT CO.,

220 to 226 Jessie St., San Francisco.

SEND FOR PAMPHLET.

GEO. H. ROE,

Secretary and Superintendent.

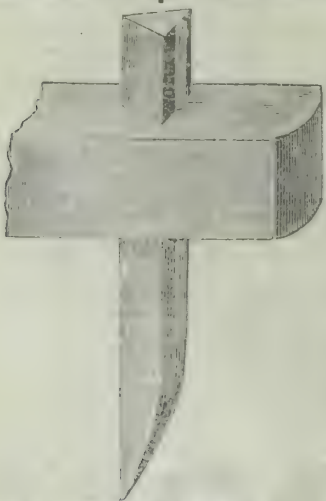


BRUSH ELECTRIC LAMP

Important
TO
Farmers.

WOOD

Solid Steel V-Shaped Tooth Harrow.



Will do MORE work, and FASTER.
Will do BETTER work, and FASTER.
Will make a HANDSOMER and NEATER
Will produce a FULLER yield, and GREATER
Will do MORE kinds of work, and READER
Will do LESS REPAIRS, and LAST LONGER
than any other Harrow for use in the cultivation

WHY IS THE BEST.

First. Proven to be improved and perfected by a practical farmer of large experience. This result of the most patient study and experiment.
Second. The V-shaped tooth presents a sharp edge to the soil, which materially lessens the draft over any other form of tooth.
Third. Every principle of mechanical science declares the V-shaped tooth to be stronger to same weight of metal than any other form.
Fourth. Having a V-shaped rib on the back makes a soil to stand up, and it is the most perfect method known to mechanics.

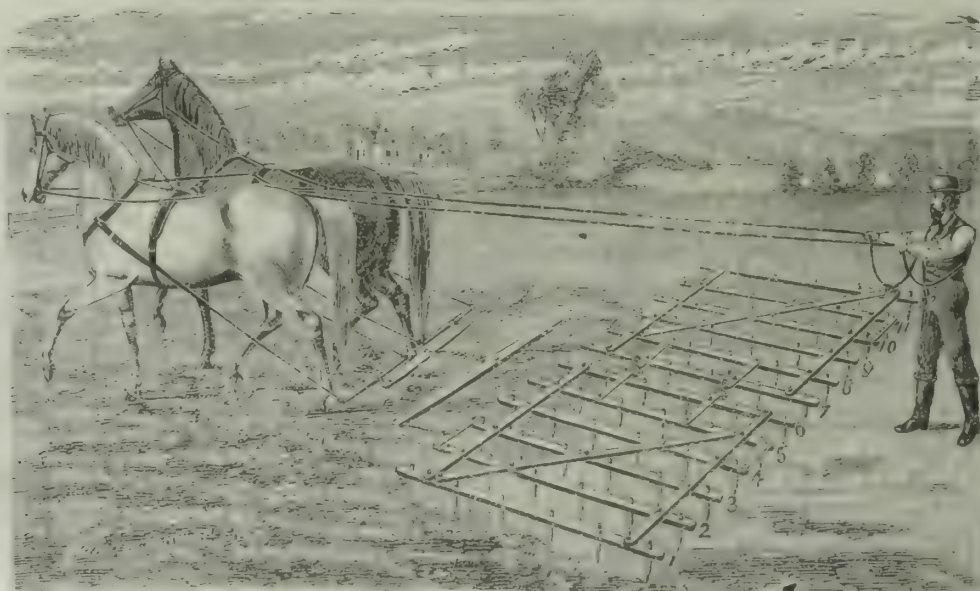
This Superior Harrow is Made in the Following Regular Sizes:

8 Bars, 2 Sections, 48 Teeth, 8 feet cut, weight, 135 lbs. Price, \$29
10 Bars, 2 Sections, 60 Teeth, 10 feet cut, weight, 160 lbs. Price, \$32
12 Bars, 2 Sections, 72 Teeth, 12 feet cut, weight, 180 lbs. Price, \$35
15 Bars, 3 Sections, 90 Teeth, 15 feet cut, weight, 225 lbs. Price, \$36
18 Bars, 3 Sections, 108 Teeth, 17 1/2 feet cut, weight, 270 lbs. Price, \$40

JACKSON & TRUMAN.

JACKSON & TRUMAN'S V-TOOTH HARROW.

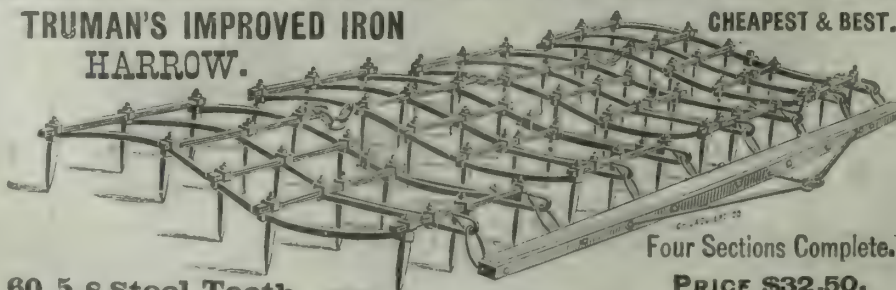
THE BEST WOODEN HARROW IN THE WORLD.



THE BEST WOODEN HARROW AND THE BEST IRON HARROW

TRUMAN'S IMPROVED IRON HARROW.

CHEAPEST & BEST.



60 5.8 Steel Teeth.

SEND FOR SPECIAL CIRCULAR.

Four Sections Complete.]

PRICE \$32.50.

Truman Harrows.

- No. 1 has three sections, 45 1/2 steel teeth; cuts 7 feet wide. This is a light size for two horses. Weight, 165 lbs. Price, \$25.
 - No. 2 (represented in the cut) has four sections, 60 1/2 steel teeth; cuts 12 feet wide. This is our standard style for two horses (generally used). Weight, 230 lbs. Price, \$31.50.
 - No. 3 has five sections, 75 1/2 steel teeth; cuts 15 feet wide. This is our 3-horse Harrow; can leave off one section and use two horses with the same draft-bar. Weight, 291 lbs. Price, \$37.50.
 - No. 4 has six sections, 90 1/2 steel teeth; cuts 18 feet. For this size we use four horses abreast, with two draft-bars coupled together at the ends; adapted for large farms. Weight, 336 lbs. Price, \$45.
- The following sizes are for heavy soil, and have been made to meet some of the suggestions of the large farmers of the Pacific coast:
- No. 2A has 3 sections of 4 bars each; 60 1/2 steel teeth; cuts 12 feet wide. Two horses generally used. Weight, 275 lbs. Price, \$32.50.
 - No. 4A has 4 sections of 4 bars each; 96 1/2 steel teeth; cuts 18 feet; for this size we use four horses abreast. Weight, 390 lbs. Price, \$48.
- These No. 2A and 4A Harrows are for very heavy soil.

The Truman Harrow

Can be taken apart and packed very closely for shipment. We ship them over the entire coast. They are the most

SUCCESSFUL HARROWS

Ever introduced to the farmers. We have received a great number of Testimonials. They all speak very highly of the Truman Harrow:
"Your Harrow is a good one." *M. Madden.*
"They give perfect satisfaction." *Jas. Cass & Co.*
"Your Truman Harrow is a good one and fully met my expectations." *Dr. L. E. Moulton.*
"I like your Truman Iron Harrow very well." *Milton Carpenter.*
"I tried your Truman Iron Harrow the other day, and it beats them all. My manager says 'it is the boss.'" *D. Freeman.*
"We like your Truman Iron Harrow very much." *Steele Bros.*

JACKSON & TRUMAN, 625 Sixth St., S. F.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 16, 1882.

Number 12

Guernsey Cattle.

The show of Guernsey cattle at the Golden Gate fair last week and at the State fair this week will, no doubt, awaken a greater interest in this breed of cattle, which are so little known in this State. The Guernseys are the latest dairy sensation at the East, and the animals are much sought after. Their present popularity rests upon a good basis, for they are indeed fine dairy cattle. To minister to the interest which will be awakened in this State by this year's exhibitions, we have secured an engraving of a Guernsey cow and calf owned by Mr. I. J. Clapp, of Kenosha, Wisconsin, whose herd includes about 40 animals, many of them imported this summer. The *Breeders' Gazette* says, that Mr. Clapp's herd is the best in the United States, and that he is a man of large experience and excellent judgment, and a thoroughly responsible breeder. The illustration is from a sketch of the imported cow, Polly of Kenosha 849, and her heifer calf.

Of the characteristics of the Guernseys, Mr. Henry Pierce, of the Yerba Buena ranch, Santa Clara county, who has the only herd of Guernseys in California, gives the following sketch in his pamphlet issued last week: The Guernsey, in form, is a rangy, deep animal, with plenty of udder development, and short, clean legs. She has a full, fine eye, clean throat and muzzle, and is a stylish-looking animal. The prevailing colors are orange, red and white, but they are to be found in all other colors except roan. It is claimed for them: 1. That the Guernsey is eminently a dairy cow, and pre-eminently a butter-dairy cow for the practical farmer. 2. That the quality of their cream and butter, especially the deep yellow color of their butter, cannot be excelled by any other breed. 3. That the quantity of milk is more than the average, and is well kept up throughout the year, and that as much butter can be made from it as from that of any other breed. 4. That, being a good-sized animal, with a tendency to fatten rapidly when dried off, the sources of profit to her owner are thereby increased. 5. That it is a quiet, gentle breed, free from nervousness of movement or behavior. 6. That the oxen are large, strong and intelligent, and fatten readily, making good beef. 7. That the calves are of good size and hearty. 8. That its grades are strongly marked with its characteristics.

Mr. Pierce gives it as his observation, "that the butter of the Guernseys, while being deeper in color and equal in quantity to that of the Jersey, is not so firm and waxy, and lacks that peculiar nut flavor which makes the latter so palatable, and finds it so ready a sale." But this distinction would not be granted by sole Guernsey breeders.

As is probably generally known to our readers, the Jersey and Guernsey cattle come from adjacent islands of the same names in the British channel. It is stated that the Jerseymen have bred their cattle for fancy points of color, etc., likely to please the Englishman who desired them for their beauty. This breeding for style was done without loss to the butter quality of the animals, in many cases, as is seen

by the fact that some families are such great producers in spite of their breeding for fancy points. The Guernsey men did not enjoy this fancy foreign demand which was so profitable on Jersey island, and they bred their stock directly for productive value. A hundred years ago, the Guernsey was fully appreciated by the islanders, and to keep their stock pure, it was determined that the introduction of any foreign blood must be undesirable, and in 1789 a law was passed by the Insular Legislature forbidding the importation of any cow, heifer, bull or calf, under a penalty of 200 livres and the forfeiture of the boat and tackle which should bring them, and a further penalty of 50 livres on any sailor on board who should fail to inform of the importation. Since that date, it is probable that the cattle of the island of Guernsey have remained as absolutely pure as

AN AUSTRALIAN GRAIN CLEANER.—The *Adelaide Observer* tells of a grain cleaner. It is driven by one horse. There is an attachment consisting of elevators fixed on one side, driven by a belt from the fan spindle, which carries the uncleaned wheat, as brought in by the stripper, and empties it into the two hoppers, from which it is taken by the spike roller out of the sieves, of which there are two of different mesh. The wheat then falls on a set of screens, where the white heads are separated from the clean grain. Another set of elevators, of a smaller size than those which feed the machine, then convey the clean grain into a small hopper having two valves, to each of which is attached a cornsack, which are filled alternately, and by a very simple movement. As soon as one bag is full, the valve from which it is filled is shut off, and the other opens simultaneously. Three

The Oleomargarine Business.

Last week we announced that the oleomargarine business had secured a footing on this coast, and might be expected to begin operations at any time. All our dairy readers should keep themselves informed as to this manufacture, and hedge about the product so that it shall interfere with the genuine as little as possible. The *Rural New Yorker* is credibly informed that in that State alone there are nearly 100 places where false butter and cheese are turned out, chiefly in small quantities and in a quiet way, while the capacity for manufacture in New York city alone is stated to be large enough to turn out a greater amount of

these products than the entire make of genuine butter in the whole State. At a low estimate, two-thirds of the vast production finds its way to the table under the false name, and the only way to prevent fraud in its sale appears to be to forbid the mixture of coloring matter with it. Unco'ored, the stuff can readily be recognized, and those who have a taste for it can buy it on its merits.

In the *RURAL PRESS*, of April 1st, we gave a copy of the new New York law against oleomargarine compounds, which aimed to make them easily recognizable by forbidding the use of coloring matter to give them the usual appearance of butter and cheese. This law is now in force, and it is a question whether it can be enforced or not. The law, says the *Rural New Yorker*, appears to be ample to secure this end, in spite of the proviso that "nothing in this act shall be so construed as to interfere with or abridge any right obtained, secured or guaranteed by law of Congress or by patent duly granted by the United States Government." Only two patents have been taken out in this country for the

manufacture of these products. The Mege patent originally granted to the Commercial Manufacturing Company, of New York city, on December 30, 1873, and reissued on June 13, 1882, is that under which the vast bulk of the products, that are not made clandestinely, is manufactured. The Cosine patent, granted to Garrett Cosine, of New York city, on February 15, 1876, covers a different process of making artificial butter "from oleine and margarine, as obtained from animal fats, fruits, and vegetable nuts, with lactic acid and lopped cream or milk." In neither of these patents, either in the "specifications" or in the "claim" of either is there a word said about coloring the product. The above proviso, therefore, will not permit the coloring of the imitation products forbidden by the rest of the bill, on the ground that the Mege or Cosine patent secures the right of doing so.

NEW SIGNAL STATION.—A new signal station has been opened at Cape Mendocino. The addition of this new station (on a point of land projecting into the Pacific ocean), will enable the signal service to more accurately predict the approach of storms during the coming rainy and stormy season.



IMPORTED GUERNSEY COW POLLY, OF KENOSHA, 849, AND HEIFER CALF.

any breed that is known. The aim that has animated these many years of care has been to produce a cow as perfect as possible for the dairy of luxury—a cow to produce milk and cream of marvelous richness and butter that in grain, flavor and golden color excels that of any and all other breeds.

The most remarkable characteristic of the Guernsey is the richness of the animal. It is seen in every point. The horn is soft and full of color, the hoofs are usually like tortoise shell, the skin is soft and of a golden yellow tint, and the inside of the ears is still more highly colored, while the same orange hue seems to glow from the bag as if there were light under the soft skin. In the mature, well-bred animal, both eye and hand find evidence that all secretions are rich and of high quality.

The disposition of these cattle is remarkably gentle and affectionate. On the island, their care is usually confided to women and children, whose gentle ways are reflected in the quiet demeanor of their family favorites. In driving through the green lanes of the island, the visitor will see many beautiful scenes of children, when scarcely large enough to toddle along, leading cattle to water with one end of the frail string that is sufficient to secure the obedience of the beautiful animal, which really seems fitted to be the guardian.

men can, with perfect ease, work the machine. From the material the machine operated on, consisting of chaff, wheat and mill refuse, well mixed, it was evident that the machine, with a few improvements, will do all that is expected of it.

THE GOLDEN GATE EQUESTRIENNES.—The following entries for the ladies' tournament appeared in front of the judges' stand at 2:30 o'clock on Friday, at the Golden Gate fair: Mrs. A. E. Sessions, Miss Chrisholm, Miss Marchang, and Miss Johnson, of Oakland, Miss Peniman, of San Jose, and Miss Peters, of San Francisco, and Miss Lang, of San Francisco. The judges of the tournament were: Messrs. J. Broader, W. H. Hammond, A. C. Dietz, Shafter, A. K. P. Harmon, Harry Houghton. The riding of the ladies was all good. It was altogether a very pretty exhibition. The awards were made as follows: Miss Peniman of, San Jose, first prize; Miss Ellis, second prize; Miss Marchang, third prize; Miss Peters, fourth prize; Miss Lang, fifth prize; Miss C. A. Sessions, sixth prize; Miss Chrisholm, seventh prize.

LARGE PEAR.—The *Dixon Tribune* has been shown a pear of the Columbia species, from the orchard of S. C. Wolfskill, which weighed one and three-fourths pounds.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Notes from San Diego City and County.

EDITORS PRESS:—Many interesting points concerning the agricultural and horticultural advantages of our county can now be noted for your valuable paper. Our shipping facilities to all points are now complete, as far as rail and water transit can make them. The completion of the California Southern railroad, a few days ago, from San Diego city to a connection with the Southern Pacific railroad at Colton, has placed us in direct communication with the balance of the United States, and the very favorable freight rates established by the railroad company have given universal satisfaction to the farmers and producers of our county located along the line. As matters now stand, our grain, wool and honey crops can be moved from the different stations throughout the county on the cars, and run direct to steamers and sailing vessels that ride with safety (at all seasons) along our wharves, thus bringing ship and rail together. San Diego city grain merchants are now loading the iron vessel, *Sarah Scott*, with 1,000 tons of San Diego county wheat for a foreign market, and several more are to follow.

Our Crops for 1882.

Particularly wheat, have produced one-quarter more in bushels than was anticipated early in the season. The total yield in the county will be 100,000 sacks, and all of good average quality. Barley comes next, with 40,000 sacks. Considering the cool weather we had until quite late in the season and the acreage devoted to grain, we call this a fair showing for a county not reaching after fame as a grain-growing section.

Our Honey Production.

For in this we excel as to quality over any known section in the world, will be, say, two-thirds of a full crop. A full crop in this county means about 1,400 tons of choice honey. I presume we shall ship nearly 500 tons of honey in comb, and balance will be choice extracted. Counting this quantity at the average price now being paid (10 cents per pound) by our merchants, it puts in circulation considerable coin, and it goes into many hands, the production of honey not being confined to a few, but to many hundred persons.

Semi-Tropical Fruits.

In the production of oranges and lemons we are advancing rapidly, it having been demonstrated that our soil and climate are all that can be desired for their successful production. Nowhere on the coast do the olive and guava flourish more luxuriantly. In the fruit markets of San Diego city can be seen as choice apples, pears, plums, grapes, and other small fruits, as in any portion of our fruit-producing region, thus showing the great diversibility of our soil.

In conclusion, I would say that in this county to-day are hundreds of pleasing little valleys, wherein thousands of families can erect their homes, and in a few years, in reality, sit under their own vine and fig tree, and enjoy a climate that to compare with any of the most favored ones on earth would be but a waste of time.

San Diego, Cal. JNO. C. DALY.

HORTICULTURE.

Poor Fruit—The Cause and the Remedy.

EDITORS PRESS:—The cause of small, dwarfed and stunted fruit, and the remedy therefor, is a subject that affects alike the fruit grower and the consumer.

The fruit growers all seek to obtain the most prolific-bearing, fine and large fruits, and too often do we find the largest and finest of those fine fruits dwarfed and stunted, with not a vestige of their fine qualities left, by which a good judge could know them. I have seen, this year, the Washington plum so small, withered and insipid that its owner would disown it if confronted with it out of his own orchard. I exhibited some just such, together with some fine large ones of the same variety, fully developed and ripe, at the Mechanics' fair two or three years ago. The contrast was so striking that it was hard to make an expert believe that they could be of the same variety. The one looked more like a western crabapple or a wild persimmon than a scion of that luscious king of plums. Both specimens were grown side by side, on the same soil, and having the same treatment, save in one particular, of which I will tell you before I close.

The plum is not alone affected by the same cause. The apricot, peach, nectarine, apple and pear, and in fact nearly every kind of fruit having prolific-bearing habits. I have seen the Moorpark apricot, this year, so exhausted with

its enormous load of fruit that it looked more like a bitter almond than like that grand fruit. Birds nor bugs had no use for them, and the Royal—well, it is not worth mentioning them; children might play jackstones with them. The disastrous effect of this over-bearing of our orchards is seen all over the State, to the great injury of the grower, and not much less that of the canners and the trade. To such an extent has the fruit been injured, that the canners have rejected much of the fruit as worthless for their use, and repudiated many of their contracts, throwing immense quantities of it on the market to be sold on account of the shipper, or better still, dumped it in the bay. This, of course, had a tendency to lower or break the market, and those who had good fruit were made to bear a share of the general loss.

Now, the question again to be asked, what is the cause and the remedy? Some contend that we must thin out the fruit—a very good remedy, but it will not wholly remove the evil. Others say that they have tried it and did not get any better results than from trees not touched. Then where is the remedy? Some say we did not have rain enough last winter; that the trees are starving for moisture, and their appearance fully justifies the assertion. But the injury, in my opinion, is not wholly attributable to the above causes, but to slight or injudicious pruning, or not pruning at all. There is no questioning the fact that our orchard trees suffer in consequence of light winter rainfalls, and too often perish entirely.

If we study closely the effect of a dry season on our trees, we cannot fail to see that the roots must be strained to their utmost to furnish sufficient moisture to keep life in the plant throughout our long parching summer. A close observer cannot fail to see that every useless limb, twig and leaf, demands its share to the last drop, until the tired roots cry out in despair.

If we but look at the enormous top of a tree, covered with thousands of superficial feet of leaves, with countless millions of minute pores, and calculate the enormous amount of water, in the form of vapor, thrown off, then we cannot but wonder how it is possible for those feeble little rootlets to furnish this wonderful supply from a soil as dry as we know ours to be in our long dry seasons. But, like the hydraulic ram, they go ceaselessly on with their work until the supply fails or the valves give out.

It is said that the atmosphere contains 21% of oxygen—the most essential element of plant life—and that the leaves of plants, under certain circumstances, are known to absorb it. It is very evident that this circumstance is the presence of moisture in the leaves, in the absence of which the leaves are unable to perform their function. Then why permit a tree to form an enormous head, loaded with fruit and a superabundance of leaves that it cannot support. The fruit makes the first draft upon the tree of the limited amount of moisture that it can supply, and that only enough to sustain life, and the leaves wither and dry up.

We cannot be governed in our peculiar climate in the treatment of our orchards by the rules laid down in the Eastern States, and other countries with similar conditions. There, they have occasional showers to revive a tree after it becomes exhausted by a period of drouth, giving it renewed life for a time. But here, in a dry season, the exhaustion goes on to the end of the season, without the possibility of relief, other than what we may give them by judicious pruning and cultivation.

A Record of Experience.

When I took charge of my orchard, nearly six years ago, it was in a deplorable condition—so thick-like that the fruit in dropping would lodge in the brush. I went energetically to work pruning it, using the best judgment a limited experience afforded me. There was a perfect hue and cry all over the country, with prophecies from every section that my trees would die; that I was ruining my orchard. Nevertheless I have not lost nor injured a tree by pruning, but have, on the other hand, lost several by not pruning them, and letting them follow their own inclination and bear themselves to death, which several did do during the hot, dry season, some four or five years ago. Those were left unpruned to satisfy the skeptical, and the fruit of one of those trees was the Washington plums alluded to above as being exhibited in the Mechanics' fair, to illustrate the advantages to be obtained by judicious pruning. And, as a proof of the correctness of my treatment of my trees as above stated, I have not lost or injured a tree, and my fruit has been gradually increasing in quantity and quality far above the average. The canners did not repudiate their contract with me for what fruit they contracted for; nor did they reject any fruit I had of the varieties they were using, but, on the other hand, they requested me to send all that I had, and that, too, at fair, remunerative prices.

My candid opinion is that the inferior quality and small size of the fruit sent to market and the canners this year is attributable to a lack of proper pruning or cultivation, or both. Especially is this the case with the plum, peach and apricot. I never saw either of those varieties injured by judicious pruning.

Effects of Pruning.

Mr. Downing, one of our best American authorities, in speaking on the subject of pruning, states that pruning has the power of increasing the vigor of a tree in two ways. If we assume that a certain amount of nourishment is supplied by the roots to all the branches and buds

of a tree, by cutting off one-half of the branches at the proper season, we direct the whole supply of nourishment to double their former luxuriance. Again, when a tree becomes stunted or enfeebled in its growth, the thinness of its inner bark with its consequent small sap-vessels (which it must be remembered are the principal channels of the passage of the ascending supply of food) renders the upward and downward circulation tardy, and the growth is small. By heading back or pruning judiciously, all the force of the nourishing fluid is thrown into a smaller number of buds, which makes new and luxuriant shoots, large sap-vessels, and which affords a ready passage to the fluid, and the tree with these renewed energies will continue in vigor for a long time.

The same author, in speaking of the apricot, remarks: "In order to render it fruitful, and keep it for a long time in a productive state, we cannot too strongly urge the advantages of the shortening-in system of pruning recommended for the peach."

There is no questioning the fact that a judicious and intelligent system of pruning will insure more satisfactory results. Any system that will force the fruit-bearing surface into the body of the tree is, in my opinion, the correct one. Remove all water sprouts or slender shoots from the body of the tree; encourage the growth of all the short, crooked, brush-like limbs that are possible in the body of the tree, as they are the true and lasting fruit spurs, and those that, as a rule, bear the best fruit. If your tree becomes too dense in its foliage, remove a larger limb to admit light and air. The fruit spurs that cluster round a long straight limb are generally short lived, as they are constantly being broken off by the annual gathering of the fruit and general care of the tree, and even if they were not so destroyed, they will soon perish, as they have but a feeble hold on the surface of the limb. Although at first supplied with good, well-developed sap passages, they are soon lost for the reason that they cannot keep pace with the rapid growth of the parent limb. The nourishment that should go to support them is carried past them in the well-developed system of sap passages to the extremity of the limb. In case of a lack of a sufficient number of those short fruit-bearing limbs, or spurs, they can easily be created by selecting a sprout, properly located, and shortening it in to the desired length, which in all probability will force it into fruit the following season. I have seen so-called professional pruners removing all such brush (as they termed it) to give their trees a clean, trim appearance. I want no straight, smooth walking-sticks in my orchard; my trees can stand alone in their magnificent glory, unaided, except by what assistance I can give them in what I deem judicious pruning and good cultivation, and they always yield me a bountiful return for my labor. Many may say this sounds like a boast, but the proof is within their reach; I challenge criticism. WM. H. JESSOP.

Haywards, Sept. 6, 1882.

The Fruit Interest of Nevada County.

From the report of the County Horticultural Commissioners, Messrs. Gillet, Barker and Hatch, as published in the *Foothill Tidings*, of Grass Valley, we extract the following description of the horticulture of Nevada county:

The largest half of the county is almost unfit for the raising of crops of any kind, fruit or cereals, but is a rich gold-mining region. With that part of the county the commission had nothing, or very little, to do. Now, in regard to the other half, comprising the townships of Rough and Ready and Grass Valley, and portions of Nevada and Bridgeport, the case is a very different one. There we find, it is true, mines in innumerable quantities, gold-bearing quartz lodes—some of them the richest in the world—intervening the land in all directions; but outside of those regular mineral lands, we find a large area of what may be termed agricultural land, or land as well fitted for agricultural or horticultural purposes as for mining purposes. On that land can be grown all the varieties of fruit peculiar to the temperate zone; though the soil of Nevada county, mostly composed of a reddish, ferruginous loam, or what may be termed sidehill or table loam, is more particularly adapted for the raising of apples, pears, chestnuts, walnuts and grapes, for all of which she has hardly an equal among the other counties of the State. As a general rule, Nevada county has a pleasant and equable climate, and if the summers are all sunshine, the nights are cool and refreshing and very beneficial to fruit of all kinds. Very few counties in this State have such a variety of climate, for we have seen it raining at Grass Valley, snowing at Nevada City, freezing hard at Meadow Lake, while oranges were ripening on the trees in the open ground on the banks of the Yuba, in Bridgeport township. This county has the name for producing some of the best keeping and best flavored apples to be found in the State. The exportation of that fruit to other parts of California and to the State of Nevada, is getting to be quite a trade. The whole of Rough and Ready and Grass Valley townships, and the biggest portion of Nevada and Bridgeport townships, are admirably adapted to the raising of grapes; and since

Nevada county is known to have produced some of the finest wines and brandies ever raised in California, while that terrible pest, the phylloxera, is entirely unknown here, it is a wonder to us, indeed, that more vineyards have not been set out, particularly in Rough and Ready and Grass Valley townships.

The miners of Nevada county have a natural taste for fruit and ornamental trees and shrubbery, so much so that all over those mining towns of Nevada county, from Grass Valley to North San Juan, from Nevada City to North Bloomfield, the homes of our miners are a credit to the high culture and good taste of the men. All round those small habitations are grown all kinds of fruit trees and shrubbery, that give a cheerful appearance to the hardy miner's home. At Grass Valley, those little orchards are innumerable; they are also very numerous in Nevada City, and in Bridgeport, and even the more elevated townships of North Bloomfield, Washington and Little York, a great many of the miners' homes have, too, a little orchard annexed to the house.

For the present, our main reliance for fighting the codlin moth and checking its increase and ravages, is by entrapping the larvae (worms) and pupae (chrysalis) through bands of cloth placed around the bodies of the trees; we will add that this band system works admirably; but, to render it quite effective, every owner of fruit trees must have bands around his trees, which have to be examined every ten days, and all the larvae and pupae found therein removed. We find that in all parts of the country, and from present appearances, the codlin moth's ravages, if not checked at once, as described above, will be appalling, and it must be so, very naturally, for the moment the codlin moth was introduced into California, it struck a bonanza. Since its introduction in this State in 1874, it has kept on increasing and spreading all the time, and to-day, in Yolo county, from where it first started, hardly any apples can be raised. In cooler climates, the codlin moth goes through but one generation in a year; thus the reason why it is so much less dreaded in the Eastern States than in California; but we know from our personal observation and that of other competent persons, that two or three broods here in California are not only common, but almost the rule. This does explain the importance of the band system for entrapping the first brood under the form of larvae and pupae, and thus save the balance of the crop. In our opinion, with a little more experience, as they are bound to have this season, our people will be more ready to fight an insect with which they will make a closer acquaintance this summer; and with more exertions yet on the part of our commission, we may, we will not say exterminate that pest, but check its increase and ravages in such a manner as to be able to secure the most of our most valuable crop of fruit.

Besides the codlin moth, our apple trees are attacked to a more or less extent by the woolly aphis, an insect belonging to the plant lice family, and which has the upper part of the abdomen covered with very long white down; hence its name. It is found chiefly upon the wood and roots of the trees. It is easy enough to get rid of that pest when found on the trunk and branches of the tree, but it is very hard to get at it when infecting the roots. Our commission has been trying a wash composed of bisulphide of carbon, tobacco and water, and we will know this fall whether this remedy is successful or not.

In Rough and Ready township, we found, on some pear trees, the red spider, or red mite, another pest that makes the limbs of trees appear as if covered with iron rust; they make the leaves fall prematurely, and render the fruit unfit to pick. In the same township, we found, on the 'Christmas berry' bush, a native scale insect which is the same as does such ravages in the citrus orchards of southern California. On its native plant it is almost harmless, and does not seem to increase much in numbers.

Next to the codlin moth and woolly aphis, the insect most injurious to our orchards is the twig borer of the chestnuts; it is a very small beetle that bores through the bud, making the leaves drop off prematurely, and, in most cases, ruining the bud; in this way it causes a double injury; first, by destroying a portion of next year's crop; second, by injuring the standing crop, which it does by leaving the fruit too much exposed to the sun. This little beetle we found to be a parasite of the oak, and a native of California. It is plentiful around Nevada City and Grass Valley.

As to scale insects, San Jose scale, black scale, white scale, red scale, or any other scale, the terror of the counties south of San Francisco, and which caused such a desolation and ruin in the beautiful valley of Santa Clara these last two years, we are glad to say that they have not yet reached this country.

In regard to our vineyards, the mildew last year, and here and there a few cases of black knot, was all that affected our grapes. The mildew is easily checked by two or three applications of flowers of sulphur, when applied in time; and all those vineyardists that last year lost their crop of grapes by not being posted on this excellent remedy, have found, through this commission, what to do against that cryptogamous eruption, and we have the satisfaction to state that this year all our vineyards look splendid, with no mildew, very little black knot, but a fair crop of grapes.

As to the phylloxera, the scourge of the vineyards below, it is entirely unknown in Nevada county.

THE VINEYARD.

Clearing and Vine Planting in Lake County.

EDITORS PRESS:—I recently had the pleasure of visiting the premises of Mr. R. K. Nichols of Lower Lake. Mr. Nichols put out last winter and spring 160 acres of grape cuttings, and there is to-day less than five per cent. of them dead. The year before, in his planting, he took the advice of some one else in putting out his vines, and the advice was such that he plowed up the whole thing and went by his own judgment this year. He has at this time a fine young vineyard of 160 acres.

His Plan

Is about this. The ground is subsoiled to the depth of 16 inches. We were surprised to find how loose this ground is. You must remember that much of this land is chemise land which costs something to clear it. But this gentleman has a peculiar way of clearing his land which we will more fully describe further down.

The Cuttings

Are from 24 to 30 inches long, and of a good solid growth—looking out for this before they are put into the ground. They are put about eight feet each way. A hole is dug, and top soil put in around the bottom of the cutting, and pressed firmly to it, and on nearing the top it is left perfectly loose and a little rounding. A wire rope is used for the purpose of laying off the ground, and as a consequence, they are in rows every way—the straightest and best laid off grounds that I have ever observed. The kinds of grapes that do the best are Zinfandel and Berger, while the Chasselas and some other varieties do not do quite so well, but are growing nicely. The average growth of the 160 acres cannot be excelled, I do not think, in either of our sister counties.

Clearing Land for Vines.

Mr. Nichols is now preparing another 160 acres, to be put in next winter. The immense amount of labor he is doing no one can tell without visiting the premises. Yet, he informs me that it costs him only \$16 per acre to clear this land, and sells \$4 worth of wood, which brings it down to \$12 per acre—the actual cost of clearing the land. There is a wide difference between the cost of clearing this land of Mr. Nichols' and that of Mr. Buckingham's, situated in the same county, and only a few miles from these premises. While Mr. Nichols' land costs only \$12 per acre, the same kind of land, covered with the same kind of brush and trees, and just as thick, costs Mr. Buckingham \$55 per acre. Here is considerable difference. But how is this? What makes this difference? Mr. B. takes his brush off by grubbing it out wholly by hand. Mr. N. has a peculiar way of fastening a block and tackle to the top of the pine and oak trees, after digging down and cutting off the horizontal roots, and by using a long chain for a rope on the pulleys, he pulls the trees to the ground with one span of horses. These can be pulled up very quickly, when compared with hand work. Some of this land was cleared off and put in small grain during the winter, and there were one and one-fourth tons of hay baled to the acre off this land. Why is it that more of this land is not cleared off and put into something profitable?

The Bee-Democrat, of Lake county, has called attention to this matter time and again, trying to inspire into our people confidence, in that they would be paid beyond any doubt for their labor. Now the ball is started, let us keep it rolling. Let us wait for others to follow in the footsteps of Mr. N. in this matter.

Rockwork.

In addition to grubbing up the trees and brush of this land, there is a kind of lava rock here and there on the surface which is dug out and hauled to the creek and abutments made for a bridge to be built in time to allow hauling the grapes from one side to the other to the winery—finally to be built. This abutment, wings and all, was marked out by Mr. Nichols and given to Mr. — well I have forgotten his name now it was his boss teamster any way—to build, and the job of work done would do credit to a stone mason. It certainly shows talent.

The Lake County Grape District.

This large tract of land set out to vines and to be set out, is situated just below the outlet of Clear lake, on both sides of Cache creek about one and one-half miles northeast of Lower lake.

Mr. Nichols has 125,000 grape cuttings out rooting, for the land now almost cleared, which will be put out this winter and spring. There are 16 head of horses used on this ranch, and ten men regularly employed besides more at intervals. There is hay and grain raised on these premises to feed all necessary stock to be kept. Mr. Nichols is putting all the manure on the adobe soil that he can get hold of. Some one is giving him manure, and as Mr. Nichols states it, "it does not hurt the land as is sometimes supposed, but hurts the man that gives it away." Financially, he means he is hauling sand and putting it with the clayey soil and thinks it will thus improve it.

I have written as a matter of news, and to show what we are commencing to do in our county, and to inspire in the hearts of our people a desire to look after what was once thought

to be a useless class of land; but as this report and others to follow will show that here at this western margin of the globe we have land that will produce waving fields of grain, grape-bearing vines, orchards full of fruit, gardens of vegetables, berries and flowers, and soon we shall see inspiring promises of the toil-worn farmer.

W. P. BURKE.

Lower Lake, Lake Co., Cal.

THE STOCK YARD.

The Livestock at the Golden Gate Fair.

The exhibitors of live stock at this year's fair have put forth commendable efforts to show their stock in good condition, and the result is that the public is much pleased and instructed by the exhibition of the fine animals which are exhibited.

Nearest to the gateway is the exhibit from the Forest Home Herd of Short Horns, owned by Coleman Younger, of San Jose. At the head of the herd stands the 2d Duke of Alameda, bred by M. B. Sturges, and another notable animal is the 3d Duke of Alameda, also from Mr. Sturges' herd. Col. Younger's exhibit includes 17 or more animals, among which, of course, are some of the famous Roses of Forest Home, and Red Dobbies, cows and heifers, and a string of promising young Dukes of Forest Home. The Colonel's stalls are all adutter with prize ribbons.

Page Brothers, of Cotate Rancho, near Petaluma, have a splendid show of Short Horn animals of clear pedigree, and with a pronounced milking tendency, as they are bred for their dairy value. The head of the herd, El Medico, is a noble animal, and the females show most excellent points. The Cotate herd is handled with much skill and makes a very creditable exhibition.

Silvester Scott, of Cloverdale, shows the Short Horn bull, Royal Oxford, an animal of good form and breeding.

The Ayrshire display is made by George Bement, of San Mateo county, who is the best known Ayrshire breeder of the Pacific coast. He has a herd of 12 animals, male and female, young and old, which will satisfy any admirer of this well-known breed of dairy cattle. The Ayrshire has acknowledged excellence as a dairy animal at the East and in Great Britain, but has not attained the position here to which its merits entitle it. However, Mr. Bement goes on breeding and exhibiting, believing himself in the value of the cattle, and hoping to educate the people up to them. His cattle are worth examining.

Henry Pierce leads in the display of Channel Island cattle, with selections from his Yerba Buena herds of Jerseys and Guernseys. He has about 25 head on exhibition, and his stalls are the center of attraction. People are getting very well informed on Jersey qualities, and the demand both for breeding and for milk is sharp. Mr. Pierce has on exhibition some of the very top crust of the Jersey pie, for he has descendants of the famous "Jersey Belle of Scituate," who gave 25 lbs. 3 oz. of rich, yellow butter in a week, and over 700 lbs. in a year; of "Coomassie," the celebrated prize cow of the islands, seven of whose progeny sold at auction this year, in New York, for an average of \$3,000 per head; and of "Farmer's Glory," the noted bull, who brought at a recent sale \$3,250.

Mr. Pierce's Guernseys are the only herd on the coast, so far as we are aware, and were brought by him directly from Guernsey island. They are larger than the Jerseys, and, therefore, are preferred by those who look to a beef carcass after the milking service. They have the rich, golden hue to their products, as with the Jerseys. Mr. Pierce has issued a very neat pamphlet, setting forth the leading characteristics of the Jerseys and Guernseys, which should be asked for by those seeking information on the cattle.

Mrs. R. P. Clement shows a beautiful little group of Jerseys from her Rose farm near Melrose, Alameda county. They are as fine and handsome as Jerseys can be—lovely enough for lawn ornaments, and yet useful, as their capacious udders show.

J. S. Wall, of Oakland, also has several Jerseys of good quality. Other Jersey exhibitors are P. J. Shafter, who shows a cow, "Mouse," a fine animal; also F. K. Shattuck and W. Mahony, of Berkeley; A. J. Snyder and J. S. Emery, of Oakland.

Col. Younger shows a pen of Cotswolds, and George Bement has a fine Southdown buck. J. H. Strobbridge, of Haywards, Alameda Co., had on exhibition seven pens of thoroughbred Spanish Merino sheep, which are remarkable for size, uniformity of covering and texture of fleece, and constitute the finest exhibit we have ever seen in this State, or any other. Two Australian gentlemen, experts in the business of sheep raising, visited the grounds on Wednesday, and pronounced these specimens superior in most respects to any to be found in Australia, a land that now boasts of 100,000,000 sheep. Mr. Peet, the molder and manager of this famous flock, goes from Oakland to Sacramento to attend the State fair.

Messrs. E. W. Woolsey & Son, of Fulton, Sonoma county, made an exhibit also, but the animals having suffered by exposure at the Petaluma fair, did not do themselves justice.

List of Premiums.

The following is a complete list of the premiums awarded to exhibitors:

Horses.

Thoroughbred Stallions—Three years and over, Thad Stevens, by R. P. Clement; second, Nathan Coomb, by William Boots. One year old, Sir Thad, by J. C. Simpson; second, Billy Foote, by W. A. J. Gift. Under one year, Lito, by J. C. Simpson. Thoroughbred mares—Three years, Too Soon, by J. C. Simpson. Two years, Miss Gift, by W. A. J. Gift; second, Lady Viva, by J. C. Simpson. One year, Laguna, by R. P. Clement. Special diploma to Miss Stevens, by J. Leech. Thoroughbred families—Thad Stevens and five colts, by R. P. Clement. Families other than thoroughbred—General Grant and five colts, by Antonio Bellina.

Horses of All Work—Stallions, three years, General Grant, by A. Bellina; second, Gold Hill, by R. O. Baldwin. Two years, May Boy, by A. Bellina; second, Black Prince, by P. J. Shafter. One year, Frank, by Antonio Bellina. Colts, Little Prince, by Chisholm & Sackrider; second, "Batt Cutt," by A. Bellina. Mares of all work—Three years, Brownie H., by H. Hewlett; second, Dollie, by A. Bellina. One year, Abboten, by Ben Harris. Filly, Lili, by Chisholm & Sackrider.

Roadsters—Stallion, four years, Rustic, by P. J. Shafter; second, Odd Fellow, by W. K. Robinson. Three years, Belmont Chief, by J. F. Houghton; second, Anteo, by J. C. Simpson. Two years, Echo, Sr., by L. Newlett; second, Redwood, by Geo. Copsy. Yearlings—Sydney; second, Judge S., both by J. Goldsmith. Sucking colts—Tom Moore, by W. D. Hammond; second, Royal Boy, by A. Bellina. Mares or geldings—Four years, Unknown, by Mark Rollins. Three years, Patriarch, by W. K. Robinson; second, Lady Lightfoot, by W. D. Hammond. Two years, No Name, by J. L. Rose. One year, Rose Abbott, by B. E. Harris.

Matched Span—Jack and John, by Newland & Purney; second, Prince and Bill, by S. W. Sawyer. Draft Horses—Stallion, three years, Tornado, by W. S. Brown; second, French Spy, by Chisholm & Sackrider. Two years, Penola Chief, by F. Tooleman. One year, Deceda, by Chisholm & Sackrider. Under one year, French Spy, Jr., same owners. Mares—One year, Gertrude, by W. S. Brown; second, Lizzie, by Chisholm & Sackrider. Under one year, Puss, same owner.

Carriage Horses—Jack and George, by Mrs. R. Duffy. Saddle Horses—Mike Price; second to Major; both by Ben Harris.

Sweepstake Stallion, any breed—Anteo, by J. C. Simpson; second, Old Fellow, by W. K. Robinson. Sweepstake mares—Lady Viva, by J. C. Simpson.

Jack—John Henry, by W. A. Memyan.

Durham Cattle.

Bulls—Three years, Second Duke of Alameda, by Colman Younger; second to El Medico, by Page Bros. Two years, Cherry Prince; second to Lord Clover; both owned by Page Bros. One year, Forest King; second, Fourth Duke of Forest Home, Colman Younger. Bull calf, Eighth Duke of Forest Home, Colman Younger; second to Roscoe, same owner.

Cows—Three years, Jessie Maynard; second, Red Dolly 2d, Colman Younger. Two years, Oxford Rose, Colman Younger; second, Belle of Sonora, Page Bros. One year, Belle Medico, Page Bros. Heifer calf under one year, to Red Dolly 14th, Colman Younger.

Ayrshire Cattle.

Bulls—Three years, Archie, George Bement; two years, Lindo, same owner; calf, Malcolm, same owner. Cows—Three years, Stella, George Bement; second, Ethel Brown, same owner; two years, Stellanita, same owner; one year old, Sultana, same owner; heifer calf, Sybil, same owner.

Sweepstakes Durhams

Bulls—First to Second Duke of Alameda; second, Third Duke of Alameda, Colman Younger. Cows—First, Jessie Maynard; second to Red Dolly 2d, Colman Younger.

Sweepstakes—Ayrshire, Jerseys or Alderneys.

Bull—First premium to Archie (Ayrshire), owned by G. Bement; second to Champion of Guernsey, Henry Pierce.

Cow—First premium to Rumor 2d (Jersey), Henry Pierce; second to Lane (Ayrshire), owned by George Bement.

Herds—Durham.

Over two years—One male and two females: First to Second Duke of Alameda, with cows, Rose of Forest Home, Red Dolly 2d, Jessie Maynard, Red Dolly 5th, Colman Younger. Under one year—One male and five females: Bull, Third Duke of Alameda; cows, Red Dolly 9th, Red Dolly 11th, Laurence 5th, Rose of Forest Home 4th, Rose of Forest Home 9th, Colman Younger.

Herds—Jerseys and Alderneys.

Over two years—One male and four females: Bull, Victor of Yerba Buena; cows, Bloomer 2d, Oakland Maid, Mon Plaisir, Fairy of Yerba Buena, Henry Pierce. Under two years—Bull, William Scituate; cows, Eva 3d of Yerba Buena, Coquette of Yerba Buena, Carrie of Yerba Buena, Flora 3d of Yerba Buena, Henry Pierce.

Herds—Guernseys

One male and four females—Bull, Champion; cows, Lizzie, Lassie, Lillie, Daisy, Henry Pierce.

Best Jersey, Alderney or Guernsey in Class.

Bulls—Three years: First to Victor, Yerba Buena; second to Champion of Guernsey, Henry Pierce. Two years old—First premium to James Hayward, A. J. Snyder; second to Modoc, Jesse Wall. One year old—First to William Scituate; second to Electric, Yerba Buena, Henry Pierce. Under one year—First to Shot-over, Henry Pierce.

Cows—Three years: First to Bloomer 2d; second to Fairy of Yerba Buena, Henry Pierce. Two-year-olds—First to Nancy, Mrs. R. P. Clement. One year old—First to Carrie of Yerba Buena; second to Eva 3d of Yerba Buena. Best calf—First to Coomassie Yerba Buena; second to Delta of Yerba Buena, Henry Pierce.

Graded Cattle.

Best cow, three years and over—First to Betsy, F. Rosenstock. Two year old—First to Minnie, F. Rosenstock.

Sheep.

Spanish Merino—Ram, two years, Sprightly, J. H. Strobbridge. One year old—First to Comet; second to Lightly, same owner. Pen of five ewes, two years and over—No. 2, J. H. Strobbridge. Pen of five ewes, one year and under two, same owner. Pen of five ewe lambs, same owner. Pen of one ram and five lambs, same owner.

Cotswold—First to ram Hancock, Colman Younger. Southdown—Premium to ram "No Name," G. Bement; pen of five ewes, Colman Younger.

Hogs.

Essex and Berkshire Swine—Best boar, first premium; best sow, first premium, owned by C. L. Dietz.

Poultry.

Light Brahmas—First to E. Woolfenden. Dark Brahmas—First to E. Woolfenden. Partridge Cochins, W. Hubbard; Buff Cochins, E. Woolfenden; Plymouth Rocks, J. N. Lund; Brown Leghorns, same owner; Golden-spangled Polish, A. J. Jackson; black-breasted Game, C. L. Dietz; blue Game, W. H. Hubbard; black-breasted Game Bantams, J. N. Lund; black African Bantam, C. L. Dietz; white pile Game Bantam, C. L. Dietz; Langshan, special premium for new breed, Mrs. J. Raynor; white-faced Black Spanish, J. W. Cummings. Pekin Ducks, C. L. Dietz. For the largest collection of poultry—J. N. Lund.

Pigeons—Jacobins, special premium to J. N. Lund; Carriers, to C. L. Dietz; Flying Pouters, to same owner.

FORESTRY.

Forest Trees of California—No. 12.*

Great White Silver Fir.

(Abies [Picea] concolor.)

Here spiry firs extend their lengthened rank—
Their violets blossom on the sunny banks.—Fawkes.

Among the most stately, elegant and useful firs of the Pacific, with respect to all points of estimation, certainly none excel the white fir of the mountains. The cheerful contrast of light bark of body and limbs, as the eye catches glimpses of them here and there from beneath the soft, starry mantle of living green, recalls virgin linen, white and clean, gleaming aloft from out the exalted spires of "God's first temples"—the primeval groves.

In its young state, this fir is half-spire form, the whirled branches spreading horizontally as do branchlets and final sprays, forming flattened fan-like distributions; the line-like leaves, in two regular rows, one on this side and the other, that of the twigs, as it were, winged; the pinnae leaves, usually notched at the end, two to two and one-half, and sometimes three inches long, indeed, longer than any other Pacific fir. Rather gray-green, stomata-breathing pores, confined to the middle line, but never absent; in older trees the lower limbs only have notched leaves—this last feature, however, is not specific and peculiar if more common; higher, they are then shorter, broader, rounded above, ends blunt or very short, sharpened; on flowering and fruiting branchlets they even become keeled above and almost quadrangular—stomata cover the entire upper surface, and they are not then so strictly two-rowed.

The white silver fir is a tree from 200 to 300 ft. high, usually four to eight feet in diameter, often with a neat, naked shaft from 50 to 100 ft. or more; top always more pyramidal, even in age, than the great magnificent red fir (*A. [Picea] magnifica*), probably only another form of *nobilis*, with its colossal, dark cinnamon-red body or bark. It is found in the California Sierras up to 7,000 ft. altitude. The most eminently prosperous belt of the best timber lies between 4,000 and 4,500 ft. of western and northwestern exposures (for present purposes we omit its Rocky mountain, New Mexico and Utah ranges east, or Oregon); at least here the timber is never as good above or below the above-mentioned limits, nor, if lacking in any one of the best-suited conditions—all of which we do not pretend to notice—as average temperature, rainfall, and the like.

Messrs. Toll Brothers, of Dutch Flat, have tried stringers for horse-tramways, three by six inches—half in earth, half in air, the alternate wet and dry test—some of spruce, sugar pine, yellow or heavy pine, redwood and white fir, among these, all tried in the same locality and at the same time, this white silver fir outlasted them all. We examined these, and were it not manifest from many experiments, we should hardly have anticipated it superior to our pitch pine (*P. ponderosa*). Dr. Parry informs me that a like reputation holds good in that where it is preferred for railroad ties, etc., this fir does not warp like spruce, red fir or Jeffrey's Owen's Valley variety of *P. ponderosa*, with their marvelous efforts to get away from fences, etc. It makes choice ceilings, shrinks least of all, and takes less paint than any other lumber, as it abounds in (tannic?) acid. Spikes and nails never loosen in the lumber as in other timbers, so that, as entire or half-earth sleepers, outside or inside work, it may be well commended. Another point, it should be remarked, is that the wood is not too hard to work, but soft in the region named, nor is the grain unsightly and coarse, like spruce; besides, it is famous as the stiffest, strongest mountain timber, both for transverse horizontal strain and crushing perpendicular pressure; hence its far-famed esteem in mines for bridges and for strong floors; for butter barrels, kegs and boxes it is superior, as no taste or odor is communicated to the contents, besides staves for laths and the like; but for laths, Douglas and Merton's spruces are preferred.

Where so much confusion has hitherto existed as to species, one must expect somewhat particular details—perhaps unavoidably prosy—had not the quality, also, been so egregiously decided, like other timbers of the Pacific, a word of commendation might have been sufficient for passing estimation and briefer notes, that only seize some strong points of obvious and ready recognition.

Cones erect or perched upright upon the top branches, three to five inches long, and one and one-half inches or so in diameter, usually obtuse, clothed in a very close, soft, yellowish-green or velvety scum-greenish mantle of exceedingly short villi scales; separately examined—edgewise or side-viewed—the claw is bent at an obtuse angle, so that when broken the base portion of the cone presents a deep, cup-like cavity or fracture; these scales are very broad in proportion, appendages or bracts beneath, short, slightly wedge-like, rounded, blunt or sometimes notched at the end, a sharp point from the center wing of the seed, broad American ax-shaped, or often as broad as long, if not wider, and so on. The most obvious marks are the ashy-gray body below in age, and always the white color of the body and branchlets above; the foliage pale, blooming or light, gray-green tint.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 9.

Written for the Rural Press by CLARA DENNIS.
Trees.

We pause with open-eyed wonder at the vastness of the multitude of trees that rise before our mind's eye, and vote enumeration a hopeless task, and are content to gaze upon those that come within the range of our vision, and revel in the beauty and the welcome shade which they afford us during the hot days of summer. A person who has always lived where there were plenty of fruit and shade trees, cannot understand how others live without this necessary luxury.

Every man who owns an acre of ground cannot put it to better use than by planting fruit trees, vines and ornamental trees to beautify his home with. Evergreens, except when trained for hedges, arches and summer-houses, should be allowed to grow in their natural way; do not spoil their natural beauty by trimming them in the shape of inverted funnels, which makes them look like so many stiff, austere sentinels about a place.

Every farmer should enhance the value of his property by planting out orchards, vineyards and timber patches; waste portions of land here and there may be utilized for this last purpose. Those who are not able to purchase trees already started, may plant seed which, with care, will in time bear fruit and probably last longer than budded or grafted fruit. But great care should be taken in selecting seeds, to know that they are not from budded or grafted fruit, for it is said, the fruit under these circumstances will not come true; but if taken from a tree which has been growing from the seed, will produce the desired fruit. The seeds may be planted either in rains, in some sheltered spot or in boxes, which are shallow; when planted in boxes, they should be transplanted when about two inches high into other boxes which have been divided into sections about three inches square, each section holding one tree. When six inches high, the trees are ready to be placed in the orchard, or wherever you wish them to be. It is at this period of growth that they send down the tap root and are better, if not disturbed after this principal root begins to grow. Budding and grafting are quick methods of getting fruit, provided you have trees suitable for the purpose; these are also accomplishments valuable to every farmer, for often, in purchasing trees, some kinds are found not to be as desirable when they bear as some others which may be budded into or grafted on to the tree, thus converting an unprofitable tree into one of value.

A few new trees should be planted every year, if you would have your orchard a source of perpetual delight, for some trees bear themselves to death in a few years, especially the peach.

One of the handsomest trees thriving well in this climate is the English walnut, which bears in about 10 years from the seed. Ten years seems a long time to wait, but soon comes around, after all. Some men say they will be in their graves by that time. Well, they might be there in a day or two, but their children may possibly live to enjoy the fruit. These nuts are as much better when fresh from the tree as grapes or other fruits are when fresh from the stem. The trees are pretty without the foliage; the limbs grow in broken lines. The California walnut makes a very handsome tree, quite as beautiful as the mountain ash or black walnut, so much admired in the Eastern States. And the nuts are very enjoyable when once extracted from the numerous crevices of the shell. The fig tree grows easily in the climate of the Pacific coast, and the fruit is very pleasant to the palate. Figs may be dried, preserved or pickled, and make a delicious dish when fresh, if pared and served with sugar and cream. These trees are propagated by cuttings or suckers.

Fruit trees always pay for cultivation, and trees suitable for use as firewood and timber might be very profitable to a farmer; there may come a time when timber will be scarce on this coast, and lumber may be very high, hence why should not a farmer raise his own timber, take it to mill, have it dressed, build his buildings, and be proud to say they are built from timber whose growth he had watched from the seedling or tiny tree purchased from the nurseryman.

Many parts of California are so desolate of trees that, as a lady said the other day, "there should be a law compelling every man to plant at least one tree every year." In some parts, everyone who plants trees on the sides in the country roads, is entitled to receive one dollar for every tree that lives four years. How much trees add to the beauty of a public highway when they are planted on both sides; and oh, how welcome the shade is to the tired wayfarer, who, as he rests from the heat and glare of the noonday sun, invokes a blessing upon the head of him who had the good sense to plant those trees!

The Jesuit missionary who planned and planted the Alameda of San Jose, although his

brothers laughed at the project when he first proposed it, has left a joy for all who may dwell in or visit the city; and the present inhabitants should be compelled to keep it in order by planting new trees in place of those that die.

Children should be encouraged to plant and cultivate trees by being allowed to call them their "very own," as they like to say. They should, also, do with the fruit whatever they choose, and little by little they gain a knowledge of trees and fruits, their culture and sales, which will be of value to them when grown to maturity. One of the principals of the Order of P. of H. is, that each member shall do all in his power to beautify his home, that the tired family may find a haven of rest, and love the farm. How can he do it more effectually than by planting trees and flowers about his doors?

September 12, 1882.

GRANGE WORK.—The Grange has a share of minor obstacles, but not more than many other organizations, and less than many from their very weakness. Among a few hindrances, one is from persons who would be Patrons, but what they wish to accomplish has not been undertaken and dispatched all in one year. Others are from those who join the Order at their earliest convenience, and as it did not make money for them all in one month, before they had put their shoulders to their wheels in any manner to forward its enterprises, all of their aspirations dwindled to nothing. These simple Simons floated in and died a natural death of the disease known as indolence, sometimes called "You do all you can; I'll wait to see what you do." And such men are sitting on street corners and out-of-the-way places, waiting for their brothers to heave the millstone that threatens all alike. The work of Patrons is an honor, and no one should blush at its mission or duties. It is nothing more than ascertaining one's rights and God-given privileges. We are taught by the sacred page to "stand by the right if odds assail."—*Dirigo Rural*.

STATE GRANGE ARRANGEMENTS.—Bros Marsh and Overhiser, from Stockton Grange, have informed the Patron that ample accommodations have been secured at the rate of \$1.25 per day, for all Patrons proposing to visit Stockton during the session of the State Grange, commencing on the third of next month. Every hotel in the town of any note, with one exception, agrees with the committee that good board and neat lodgings will be furnished at the price named. In the matter of railroad and steamboat transit, worthy Master Marsh says it has not been ascertained whether or not the railroads will make any reduction in passenger rates, but that special and satisfactory rates by water, from this city to Stockton, will certainly be arranged by the committee of Stockton Grange appointed for that purpose.

WHAT YOUNG MEMBERS CAN DO.—Some members of the Grange, especially the younger ones, do not attempt to do anything in the Grange, because they think they cannot stand up and make a half-hour's speech. But there is something everyone can do. If you cannot make a speech, perhaps you can tell of something you have seen. Perhaps you have read a little item in the paper that pleased or amused you. Well, bring it and read it to the Grange. Perhaps you have heard a piece of news in which all would be interested; tell it to the Grange. It is not always the ones who make the big speeches in the Granges who are of the most value, but the ones who are always doing some little thing for the benefit of others.—*Dirigo Rural*.

A MERCHANT ON WALNUTS.—The Los Angeles Times has seen Mr. John M. Waite, of the firm of J. K. Armby & Co., of San Francisco and Chicago. Mr. Waite's firm purchased the whole of Southern California's walnut crop last year, and has this year secured all that was purchasable in the Los Nietos country. Our walnut interests are regarded as important by him, though he says the product is held too high by producers, which makes it possible for the imported walnuts of France and England to find a market here, though the California nut is much the larger and finer.

FORESTRY.—"The Elements of Forestry," by Franklin B. Hough, Ph. D., Chief of the Forestry Division of the U. S. Department of Agriculture, etc., published by Robert Clarke & Co., Cincinnati, Ohio. This work of 381 pages, duodecimo, is designed to afford information concerning the planting and care of forest trees, for ornament or profit as well as to give instruction in the creation and care of woodlands, with the view of securing the greatest benefit for the longest time, and it is particularly adapted to the wants and conditions of the country. The book is handsomely bound in cloth, printed on tinted paper and liberally illustrated.

A LAW passed by the last Legislature of Massachusetts, to prevent the sale of adulterated food and drugs, went into effect Saturday, August 26th. The enforcement of the law lies with the State Board of Health, Lunacy and Charity, who are given power to expend annually, an amount not exceeding \$3,000, in carrying out its provisions.

The figures of the German export trade for the first half of the present year indicate an unlooked for and promising condition of many industries.

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

CLINGSTONE PEACHES.—Butte Record, Sept. 9: California cling peaches win favor as a canned fruit in all the world's markets. They are decidedly superior to freestones, as the color is better maintained, and the flavor is higher. Though many orchards of peaches have been planted in the past three years, it is not thought that the cling has received as much attention as it will hereafter. Indeed, many growers have neglected it, but the owners of the few fine and well-bearing cling orchards find them very profitable. The only kind fit to plant are those, either yellow or white, which are not subject to curl-leaf. There are many seedling clings in the State which are apt to have too large pits in proportion to flesh, or have too much of a wild or bitter flavor, or are uncertain bearers. But here and there, in the old mining counties, are trees of natural, or seedling, fruit, which are well worth propagating. There does not seem to be much prospect of clingstone peaches ever being very popular as a table fruit. In the South, clings are highly esteemed, and often preferred to freestones; but the habit appears to be an acquired one. And the fact is, a cling must ripen on a tree, and in the sun, to reach its perfection. It cannot be shipped far to market without losing its flavor.

COLUSA.

THISTLE HAY.—Sun, Sept. 9: Most of the weeds that grew originally in California, out at the right time, make good hay. There is a kind of burr thistle that grows on the overflowed lands that has been supposed to be worthless, but it makes the very best kind of hay. We got a little of it from L. F. Moulton for our cow, and find it equal to alfalfa for milk. Mr. Moulton cut a large quantity of fine hay on his overflowed lands just above Butte slough.

MOULTON'S RANCH.—A Colusa correspondent of the Bee says: "L. F. Moulton, of anti-debris fame, is having brick made for the foundation of his contemplated residence. On his farm are to be seen some of the largest haystacks found in any country. One stack measures 75 ft. in length by 40 ft. in breadth and 35 ft. in height. In unloading, the hay wagons are used and large derrick forks, with horse power to fork the hay to the top of the stack. Large amounts of wheat are being hauled to Moulton Landing, banked and placed in the warehouse. Farmers in the neighborhood of Gridley ship from this point."

FRESNO.

THE CANNERY.—Expositor, Sept. 6: The cannery is now at work putting up Bartlett pears. The supply so far is abundant, and the fruit of excellent quality. A sample of the canned pears exhibited to us yesterday, showed that it was a superior article, and bound to find a ready market. We don't believe that there is a cannery in the State that can show as fine peaches, pears, nectarines and plums, as the one at this place. The Fresno Packing Co. paid out for last week's wages nearly \$2,000. All this money was paid to white laborers, residents of the town, and of course will be put in circulation here. In addition to this, a large sum has been paid out to the orchardists for fruit. Really, the cannery is a big institution for the town and county.

NECTARINES.—The coming "bonanza" for the fruit-growers of Fresno county will be found in the cultivation of the nectarine. It is to-day the best fruit grown for canning, drying, or for eating fresh. Possessing all the aroma, juiciness and flavor of the best varieties of the peach, combined with a delicate tinge of the acidity of a tart plum, it affords a fruit that must please the palate of all who are not entirely lost to taste, while its smooth skin, and small pit, make them invaluable for canning and drying. The nectarine does not thrive in all climates and soil, and there are but few known points where they reach a state of perfection sufficient to make them an acceptable fruit. This is one of the sections where they grow to perfection. The trees grow thriftily, and are early and heavy bearers, and the fruit—well, it is so luscious that it almost melts in one's mouth. Fortunate is and will be the man who owns a good nectarine orchard in this county. We are led to these remarks by a box of magnificent Stanwick nectarines left at this office by Mr. Henry Coldman, orchardist, at the California Central colony. We never before tasted such delicious nectarines.

LAKE.

HOPS.—Bee-Democrat: The hop fever is attaining wide-spread proportions in Scott's valley. Hops at 50 cents and an expected advance are exciting our friends and neighbors very much. Mr. Faut's eight acres are looking finely, and demonstrate conclusively that the valley is adapted to that crop. Mr. F. will plant 11 more acres this winter. His hop house is about complete, and he will soon commence operations. The facilities afforded the neighbors by this erection will stimulate planting at once. Several intend to put out some this season, among whom we enumerate G. Scudamore, 15 acres; John Stevens, 8; Chest. Pool, 5; Charley Jones, 5; making a total of 44 acres, besides Mr. Faut's present stand. Marshal Byrnes says he doesn't want hops, but he proposes to raise watermelons for the Indian pickers. Crops are very good; of course that means grain. All are pleasantly disappointed at the unusual

yield and quality. Charley Jones has just thrashed over 52 bushels of wheat to the acre, from a late-sown, frost-bitten, stumpy piece of ground.

LOS ANGELES.

THE GRAPE CROP.—Anaheim Gazette, Sept. 9: In about 10 days more the wine-making season will have fairly set in. All varieties of grapes are ripening rapidly, and we note the fact that Mr. Zsyn commenced crushing his Zinfandel grapes on Thursday. The yield promises to be very large. Indeed, we have it from a gentleman who has traveled all over the county within the past three weeks, that the vineyards of Anaheim are more thrifty, and have larger bunches of grapes, than in any other section. In the vicinity of Downey, especially, the Mission vines will yield only about half an average crop, for some inexplicable reason. Foreign varieties, on the contrary, are bearing very well.

LIVESTOCK FOR ARIZONA.—The Niles Bros. shipped three fine thoroughbred Berkshire pigs and a white Leghorn rooster to Gov. Gosper, of Prescott, Arizona. The stock was selected by Mr. Gosper, himself, during his visit here two weeks ago, and is an exceptionally fine lot.

CARPINTERIA.—Cor. Los Angeles Mirror, Sept. 9: The Carpinteria is an exceptionally beautiful spot on the seacoast—a charming nook among the hills, dotted with ancient and wide-spreading live-oaks, sheltered from rude wind by encircling *lomas y cerritos*, possessing a soil of great depth and inexhaustible fertility, and watered by perennial streams of purest water, flowing right out of the heart of the rugged range which forms the picturesque background of the valley. The whole district is no larger than a moderate-sized stock rancho; yet, subdivided as it is into scores of small and highly-cultivated farms, it supports in comfort, and even affluence, a numerous population. Lima beans are by no means the only or principal crop grown there; they are only "a circumstance." The cereals, root crops and the finest fruits are grown to perfection and in prolific abundance. But the bean crop is no trifling one. Sold at prices ranging from 2½ to 6 cents the pound, it has in former years brought more than \$40,000 in a single season. So great is the demand for "bean lands" in that favored valley that the standard prices for the best tracts have risen from \$20 and \$30 per acre—the prices of the last decade—to \$150 and \$200 per acre, with very little to be had even at those figures. We have often thought that if the price of beans keeps up, there will soon be not a forest tree left there to give grateful shade and lend beauty to the landscape. This would be a great calamity to a rare and lovely spot, because the denuding of any region of its timber, especially in a so-called "rainless" country, tends directly to the production of droughts. It was recently reported that the extreme heat of the last month had prematurely dried up the growing bean crops of the Carpinteria; but later information is to the effect that this statement is only partially true. Some of the growers report that a third, and others that a half of the crop has been scorched so as to be practically ruined. We can hardly believe that the damage is general on account of the heat, for the sun's rays are always tempered there by the gentle sea breeze ever blowing from the Pacific.

MENDOCINO.

WOOL GROWERS' MEETING.—Ukiah Press, Sept. 8: At a meeting of the Directors of the Mendocino Wool Growers' Association, held in Ukiah, Sept. 2, 1882, it was ordered that an assessment of 20% of the capital stock be levied, and that the association go on with its usual business. A telegram has been received saying that the wool shipped through the association had arrived in Boston.

HOP NOTES.—We are informed that the hop crop in Round valley is turning out first-rate, and owners of hop fields are jubilant, as well they might be. The increased acreage this year over last is about 35 acres, the total number of acres being 102, divided between the following planters: Joel Eveland, 25; reservation, 25; Felix Purcell, 15; Van Dyke Bros., 10; George and John Grunt, 8; Standley Hornbrook, 6; Redwine and O'Farrell, 5; Mrs. Melendy, 4, and Wm. Cowman, 4. From all directions come complaints of the scarcity of hop pickers, and of the warm weather ripening hops faster than the force available can cure them. We are informed that Long has a patch of three acres that is a complete loss, and Parson will lose an acre or more.

SACRAMENTO.

ALFALFA.—Record-Union, Sept. 8: Alfalfa is being cut the fourth time all along the Sacramento, American and other rivers in this State, where a good stand was carried through the winter. We have seen meadows turn off, this season, four crops that would average two and a half tons to the acre, making ten tons per acre for the season. These same meadows afforded good feed from February 1st to March 1st, in the spring before the hay was allowed to begin to grow, and they will furnish good feed from the present time till frost comes, probably till December 1st. Alfalfa hay, baled, is now worth, in this city, \$12 per ton. The cost of production, counting interest and capital, labor, etc., is about eight dollars per ton, delivered in the city baled. This gives the producer about four dollars per ton clear or net profit, or \$40 per acre for his land. All the river-bottom lands are good for about ten tons per annum, provided the water can be kept off of them during the winter and spring. Water, however, stand-

ing on the meadows from ten days to two weeks, kills all alfalfa roots, and renders a new sowing necessary. The first season's crops, after seeding in the spring, are necessarily light, and afford but little or no profit to the owner. With the certainty of annual crops of alfalfa, without annual seeding, the river lands would be worth \$500 an acre. With the present uncertainty they have no standard value.

SAN JOAQUIN.

BESSARABIA CORN.—Stockton Independent, Sept. 11: A few days since, a reporter of the Independent was accosted by Mr. Matteson, of Matteson & Williams, with, "looking for an item? If so, just get up here on the buckboard and come along with me, I've something to show you." The invitation was accepted. "It's corn," he continued, "and it does beat all creation. It's so tall I can't pick the ears off," and he checked up the speed of the old horse in front of the garden, where a fine view of the corn could be obtained. And as had observed, it "beats all creation in the corn line." The soil the corn grew on was adobe, and was deeply cracked from drouth, but that seemed to have no effect in checking the growth of the corn. By actual measurement it was found that the taller of the stalks were over 14 ft. in height, and a tall man could barely reach the lower ear joints. Some of the stalks contained two ears, though most of them bore but one. The ears are of enormous size, being from 10 to 14 inches long, and carrying 16 or 18 rows of kernels. The grain is white, of firm, hard texture, very sweet when eaten green. Considering that there was but a small plant planted, the filling out of the ears is remarkable, each one being full to the tips of the cob. Mrs. Matteson planted and cared for the corn, but not being a practical farmer, did not leave space enough between the hills to give the grain a fair test. Had the hills been about four feet apart, each way, it is evident that the stalks might have grown to a reasonable size. It is said that this corn is not affected by the most severe drouth, hence is peculiarly adapted to this climate. That it is prolific and hardy no one can doubt who has seen it growing. It will doubtless become a favorite here when once its qualities shall have been understood.

SANTA BARBARA.

THE BEAN HARVEST.—Lompoc Record, Sept. 9: Bean pulling has commenced in good earnest. There are several companies of Californians at work in the valley pulling and preparing to thrash. The yield is not as good as in former years, owing to the scarcity of moisture.

AGRICULTURAL FAIR.—Independent, Sept. 9: A special meeting of the Santa Barbara Horticultural Society, was held last Saturday to appoint the committees and lay out the work for the coming fair, to be held in conjunction with the Agricultural Society, on the 27th inst. Mr. Ford, the President, and Messrs. Cooper and Hogue, the Vice-Presidents, being absent, Mr. Jos. Sexton presided. To assist Mr. Calkins, the chairman of the standing committee on exhibitions, the members of the other standing committees were added to that on exhibitions. Messrs. Ashley, Spence, Childs and Morris and Dr. Yates were appointed a committee on decorations; Messrs. H. K. Winchester, Smith and Calkins, to provide tables; and to solicit exhibits, the Misses Knight, Miss Hall, the Misses Perkins and Messrs. Sexton, Cadwell, Hogue, Bond and Knight. On motion of Mr. Hayman, A. L. Lincoln was unanimously elected Treasurer of the association. The following appointments were then made for the fair: Superintendent of the Pavilion, Mr. H. B. Brastow; Superintendent of the Yards, Mr. Chas. H. Kelton; Nightwatchman, Daniel Moyer; Doorkeeper, J. N. Sweetzer. The President was directed to invite Hon. Warren Chase to deliver an opening address on the first day of the fair.

SOLANO.

HARVEST.—Solano Republican, Sept. 9: The harvest of cereals this year is proving far more satisfactory than was anticipated. For a dry year, the result is certainly extraordinarily good. Wheat is generally of fair quality, and at least two-thirds of the land seeded has turned out average crops. Barley is plump and bright, and commands a good price. The crop of hay was rather light, but the high prices prevailing have compensated for any falling off in the yield.

CHAMPION GRAPES.—A Winters correspondent of the Dixon Tribune writes: We come again to the front in the fruit line. A bunch of grapes raised at Mr. J. R. Wolfskill's orchard was brought to town which weighed seven and three-fourths pounds, three bunches weighing sixteen pounds, which more than filled the box.

VENTURA.

SUN-DRIED APRICOTS.—Los Angeles Times: Mr. J. C. Peabody, who is visiting Santa Barbara and Ventura counties in the interest of the District fair, writes to the Express that the farmers have done unusually well throughout that section this year. One feature of the Ventura exhibit at the approaching fair at Los Angeles will be sun-dried apricots, which are reported by competent judges to be superior to those dried by the Plummer process. One gentleman, who had an immense crop of this fruit, dried it, and has just sold the entire crop at 25 and 30 cents per pound, which pays very well.

NEVADA.

CATTLE ON THE ROAD.—Reno Gazette: Ten carloads of beaves left Reno this morning for San Francisco, shipped by Hardin, of Winne-

muca. There were 180 head, all in fine condition. Beef cattle are getting scarcer every day. Dealers in northern Nevada and Oregon say that it is very difficult to obtain even small bands. It is reported that eastern Oregon, where cattle were plentiful a year ago, is almost stripped of beef.

ANGORAS.—Battle Mountain Messenger: At Mr. C. P. Bailey's ranch, near Little Humboldt, Nevada, he keeps a herd of 5,000 Angora goats. Last year he shipped East about 10,000 lbs. of mohair, receiving for it from 50 to 60 cents per pound, and could have disposed of ten times that quantity. He has also sold in the past two years nearly \$30,000 worth of goats in the Sandwich islands, Texas and Wyoming. Mr. Bailey is justly proud of his success in breeding the Angora, and says that there are hundreds of localities in Nevada and adjoining Territories adapted to the business.

SHEEP AND WOOL.

The Mohair Industry.

"His banner led the spears no more, amid the hills of Spain."—Mrs. H. H. H.

EDITORS PRESS:—At the time of which I write, I had been just five years engaged in the occupation of goat breeding. I had in my corral the strain of blood of every professional breeder at that time before the public, except, indeed, the one who is so strongly entrenched at Battle Mountain, Nev., and who, naturally enough, in common with the rest of the profession, retain such an ardent desire for an augmentation of the business. Though never aspiring to the authorship of a pamphlet, his circulars had a wide distribution. They contained sterling information, and were embellished with a life-like portrait of Romeo 2d, who had competed successfully for a ribbon on the Sacramento fair grounds.

While we are awaiting the answer of Col. Peters to my enquiries, I will trespass on your charitable space with a deviation, merely to ask the talented and indefatigable reporters of your exchanges, who may feel inclined to compile statistics of the Angora, that they will bear in mind that the day of generalities is past. Inflation has done its utmost. The Angora now stands upon his merits, nor is there the least danger of the industry becoming extinct, much less does it require \$2,000,000 to revive it, at least as far as California is concerned.

The mail having arrived, we will open the conference.

ATLANTA, GEORGIA, Sept. 25, 1879.

Mr. Martin Kirby, DEAR SIR: Yours of Sept. 12th received. I am able to send you a pedigree in detail for the ewes No. 85 and No. 135.

I have bred from year to year from selected bucks of the Davis strain, and when I sold a number of ewes in large lots, about the year 1873, I got rid of those not liked, and since then I have not bred to details in pedigree. My customers have not a kid for such pedigrees, and I found it almost impossible to arrange the flocks so as to designate the sires and dams of the kids by their numbers. I have bred only from selected ewes and bucks—such as are free from defects.

The importations made since the war were obtained near the coast, and are not equal to our high grades—not all, but many of them.

I can let you have a selected buck kid, nine months old, for \$100; the freight would be \$30, if prepaid.

R. PETERS.

The pedigree was in diagram, and showed that No. 85 was a kid of the year 1867. It is endorsed with notes, from which I copy the following:

Ewe No. 85 is rated in the register, when near a year old, as "Best." She is checked off for California, and I am under the impression that she was sent in charge of Mr. Ed. Holland, via the Panama route, and sold there for \$300 gold. I think Butterfield purchased some of this lot. I have misplaced the list of the Holland shipment.

Buck No. 45 (sire of 85) was one of my best selected bucks, and used several years as a breeding buck.

Buck No. 1 was imported by Dr. J. B. Davis. It was dropped on the ship. He lived until 14 years old, was of large size, and had a superb heavy fleece.

Buck No. 1 B was sent from Constantinople by Col. Brown, of the U. S. Legation, with a ewe, during the year 1854, and in 1859 I saw them on exhibit at the Maryland State fair. They were both aged, but very large, and the buck had a heavy curly fleece, not of long staple. His kids were always extra fine. I paid, for the pair, \$500. The relative of Col. Brown could not resist such a liberal offer.

Ewe No. 7 I considered one of the best purchased of Dr. Davis.

The Conversation.

Grove: It would seem from this letter that it is impossible to obtain perfect Angoras near the sea coast in Asia Minor. Watsonville is within seven miles of the sea. The stock is the same; the hornless Kastamboul never saw Angora in the world, and I am doubtful whether the imported Hercules did. Can you explain to me how the act of transferring animals from the sea coast in Asia Minor to the sea coast in California has enhanced its value?

Kirby: Hush! that is one of the secrets of the professionals.

Grove: How have you placed these animals on the records?

Mattie Jane—Value of fleece, 50 cents a pound. Remarks—Just a fair quality and length. A fair specimen of an exhibition animal. This is her guaranty and pedigree:

WATSONVILLE, Jan. 22, 1877.

This is to certify that we have this day sold to Martin Kirby (73), Angora Downs, Mattie Jane, a pure-bred Angora ewe, labeled "No. 132, A." Mattie Jane is one of the three does that were entered for the first prize for best three does under two years, by Landrum & Rogers, at the State fair in 1876, and won the first prize over five exhibitors. She will be two years old in April next. She is in kid by our sweepstakes buck Hercules (37). She was sired by imported Hercules, dam a pure ewe of the original Davis importation, bred by Richard Peters, of Atlanta, Georgia. Mattie Jane shows all the fine points of excellence, and we think her equal to any in this State for fine points to breed to, and blood in her ancestors. We guarantee the above to be a true and correct pedigree of said goat.

LANDRUM & ROGERS.

Waiting Mary—Sire, Sweepstakes Hercules (L. & R., 37), dam, Mattie Jane (L. & R., 182 A). Born March 23, 1877. Value of fleece, 35 cents a pound. Remarks—matted, kempy and short.

I have designated her mother as a fair specimen of an exhibition animal; here, we have the type itself. With every exhibition quality studiously intensified, this creature is a curiosity at the same time that she is a nuisance. How to dispose of herself and her progeny I am in utter perplexity. To start with the common goat in preference to this one would give results more gratifying and more permanent, for long after the fifth cross, or full blood, she would convince you that the saying is true, viz: The meanest animal in this world to breed from is an inferior thoroughbred.

Young Lady Grove—Born Feb. 18, 1876. Value of fleece, 70 cents a pound. Remarks—Good length and fair quality.

This is the animal that at present wears the blue ribbon of the Angora Downs against all the thoroughbreds, and in this fact we find an immensity of encouragement. She is clearly an instance of reversion. She has a full sister, Little Maggie, born Feb. 23, 1878, whose fleece will be forwarded with others, to the Farr Alpaca Co., to be scrutinized.

Grove: I see you have given this animal no pedigree.

Kirby: She has none. She is an upstart, a hybrid, a mushroom.

Grove: Is she not the effort of California to show that she will produce mohair whenever she is allowed to? There is another of that exhibition stock yet; that one that, "if it were not for her fox ears, would be worth \$175 anywhere." We do not sell the ears, it is the fleece we want. She is designated L. & R., 21. Value of fleece, 50 cents a pound. Remarks—Irrregular; an old animal, or unhealthy.

We know that she is not an old animal, and we have no reason to believe that she was unhealthy; therefore, we are inclined to the opinion that Mr. Farr is mistaken as to the cause of her irregularity. Might it not be that she is composed of two entirely different strains of blood? I should certainly expect that it would act in this manner, more especially as it is probable that the sire was prepotent, and of the inferior strain. We know that in the union of the Angora and common goat, no matter how superior the sire is, he never covers the offspring completely with fleece. It is also deficient in length. If I am rightly informed, there are over 20 varieties of fleece-bearing goats; and if two of them are crossed, I would suppose that it would have a tendency to produce irregularity in the offspring, although I am aware, by observation, that in some instances they will compromise, or blend, and form a compound totally different to either.

Grove: On account of her fox ears this goat is unfit for the exhibition grounds. What is her actual breeding value to the producer?

Kirby: To the producer this goat is worthless.

Grove: Why?

Kirby: On account of the irregularity of her fleece. I do not suppose that even Mr. J. H. Tingle, himself, is so infatuated with his pure-blood doctrine that he desires an irregular fleece. This goat has nothing else to give you; it can not even be subdivided, it will be irregular still. Let us suppose that she produces a male offspring, and that you use it as a consort for Young Lady Grove, neither of us could live long enough to eradicate the effects of the single cross.

Grove: Here, then, we have a thoroughbred Angora goat that is unfit for exhibition, worthless to the producer, and too expensive to feed to the hogs. I tell you, Kirby, there is one thing, and one alone, that sustains me in this struggle, and that is, there is not a business in California that was not forced to a failure before it was conducted to a success. I'll tell you what I propose: Wait upon Mr. Landrum and ask him for an exchange for this exhibition stock. In the mean time, there is a side track runs to Hollister, where Mr. John S. Harris is located, who has become renowned for his enthusiasm on goats. You might pay him a visit, and if there is anything in his corral that suits your fastidious eye, bring it with you, regardless of cost.

MARTIN KIRBY (73).

Darrah, Mariposa Co., Cal.

THE following is an abstract of the report of the Portland Board of Trade on trade and commerce: For the year ending June 30th, passengers arriving exceed the departures, 13,619; the postoffice yields a net profit to the Government of \$39,450; internal revenue collected, \$89,932. For the year ending August 31st, vessels arriving, 289, representing 411,091 tons; sailed, 281 vessels; wheat exports, foreign, 2,864,289 centals, valued at \$4,735,321; flour exported, 373,387 barrels; real estate transactions, \$5,266,258; total assessed value of property of Multnomah county, \$13,903,205; buildings erected in Portland, 900, at a cost of \$1,500,000; salmon packed, 530,850 cases, valued at \$2,813,510.

LARGE CARGO OF HOPS.—One day last week, in Sacramento, the attention of many was attracted to the appearance on the street of a twelve-mule team hauling four large wagons coupled together, and laden with 29,950 pounds of hops. The entire outfit belonged to Samuel Hoover, who owns a large ranch a few miles southeast of Elk Grove. The hops were sold for 50 cents per pound, and the value of the entire cargo was about \$15,000. The hop yield in Sacramento county this year is large.

News in Brief.

THE natural gain of population in Germany is put down at 500,000 a year.

GREAT damage has been done by storms and floods in the south of Spain.

FROM the sale of tobacco France derives a revenue amounting to about \$50,000,000.

THE authorities of Odessa are taking precautions to prevent the introduction of cholera.

PATENTS for car-couplers are issued from the Patent office at Washington at the average rate of one every day.

THE Board of Managers of the Milwaukee Exposition have rejected a proposition to keep the exhibition open on Sundays.

RAINS have caused a great rise in the James river and tributaries, the streams overflowing the low lands and destroying property.

THE Texas-Mexican railway has been completed from the American border to Monterey, and the Mexican Central is almost finished to Chihuahua.

IT is stated that telegraphic communication will be opened between Guaymas and San Francisco before the first of next month by way of Benson, A. T.

SIX hundred and fifty limes from a single bud, budded two years ago on a lemon stock, is the result of an Orange county, Fla., man's experiment.

THE issue of standard silver dollars from the mints for the week ending Sept. 9th, was 411,000, against 451,000 for the corresponding period of last year.

A ST. LOUIS company issues insurance policies on the lives of infants, the parents paying five cents a week and getting \$35 if the child dies, "to cover funeral expenses."

THE vessel which John Kruse has started to build at North Bend, will be a steam schooner, for the Crescent City trade. Her keel is 138 ft., beam 30 ft. and hold 12 ft.

THE volume of business at Wilmington harbor is steadily on the increase. On Friday last, two trains—one of 61 cars with double-header engines, and another of 23 cars—were required to transport the freight to Los Angeles.

IT has been discovered that Major Phipps stole and sold the copper roof off of the Philadelphia almshouse for \$7,000. It was replaced by a cheap one, which is yet unpaid for.

IT is rumored in Santa Cruz that the Southern Pacific Railroad Company has bought a large portion of the Santa Cruz beach and intend erecting a hotel and making other improvements.

AT a recent meeting of the Universal Union of Masters of The Culinary Art, a Parisian society of over 1,000 members, it was decided to establish in Paris a professional school of cookery, and to hold a grand Culinary exhibition in October.

AT Pittsburg a movement is being made by the finishers, heaters and rollers looking to the organization of a new association which will be more conservative in spirit than the Amalgamated Association.

THE number of salmon eggs taken at the United States Fishery, on McCloud river, has only reached 650,000 so far this season. It is expected that about 3,000,000 eggs only will be sent East this year, which is about half the annual shipment.

ARMED bands of Albanians, at the frontier of Albania, attacked the Montenegrins near Podgaritz on the 5th and 8th instants. The Montenegrins addressed a protest to the Porte, and requested the intervention of the powers which signed the treaty of Berlin.

MILWAUKEE is in financial straits, owing to the gross mismanagement of its former officials, and the concealment by the present officers of the neglect. There will be no money to carry out the necessary improvements or to pay interest on the debt until next year.

MILWAUKEE newspapers are full of discussion concerning a local boycotting case. The latest move is the refusal of a brewing company to take 1,200 tons of coal according to contract, because the coal dealer signed a petition asking the manager of a theater to close on Sundays.

NINETEEN tons of peach pits were shipped last year from the orchard of the late William Hilgers, on Feather river, six miles from Orville; also, 33 tons of dried peaches. This orchard occupies 160 acres, and was set out by George Briggs, formerly of Yuba county, near Marysville, about 29 years ago.

THE Crescentmills and elevators, Denver, were burned to-day. The estimated loss is \$245,000—fully insured. The elevators were the largest in the State and full of grain. The fire originated from a spark from the lime kiln across the street, which burned early in the evening.

THERE is another likely story from Oregon: Major Jennings, of Clackamas, while driving into Oregon city, on Saturday, to deposit \$700 in the bank, was robbed by a tramp, who jumped into his wagon to ride, and pulling a sack containing the coin from his pocket, escaped.

SURVEYOR-GENERAL Atkinson, of New Mexico, has approved a grant to the city of Albuquerque of one league a square, being two miles and a half each way from the center of the city. This grant is approved under the treaty of Guadalupe Hidalgo, which allows one league of country to each town in existence at the time of the American occupation. This decision is one of much importance to Albuquerque, as it will settle land titles to property worth hundreds of thousands of dollars.



Wild Flowers.

I stood upon a little hill;
The air was cooling and so very still,
That the sweet buds, which, with a modest pride,
Fell drooping in slanting curve aside;
Their sunny-leaved and finely tapering stems
Had not yet lost their starry diadems,
Caught from the early sobbings of the morn.
The clouds were pure and white as flocks new shorn,
And fresh from the clear brook; sweetly they slept
On the blue fields of heaven, and then there crept
A little noiseless noise among the leaves,
Born of the very sight that silence heaves;
For not the faintest motion could be seen
Of all the shades that slanted o'er the green.
There was wide wandering for the greediest eye
To peer about upon variety;
Far round the horizon's crystal air to skim,
And trace the dwindled edgings of its brim;
To picture out the quaint and curious bending
Of a fresh woodland alley never ending;
Or, by the bowery clefts and leafy shelves,
Guess where the jaunty streams refresh themselves.
I gazed awhile, and felt as light and free
As though the fanning wings of Mercury
Had play'd upon my heels; I was light-hearted,
And many pleasures to my vision started;
So I straightway began to pluck a posy
Of luxuries bright, milky, soft and rosy.
A bush of May flowers with the bees about them—
Ah, sure no tasteful nook could be without them—
And a lush laburnum oversweep them,
And let long grass grow round the roots, to keep them moist,
Cool and green, and shade the violets,
That they may bind the moss in leafy nets.
A filbert-edge with wild-brier overwined,
And clumps of woodbine taking the soft wind
Upon their summer throng; there, too, should be
The frequent checker of a youngling tree,
That, with a score of bright-green brethren, shoots
From the quaint mossiness of aged roots;
Round which is heard a sprig head of clear waters,
Prattling so wildly of its lovely daughters,
The spreading blue-bells; it may haply mourn
That such fair clusters should be rudely torn
From their fresh beds and scattered thoughtlessly,
By infant hands left on the path to die.
Open afresh your round of starry folds,
Ye ardent marigolds!
Dry up the moisture from your golden lids,
For great Apollo bids
That in these days your praises should be sung
On many harps, which he has lately strung;
And when again your dewiness he kisses,
Tell him, I have you in my world of blisses;
So, haply, when I rove in some far vale,
His mighty voice may come upon the gale.
Here are sweet-peas, on tiptoe for a flight,
With wings of gentle flush o'er delicate white,
And taper fingers catching at all things,
To bind them all about with tiny rings.
What next? A turf of evening primrose,
O'er which the mind may hover till it dozes;
O'er which it will might take a pleasant sleep,
But that 'tis ever startled by the leap
Of buds into ripe flowers.

—John Keats.

Woman's Rights and Wrongs—Suffrage.

[Written for the Press by Mrs. C. I. H. Nichols.]

In my last communication on this subject, I advanced the position that the only effectual remedy for woman's legal wrongs is to be sought in a constitutional recognition of equality of rights, irrespective of sex. The ballot is the specific resorted to by the national and State governments in the treatment of men's wrongs. Its practical efficiency has justified the faith of our revolutionary fathers, who taught that with the ballot in his hand the citizen is assured of ultimate justice. In harmony with this teaching is the fact that every concession of self-governing rights has strengthened the Government and exalted the nation.

Class legislation, a marked feature in the early history of our Government, has gradually given way to laws of general application, in the interests of men. In the interests of women, class legislation, in the effort to secure to her justice without the ballot, has become more apparent as a rule, with the effect of increased demand and need for the ballot.

Most of the old States adopted property qualifications, which practically disfranchised large numbers of worthy but poor men, and as the growth of the country developed new industries, whole classes of workers found their interests unrepresented in legislation. With the slogan which the fathers had bequeathed to us, "Taxation without representation is tyranny," they procured the repeal of these laws in State after State.

In 1840, or thereabout, a real-estate property qualification in Rhode Island, which disfranchised more than half the citizens of the State—merchants, mechanics and employees, renters and not owners of real estate—originated what is known as the Dorr rebellion, which found its quietus in extended suffrage.

The three-fifths vote conceded to the slave States by the national Constitution, as a guarantee against encroachments of the free States on slavery, culminated, at last, in a sectional rebellion, which, happily for humanity, compelled the liberation of the slaves, and substituted for the national school of oppression the free schools of freemen. Even then, an amendment of the national Constitution, recognizing equality of rights, irrespective of color, was found necessary for the protection of the freed men in the enjoyment of equal legal rights under the State

governments. The adoption of a Fifteenth Amendment swept away the color-line and invested all male citizens with the right of suffrage.

Our history as a nation commends the ballot as an educational power, energizing and elevating men of all races, conditions and colors. The suffrage granted to women in school affairs by 12 States, and political suffrage conceded to the women of Wyoming, furnish no exception to this claim—only make more apparent the benefits of extended suffrage, as securing greater purity and efficiency in official administration.

To a government, the perpetuity of whose institutions rests, not in numbers or wealth, but in the virtue and intelligence of the people, it is of first importance to utilize that virtue and intelligence in the support of its institutions. The acknowledged influence of women on private and public morals has established the high grade of her morality, as also her superior intelligence in the application of both moral and political power to the ends of good government, viz., justice, purity and a wise benevolence. The use of the ballot in her hands is not doubtful. What she has accomplished by her influence without the ballot gives unmistakable assurance of what she will do with it—an assurance that has arrayed against woman suffrage every individual and every "ring" flattening on the vices and weaknesses of a frail humanity, from the Liquor Dealers' Association, that resolves against it in convention, to the petty saloon-keeper, who muddles the brain of the father, filches the children's bread and panders mother-love. To all these classes, woman suffrage appears as a "Daniel come to judgment."

The records of our last half century acknowledge woman's work as initiator or nurse of every humane movement challenging political support. The persistent efforts by associations, petitions, lectures, personal appeals and the press, which first made possible the enactment of laws restraining the liquor traffic, have culminated in the adoption of prohibitory constitutional amendments by Kansas and Iowa, and a most hopeful preparation in several other States to follow their example. Kansas, which was first to adopt prohibition, reached this result through a local-option law of some 13 years standing. Under this law, to obtain a license required the written consent of a majority of the inhabitants, women included. From the operation of this law, the first and second-class cities had been exempted, to save it from defeat or repeal by their heavy anti-temperance delegations in the Legislature. The result of the experiment in the rural districts was the growth of a sentiment and the increase of an immigration that revolutionized the cities, and won a majority for prohibition of this crime and poverty-manufacturing traffic.

I might instance woman's influence in various reformatory and industrial, as well as educational directions, but space forbids.

Our criminal statistics are eminently suggestive. Take three States of at least average morality. Indiana prisons contain 1,480 male and 44 female convicts; Illinois, 1,682 male and 22 female convicts; Ohio, 1,532 male and 19 female convicts; add to these 100 male and one female conviction—the ratio given by the police statistics of our large cities—and we have 4,794 male to 86 female convicts, as an approximate representation of the comparative immorality of the sexes, and an equally correct showing of their comparative character for good citizenship. In the face of such testimony, the worldly and the heavenly wisdom, that give the ballot to all men and deny it to women, is on a par with that of the miner, who, in separating mineral ore should gather up the lead and thrust aside the silver and the gold.

In view of all these facts, it can be no flight of a vain imagination to assume that, when the present minority of virtuous, intelligent, humanity-loving men shall be reinforced at the ballot box, by the enfranchised virtue, intelligence and mother-love of the actual majority of women hostile to the liquor traffic, devoted to the homes, to the schools and to the reclamation of the victims of lust and greed of unlawful gain—a sublime glory and a fuller measure of peace and prosperity will bless us as a people.

We are often told that women do not need the ballot; that they can be secured in the enjoyment of equal legal rights through male representation, and the amendments of laws affecting our interests since 1847, are cited in proof. But our experience takes into account the evasions, subterfuges, instability and crudeness of State legislation, which we can only reach, if reach at all, by indirection. Add to this the weightier considerations of time, energy and money expended in the years of anxiety through which the mother heart has borne sneers, rebuffs and gallant denials of justice in a crusade for rights, which, with all its successes, leaves her powerless still in law, and in fact a self-owning unconsidered personal service to a sovereign whose crown is a crown matrimonial, in virtue of which he controls her person, disposes of her earnings, and owns her clothing and her babies! And this in a country and under a Government that boasts of the absolute freedom of its citizens and of its institutions, of which marriage, as the nursery institute, should hold the guarantees of every virtue essential to a "Government of the people, for the people, and by the people"—be in fact and in theory a union of equals in law. Under this government women are courted (as were the slaves) to increase a male representation that has made and sustains laws to their detriment. As wives, mothers and widows, this representation holds

us subject to a class legislation which lessens our means and influence for good, and embitters the sweetest fountains of love and duty. As women—single or married—it challenges our antagonism for its injustice, and stirs our contempt for the petty meanness of a policy that degrades the manhood, shames the womanhood, and defeats the happiest ends of wise government.

Does this arraignment strike the friendly reader as too severe? It is so only in the seeming impossibility of being deserved. The facts which prove its truthfulness—and which are patent in every community—justify any severity of speech necessary to rouse the dormant conscience, or pride where conscience is lacking, to "do justly, love mercy," and get off its high heels. A people is to be judged by the laws it tolerates. Individuals composing a government are as justly rated by the duties they omit, as by the duties they perform. For it is through the omission of individual duty by better men that worse men, banded together for wrong, secure the majority vote that writes, "weighed in the balance and found wanting" on the legislative walls of every State in the Union, and over the judge's bench in every judicial district of the State. The silence of good men is golden only to transgressors. As "dumb bells" they may answer a purpose in the moral gymnasium, if one has the courage to grasp them.

Ab, me! Why should Bro. B. pickle a rod for his own shoulders? But life is too precious and too short—for me, at least—to spare the rod at the risk of weakening my plea in behalf of justice and humanity. He is "astounded at the world's ignorance," and justly concerned for its enlightenment, while I am more astounded that he should be on such good terms with his own as to make it an excuse for shirking his responsibility as a citizen to inform himself in all the duties of citizenship. If there is a seeming malice in my arraignment of himself personally, the friends must place it to the account of wounded pride, that having taken him through a regular course of woman's rights and wrongs, he still pleads ignorance of the "obnoxious laws," which it has been my painful duty to ventilate. With so apt a scholar, the failure is presumed to be in the teacher.

A plea of ignorance is of no avail in the courts, except to abate the rigor of a penalty in case of an evident lack of intelligence; and with reason in a country where the sources of information are so cheap and abounding that any man, if he choose, can make acquaintance with his rights and duties as a member of society and of the body politic. When he takes his freeman's oath, he assumes obligations to every person in the community amenable to the laws, or who may suffer or be profited by them—to cast a righteous vote, though it be with the minority, for only by such individual action can there be any majority power of good in authority.

But, alas, it is indifference that is the criminal power behind the ignorance; or its supposed dryness and insipidity as compared with other literature, that prevents men and women from the study of the noblest of all secular lore—the laws by which civilization marks its upward progress.

What is a Tear?

The principal element of a tear is water; this water, upon dissolution, contains a few hundredth parts of the substance called mucus, and a small portion of salt, of soda, of phosphate of lime, and of phosphate of soda. It is the salt and the soda that give to tears that peculiar savor, which earned for tears the peculiar epithet of "salt" at the hands of the Greek poets, and that of "bitter" at ours; "salt" is, however, the more correct term of the two. When a tear dries, the water evaporates, and leaves behind it a deposit of the saline ingredients; these are amalgamated, and, as seen through the microscope, array themselves along crossed lines, which look like diminutive fish bones. Tears are secreted by a gland called the "lacrimal gland," which is situated above the eyeball, and underneath the upper eyelid on the side nearest the temple. Six or seven exceedingly fine channels flow from it on the under surface of the eyelid, discharging their contents a little above the delicate cartilage which supports the lid. It is these channels or canals that carry the tears into the eye. But tears do not flow only at certain moments and under certain circumstances, as might be supposed; their flow is continuous; all day and all night, although less abundantly during sleep; they trickle softly from their slender sluices, and spread glistening over the surface of the pupil and eyeball, giving them that bright enamel and limpid look which is one of the characteristic signs of health. It is the ceaseless movement and contraction of the eyelids that effect the regular spreading of the tears, and the flow of these has need to be constantly renewed in the way just mentioned, because tears not only evaporate after a few seconds, but also are carried away through two little drains called "lacrimal points," and situated in the corner of the eye near the nose. Thus all tears, after leaving the eyelids, flow into the nostrils, and if the reader will assure himself of this, he has only to notice, unpoetic as the fact may be, that a person after crying much is always obliged to make a two-fold use of his or her pocket-handkerchief.—Chamber's Journal.

THERE is a dog in Georgia that weighs only 15 ounces. Whenever he gets lost his owner knows that he is inside of a pound.

Charles Reade's True Woman.

Reade, in fact, invented the true woman; that is to say, he was the first who found her. There have been plenty of sweet and charming women in stories—the patient, loving Amelia; the bouncing country girl, Sophie Western; the graceful and gracious ladies of Scott; the pretty dummies of Dickens; the insipid sweet-neases of Thackeray; the proper middle-class (or upper-class) girl of Trollope; the conventional girl of the better lady novelists. There have also been disagreeable girls, especially the bad-style, detestable girl of the "worse" lady novelists; but Reade—the *trouwee*—has found the real woman. You will meet her on every page of all his novels. What is she? My friends, Columbus' egg was not simpler. She is just exactly like a man, like ourselves, but with certain womanly tendencies. Like ourselves, she ardently desires love. She knows that it is the best—the absolutely best—thing the world has to give; that we are all born for love, man and woman alike; that to lack this consummate and supreme blessing is to lose the best part of life. Since she desires above all things to be wooed, and is forbidden to woo on her own account, she conceals her own thoughts; yet, from her own experience in hiding, she is quick at reading the thoughts of others. She is satisfied with nothing less than what she herself gives, which is all herself. Her reserve leads her, in the lower natures, to deceit and falsehood. Her devotion, which is part of her nature, leads her—also in the lower natures—to suspicion and jealousy. She is always in the house, and therefore her mind is apt to run in narrow grooves. The prodigality and wastefulness of men are things beyond her understanding or patience. She is unversed in affairs, and therefore comprehends nothing of compromise. She is generally ill-educated, and therefore is incapable of forming a judgment. Hence, she is carried away by every wind of doctrine; as, for instance, in matters ecclesiastical, knowing nothing of the early church or its history, she believes the poor, little, ritualist curate, who knows, indeed, no more than herself; or, in art, where, for want of a standard, she is led astray by every fad and fashion of the day, and worships sad-faced flatnesses with rapture; or, in dress, where, her taste being uncultivated, she puts on whatever is most hideous and unbecoming, provided it is worn by everybody else.

This is the woman whom Charles Reade presents to us. She is not, at all events, insipid; no real women are. If she is artificial, he shows the real woman beneath. What he loves most is the woman whom fashion has not spoiled—the true, genuine woman, with her natural passion, her jealousy, her devotion, her love of admiration, her fidelity, her righteous wrath, her maternal ferocity, her narrow faith, her shrewdness, even her audacity of falsehood when that can serve her purpose, and her perfect abnegation of self.—Gentleman's Magazine.

A NEW FLOOR COVERING.—A new and desirable papier mache process for covering floors is described as follows: The floor is thoroughly cleaned. The holes and cracks are then filled with paper putty, made by soaking newspapers in a paste made of wheat flour, water and ground alum, as follows: To one pound of flour add three quarts of water and a tablespoonful of ground alum, and mix thoroughly. The floor is then coated with this paste, and then a thickness of manila or hardware paper is put on. If two layers are desired, a second covering of manila paper is put on. This is allowed to dry thoroughly. The manila paper is then covered with paste, and a layer of wall paper of any style or design desired is put on. After allowing this to thoroughly dry it is covered with two or more coats of sizing, made by dissolving one-half pound of white glue in two quarts of hot water. After allowing this to dry, the surface is given one coat of "hard oil-finish varnish," which comes and is bought already prepared. This is allowed to dry thoroughly, when the floor is ready for use. The process is represented to be durable and cheap, and besides taking the place of matting, carpet, oil cloths or other like covering, makes the floor air tight, and can be washed or scrubbed.

DOUBLE TIME-KEEPING.—An invention has just been patented by which the time of two distinct places, at whatever distance situated, can be simultaneously marked on the face of a watch or other timepiece without interfering with the fixed time which it is desired to keep, or necessitating the moving of the hands of the piece. This invention consists in two supplemental movable rims, working independently of the fixed dial and of each other. The inner rim is divided into hour sections, the outer one into minutes. Two tiny wheels, projecting slightly from the metal bezel which holds the crystal in position, enable the wearer to bring the hour and minute at which he wishes to set these movable dials exactly opposite the hour or fraction of hour and minute, respectively, then and there indicated by the hands of the fixed dial. By this simple device, two different times are kept at the option of the wearer. These supplemental dials may also be used for the recording of engagements, and for a variety of other purposes.

ASKING FOR WOMAN SUFFRAGE.—The Kansas Republican Convention, held at Topeka, Aug. 10th, adopted a resolution asking the next Legislature to pass a law allowing woman suffrage. The vote stood 234 to 129.

Chaff.

WHEN a man chooses a mate, she frequently turns out to be the master.

FRANCE used 30,000 barrels of cider in making wines last year, but a French bottle of cider with a cobweb twisted around it will always catch the American wine bibber.

LAND can be bought in some parts of South Australia for \$4.50 a square mile, but by the time a stranger becomes acclimated there he has no use for a plot larger than six feet by three.

A TRADE journal gives directions for "preserving harness." Preserved harness may be considered very palatable by those who like that sort of thing, but we don't want a bit in our mouth.

"Just taste that tea," said old Hyson to his better-half, at the supper table the other evening. "Well," there doesn't seem to be anything the matter with it. I can't taste anything. "Neither can I, and that's what I'm growing at."

A CONVICT says he was sent to prison for being dishonest, and yet he is compelled every day to cut out pieces of pasteboard, which are put between the soles of the cheap shoes made there and palmed off on the innocent public as leather.

A GENTLEMAN made a rockery in front of his house, in which he planted some beautiful ferns, and having put up the following notice, found it more efficient and less expensive than spring guns or man-traps: "Beware! scolopendrum and polypodiums are kept here."

"My frens," said the officiating clergyman at the marriage of two colored persons, near Cincinnati, a few Sundays ago, "my frens, it am a serious thing to get married, 'specially when bofe the parties is orphans an' haint got no parients to fall back on, as am de present case."

"WHAT sort of a servant have you now?" inquired a lady of a friend she was visiting. "Oh, splendid!" she replied. "He's a Chinaman, and is so methodical in his habits that I know just what he is doing at any hour in the day. He is now probably putting away the dishes and tidying up the kitchen. Come and see if I'm right. She led the way to the kitchen, quietly opened the door, and there, in the middle of the floor, sat John Chinaman washing his feet in the dish pan.

WORKING CLOTHES.—Men and women are obliged to labor; they must dress according to their work, and that is as it should be. Men are not expected to milk cows in a mauve-colored summer suit, French kid boots and a "pancake" hat. Oh, no! Neither is he expected to sit down at table in the same clothing he has worn in the stable, thereby making himself offensive to all lovers of cleanliness, and setting an example his sons will be quite apt to follow. Neither would we have the wife and mother look like a harlequin on dress parade. If she has dirty work to do, she can wear a neat print dress, have a large apron which is easily removed, and it costs but a trifle to put a white linen collar around the neck and a ruffle or cuffs in the sleeves, and these trifling additions brighten a plain face, and make the wearer much more presentable and attractive. The woman who heeds little details in dress will never be under the humiliating necessity of making worse than useless excuses when surprised by strangers, for she is always dressed for company. Is not mother prettier, looks younger, and really seems more agreeable when tidily dressed than when she looked as if robbed for a beggars' masquerade?

There are many young women entering their life-long partnership, and we would earnestly urge upon them the necessity of giving attention to this important matter. Observe all the little courtesies and delicate attentions so precious during the days of courtship, and never permit them to be laid aside because he for whom they were practiced is now a daily companion, who shares her aims in life, and should share her burdens instead of ignoring them.

VIBRATION OF THE GROUND PRODUCED BY RAILWAY TRAINS.—Professor H. M. Paul has communicated to the Seismological Society of Japan some notes on the effect of railway trains in transmitting vibrations through the ground. A box, holding about 20 lbs. of mercury thickened by amalgamation with tin, was placed upon a heavy plank screwed to the top of a post sunk 4 ft. into the ground. Images reflected in the surface of the mercury were observed by a telescope, as in meridian observations. An express train passing at a distance of one-third of a mile, set the surface of the mercury in confused vibration for two or three minutes. Professor Paul has also found that a one-horse vehicle passing along a graveled road, 400 or 500 ft. distant, caused a temporary agitation of the mercury whenever the wheels struck a small stone.

ASTRONOMICAL EXPECTATIONS.—When the sun, the earth and Mars come again into line with the earth in the center, at the next opposition of Mars, on the 31st of January, 1884, some of the great telescopes that are now being built will be in successful operation. With these increased facilities for a nearer view, we may hope to learn something more tangible concerning the curious movements that are taking place on a planet whose real features are more nearly within the power of the human eye to grasp than those of any member of the solar family.

YOUNG FOLKS' COLUMN.

Our Puzzle Box.

Numerical Enigma.

I am composed of 19 letters.
My 12, 3, 4, 18, 6 is a part of the body.
My 1, 7, 2 is a bird.
My 5, 16, 17 is a tree.
My 10, 11, 9, 3, 8, 13 was one of the prophets.
My 19, 15, 16 is a note in music.
My 14, 1, 6, 9 is a musical instrument.
My whole is the name of an American poet.

JENNIE.

Blanks.

[Blanks are to be filled with the same words beheaded.]
1. You will find the door — in the —.
2. — did you buy that —?
3. His — was performed with perfect —.
4. I — for a — of sunshine to illumine the dreary blank of my life.

MELANCHOLON.

Charade.

My first is surely not the all,
For but a portion can it be;
An apple cut in quarters, please—
The first you then will plainly see.

Hast visited Andes or Alps—
Those hills of frost, and ice, and snow?
Then thou hast seen my second's form,
At early dawn or sunset glow.

With me please come some autumn morn,
Aside the thicket's tangle part;
Tread carefully, and I will show
From whence my whole takes noisy "start."

UNCLE CLAUDE.

Word Square.

1. A fastening.
2. One of the United States.
3. A wild animal.
4. A sound.

AUNT SARAH.

Curtailments.

1. Curtail superficial contents and leave a plural verb.
2. Curtail one who seeks earnestly and leave to desire a lofty object.
3. Curtail an animal and leave a mark of distinction.
4. Curtail odoriferous and leave an aromatic plant.
5. Curtail gloomy and leave mental condition.

JAMES.

Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Stanley.
HIDDEN WORD SQUARE.—U T A H
T A M E
A M E N
H E N S
DECAPITATIONS.—1. Gasp, asp. 2. Box, ox. 3. Crick-
ets, rickets. 4. Brook, rook.
FRACTIONAL PUZZLE.—Atmosphere.
TRANSPOSITIONS.—1. Wolf, flow. 2. Was, saw. 3. Ned,
den. 4. Mug, gum. 5. Vile, live.

Hints to Girls.

Girls who have taste and industry can make their humble rooms abodes of beauty at very little cost, if they are so disposed. We have read of a Connecticut girl who, by exercising her own innate good taste, has achieved a charming room at comparatively small expense, esthetic enough to please the most fastidious person. The floor, painted by her own hands, is a dark walnut shade, partly covered by a large rug made of cheap ingrain carpet in a small pattern of cream and olive, bordered by a broad band of plain olive felt. The inexpensive wall paper is pale olive, flecked with pink, finished by a narrow olive frieze terminating at the corners with a cluster of four tiny pink fans. One window has an undesirable outlook, and she painted the window panes in bright water colors, following a pretty traced pattern, which gives a bit of stained glass, quite effective in the pretty room. The other window is draped gracefully with long full folds of sprigged muslin, depending from rings on a plain pine roll, to be replaced in the winter with a heavier curtain of olive canton flannel. The furniture is light wood, and a lamp with a rose transparency stands on a five-o'clock tea table of unvarnished wood, and sends a soft light over the room, which also contains book-shelves of pine, a couple of second-hand easy-chairs, and a small dry-goods box for shoes, covered by her own hands with pink and olive cretonne. A large clothes-horse, on which she pasted the story of Cinderella in Walter Crane's pictures over olive paper, shuts off the bedstead and washstand from view. The toilet accessories, set off with fresh sprigged muslin over a pink lining, are a pink and white wash-bowl and a large pitcher of the quaint shape that comes now in the cheaper grades of china; a second-hand wardrobe, draped with a portiere of olive canton flannel, contains the unesthetic dustpan, brooms and other homely articles necessary to neatness and comfort; all trifles of that description bought at the five-cent counters. A pretty willow rocking-chair, ornamented with olive and pink ribbon, and a knitted hassock to match; the two latter are Christmas gifts, and stand on the rug. On the olive-draped mantel are grandma's Nankin teapot, two tall silver candlesticks and a large ginger-jar, not decorated and spoiled with gummed-on pictures, but left in its pristine blue-and-white beauty, filled with white daisies, gathered on afternoon walks.

Two or three photographs of good subjects, that are better than chromos and cost less, hang on the wall and complete the pretty refuge of this proud and industrious girl, who is self-respecting enough to earn her own living rather than be dependent upon her rich relations. She says she cannot go away on vacations, dress in fine clothes or indulge in any pleasures, and she thinks she is entitled to her pretty room, the one rest and luxury she possesses, furnished with her own earnings.

Many of our girl readers have no doubt made themselves just as pretty rooms. We shall be glad to receive letters describing them and the materials used in their decoration.

GOOD HEALTH.

Uncooked Dried Fruit.

EDITORS PRESS:—Being born with a frail constitution, and having had to study closely the laws of health in order to keep off sickness and hold possession of my body, I naturally have become very much interested in "Good Health," and always look for the arrival of your journal to see what new ideas are there presented, and you must excuse me if finding there ideas advanced or assertions made that have been proved to my certain knowledge by more than one, yet, many persons, to be decidedly erroneous, I feel compelled to pen a few lines pointing out the mistake, even if some M. D. should have read it to some sanitary association perhaps, without ever making any test of the question. I allude now to the assertion made by Dr. E. M. Hunt, in issue of August 26th, that dried fruits, as prunes, raisins, apples, etc., are unfit to eat unless well cooked; for a few of us who have tried the experiment of living entirely on such fruit during the past winter with only the addition of a little grain, has demonstrated the fact that such food is not only more easily digested in the uncooked than in the cooked state, but the system is better sustained, and more than one case of dyspepsia of long standing been cured by the use of uncooked in the place of cooked food. My own experience of ten months in that line has been most remarkable. Concerning it, you published one or two letters some months ago, since which time I have continued to improve in health, strength and happiness, and though a loss of weight for the first eight months (until from 132 I was reduced to 124 lbs.) was experienced, the last two months there has been a continued gain, so that yesterday the scales showed 134 lbs., or a gain of two pounds on my previous weight, which may be accounted for in part by not working quite so hard, for during the long days of June and July daylight seldom found me in bed; and though every hour until dark was put in to the best advantage and more than double the amount of work performed than I had been able to do for years before. The system responded so well to the demands made upon it that the word "tired," came near losing a place in my vocabulary, and with peans of praise going up from my heart for the discovery, I have felt like a new man, and old friends say, look years younger. Other families are or have adopted the grainia diet with good results. So let M. D. look out for his trade, though no doubt there will be plenty who will prefer to live for the gratification of old appetites, with its ever recurring spells of sickness, and depend upon M. D. and patent pills rather than learn the way which, though it may require some self-denial to begin with, will end in giving them a new life, continued health, and more gastric pleasure than they ever had before. I would that all might be, what doubtless God designed, all the time healthy, happy and joyous as the birds around us.

ISAAC B. RUMFORD.

Bakersfield, Cal.

THE human hand is so beautifully formed, it has so fine a sensibility, that sensibility governs its motions so correctly, every effort of the will is answered so instantly, as if the hand itself were the seat of that will; its actions are so free, so powerful, and yet so delicate, that it seems to possess a quality instinct in itself, and we use it as we draw our breath, unconsciously, and have lost all recollection of the feeble and ill-directed efforts of its first exercise, by which it has been perfected. In the hand are 29 bones, from the mechanism of which result strength, mobility and elasticity. On the length, strength, free lateral motion and perfect mobility of the thumb, depends the power of the hand, its strength being equal to that of all the fingers. Without the fleshy ball of the thumb, the power of the fingers would avail nothing; and accordingly, the large ball formed by the muscles of the thumb is the distinguished character of the human hand.

EFFECT OF SUGAR ON THE GASTRIC JUICE.—Sugar has been denounced by modern chemists as a substance, the effects of which on dyspeptics are deplorable. A writer in the *Medicine Practicien*, however, does not partake of these fears. He cites the case of a dyspeptic doctor, who, for 20 years, had a terror of sugar, but who now consumes three and three-fourths ounces of sugar daily, without inconvenience. Entering the field of experiment in this direction, he found that a dog ate 80 grains of sugar with 200 of other food, and six hours afterwards its stomach showed but little food; the mucous lining of the stomach was red and highly congested, and the congestion of the liver was notable. An animal opened after eating 200 grains of food and no sugar, showed 90 to 100 grains of food undigested. Sugar, then, favors the secretion of the gastric juice.

INDICATIONS OF HAIR.—It is said that the story of Sampson has misled people into believing that abundant hair is a sign of physical or mental strength. Madhouses and idiot asylums prove the contrary. Esau, who was so easily duped out of his birthright, was hairy; the mighty Caesar was bald. "Long-haired men are generally weak and fanatical, and men with scant hair are philosophers, soldiers and statesmen of the world."

DOMESTIC ECONOMY.

HOME-MADE SAUCES.—Home-made sauces help to keep the grocery bill small, and they may be as appetizing, and even more so than anything we can buy, if made with due thought. A piquant horse-radish sauce is a very good relish with roast beef or with fish. Take two teaspoonfuls of made mustard, two of white sugar, a little salt, and vinegar enough to make the sauce of the proper quality; pour this over a teaspoonful of grated horse-radish root. Excellent tomato sauce is made by peeling and cutting in small pieces a dozen large, ripe and juicy tomatoes; add six small, green peppers and two medium-sized onions; chop these very fine, stir in a coffee-cupful of vinegar, two or three teaspoonfuls of brown sugar, a heaping tablespoonful of salt (more if your taste demands it), a teaspoonful each of ginger, cloves, allspice and cinnamon; stew the tomatoes and all the ingredients but sugar and vinegar for an hour and a half slowly; add sugar and vinegar five minutes before taking from the fire. Another tomato sauce is made of a peck of ripe tomatoes, two onions, half a dozen red peppers, half a pint of salt, two tablespoonfuls of black pepper, two of mace, two of ginger and two of allspice and cloves mixed. Cut the tomatoes and onions in pieces and boil for two hours; when cold stir in a pint of vinegar. This is a sour sauce, and it keeps well. Then there are delicious catsups of tomatoes and of cucumbers; these are a little more trouble to make, as they must be strained and carefully bottled; but they are so satisfactory that the trouble does not count for much, after all.

CLEAR BROWN SOUP.—For four quarts of soup, cut in half-inch dice two pounds of lean beef, from the neck or leg; in the bottom of the soup pot put a tablespoonful of drippings, or butter, and set the pot over the fire until the fat is smoking hot; then put the beef in the pot, and stir it occasionally, until it is quite brown. When it is brown, pour in with it four quarts of boiling water; season it with two teaspoonfuls of salt and a small pinch of cayenne pepper, and let it boil very slowly for two hours; then cut up in half-inch pieces half a cupful each of onions and green celery stalks, and one cupful each of carrots and turnips. Put two tablespoonfuls of sugar and one of butter in a saucepan, and set it over the fire until they begin to brown; then add the vegetables, cut up as already directed, and stir them about with the butter and sugar until they are brown; put them into the soup, using a cupful of it to rinse all the browned butter and sugar off the saucepan in which the vegetables have been prepared; see that the seasoning is palatable, and continue cooking it until the vegetables are tender, removing any scum which may arise. If this soup is carefully prepared, it will be of a clear, light brown color and good flavor.

QUEEN'S PUDDING.—One pint of fine-sifted bread crumbs, one quart of milk, one cup of sugar, the yolks of four eggs, a piece of butter the size of an egg; bake until done (but do not allow it to become watery), and spread with a layer of jelly. Whip the whites of the eggs to a stiff froth with five tablespoonfuls of sugar and juice of one lemon; spread on the top and brown lightly. This is good with or without sauce. It is very good cold, served with rich cream.

CLEANSING DISHES.—Baking plates and pudding dishes that have been used for a long time need a thorough cleansing occasionally. To do this, put them in a kettle of water in which you have put a spoonful of wood ashes to one quart of water. Let them boil in this for an hour, and if any grease has been absorbed through cracks in the glazing it will be removed, and pie-crust baked on a plate thus cleaned will be sweet and not unwholesome.

SUCCOOTASH.—Take a pint of shelled lima beans (green), wash, cover with hot water, let stand five minutes, pour off, place over fire in hot water, and boil 15 minutes; have ready corn from six good-sized ears, and add to beans; boil half an hour, add salt, pepper and two tablespoonfuls of butter. Be careful in cutting down corn not to cut too deep; better not cut deep enough and then scrape; after corn is added, watch carefully to keep from scorching.

APPLE FRITTERS.—These make a cheap and delicious dessert. Prepare a batter as for griddle cakes—that is, a thin batter made of flour and sweet milk and baking powder, or flour, sour milk and soda; then stir in apples, which you have chopped fine, the quantity depending on your taste. Fry them as you would griddle cakes, and serve with a syrup made of melted white sugar. If you wish, you may bake them in patty pans instead of frying them.

RASPBERRY SHRUB.—Raspberry shrub, when made with red raspberries, is a pleasant drink. Put the berries in a jar, and pour enough vinegar over them to cover them. Let them stand for two or three hours, then heat them thoroughly without letting them boil long; strain them, and to one pint of juice add one pint of sugar; scald this juice and skim it carefully; when cold, seal in bottles. It is ready for use in a few weeks.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. W. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Addresses editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may, for any reason, occur in the payment of any quarterly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$1 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.50
Half inch (1 square).....	\$1.50	\$3.00	10.00
One inch.....	2.00	5.00	14.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, September 16, 1882.

TABLE OF CONTENTS.

EDITORIALS—Guernsey Cattle; The Oleomargarine Business, 197. The Week; Science and Agriculture; Classes of Peach Leaves, 203. Artificial Hay Drying; The English Hop Crop; Dutch or Holstein, 205. Patents and Invention; Notices of Recent Patents, 208. **ILLUSTRATIONS**—Imported Guernsey Cow, Polly, of Kanusha, 849, and Heifer Calf, 197. Characters in the Leaves of Peaches, 204. A New English System of Stock and Rick Drying, 205. **CORRESPONDENCE**—Notes from San Diego City and County, 198. **HORTICULTURE**—Poor Fruit—The Cause and the Remedy; The Fruit Interest of Nevada County, 198. **THE VINEYARD**—Clearing and Vine Planting in Lake County, 198. **THE STOCK YARD**—The Livestock at the Golden Gate Fair, 199. **FORESTRY**—Forest Trees of California—No. 11, 199. **PATRONS OF HUSBANDRY**—Grange Leaflets—No. 9; Grange Work; State Grange; What Young Members Can Do; A Merchant on Walnuts, 200. **AGRICULTURAL NOTES**, from the various counties of California and Nevada, 204-205. **HOME CIRCLE**—Wild Flowers, (poetry); Woman's Rights and Wrongs—Suffrage; What is a Tear; Charles Reade's True Women; A New Floor Covering; Double Time Keeping, 202. Chaff; Working Clothes; Vibration of the Ground Produced by Railway Trains; Astronomical Expectations, 203. **YOUNG FOLKS' COLUMN**—Our Puzzle Box; Hints to Girls, 203. **GOOD HEALTH**—Uncooked Dried Fruit; Effect of Sugar on the Gastric Juice; Indications of Hair, 203. **DOMESTIC ECONOMY**—Home-made Sauces; Clear Brown Soup; Queen's Pudding; Cleansing Dishes; Succotash; Apple Fritters; Raspberry Strub, 203. **QUERIES AND REPLIES**—The Mennonites and Their Mulberries; New Corn; Early Bearing Walnuts; Linda's Cling Peach; Flax and Jute for Fiber, 204.

Business Announcements.

Seenes, World Manufacturing Co., New York.
Langshans, Mrs. K. Raynor, S. F.
Credit Sale, Pacific Land Bureau, S. F.
Trees, shrubs, etc., Elfwanger & Barry, Rochester, N. Y.
Gardener, John Ellis, S. F.
Roses and Plants, Hiram Sibley, Chicago, Ill.

The Week.

While the peerless days have followed each other, there has been abundant food for sensations and excitements, and he who has had leisure for sight-seeing has revelled in visual delights. The fairs are progressing, and are attracting throngs both to pavilion and show-yards. As we write, the great annual event at Sacramento is in progress, and all accounts place it high in the ranks of fairs. But the region of the bay is not altogether bereft to minister to the sensation of the capital city, for we have the Princess Louise and the Marquis of Lorne receiving the homage of loyal Britons and the gazing of the curious. They glided down from the mountains on Wednesday morning, and were bumped in a harmless collision at Port Costa, and then were safely hotelled in San Francisco. A few days more and they will go northward to British Columbia. As we write too, on Wednesday, the British are pushing Arabi to the wall in Egypt. Indeed, events are stirring now, and there is the political campaign just beginning. No one need look for the sensational nowadays.

HORTICULTURAL SOCIETY—The fruit growers of Ventura county met in convention at San Buenaventura, Thursday, August 31st, and organized a Horticultural Association for mutual protection and information.

Science and Agriculture.

There has been great progress during the last few years in the application of the scientific method of investigation to agricultural practices and materials. Probably as much has been done in five years to systematize agricultural study in this country as has been accomplished in all its previous history. Almost all branches of husbandry are bringing their unsolved problems to the feet of the scientific investigator, and asking him to apply his experimentation and investigation to discover hidden causes, by the removal of which, unfavorable effects may be obviated or favorable results secured. The State governments at the East are doing something to give the farmer the advantages of scientific inquiry, and the establishment of several experiment stations is on record. It is also a pleasant fact that rich men, with a taste for agricultural pursuits, are now spending their money for systematic investigations by skilled observers, rather than indulging in haphazard expenditure in theoretical farming, for which rich merchants and professional men were so noted a few years ago. For example, there is Lawson Valentine, of New York city. Instead of going into wild and expensive indulgence in impossible cultures on his fine farm in Orange county, New York, he has equipped a private experimental station, and has employed a corps of trained observers to watch and record the results of well-directed experimentation. There is no doubt at all that the studies at Houghton farm will be of service to the agriculture of the whole country, because the publication of the results there attained will bring them to the knowledge of farmers all over the country, and the truth ascertained will be applied everywhere as the need for it arises. Even the old race of "fancy farmers" did some good, even if they did make most ridiculous

Fourteenth—To encourage agricultural surveys in the States and the nation, and to discover improved modes of conducting them.

Fifteenth—To encourage agricultural education.

Sixteenth—To encourage the collecting and improved methods of arranging and presenting statistics in agriculture.

Such a programme is certainly worthy the approval of the practical farmer. Many are now anxious to know just the things which the above category includes. We trust the present tendency in agricultural investigation may go steadily forward until many of the dark places in the industry are fully illumined.

QUERIES AND REPLIES.

The Mennonites and Their Mulberries.

EDITORS PRESS—As the subject of silk culture is being agitated in the United States, and the qualities of the various mulberry trees are being discussed, I thought a few items from this section might prove interesting. I live only about 20 miles from a colony of Russian Mennonites—a class of Russian citizens who formerly resided in Germany. Their religious convictions were such, however, that they could not serve in the army. About the year 1800, the German government insisted that they should serve or leave the country. The Czar of Russia then offered them a tract of land in his country and agreed to exempt them from military duty. They accepted his offer, and have continued to reside in Russia from that time up to the time they emigrated to the United States, some seven years ago. Many are still in Russia, but several colonies can be found in this country, in this State and Kansas, as well as a few in other localities. The Russian mulberry was introduced into their colonies in Russia by the Russian government, for the purpose of silk culture and to facilitate rainfall. They were compelled to buy these trees of the government—each land holder must plant a certain number.



CHARACTERS IN THE LEAVES OF PEACHES.

investments and attempt impossible things, but the benefits they bestowed upon the industry will be found small when compared with the results of the better system of agricultural patronage which many of our rich men are now extending. The working farmer often has not time nor spending money to carry on many investigations which he knows would teach him useful things, but he is quite glad to possess the results when they are reached by a careful systematic inquiry which yields trustworthy facts.

Another direction in which gratifying progress is being made, is by the association of leading agricultural investigators, for a comparison of results and counsel on doubtful points. It was a mark of agricultural progress when the American Association for the Advancement of Science gave birth to a new society, the special field of which was agricultural science. At the meeting held last month at Montreal, there was an excellent attendance and valuable discussion of practical questions. To show what important considerations are being presented, we quote the objects of the association, as set forth at the last meeting by the President:

First—To encourage the formation, co-operation and support of agricultural experimental stations.

Second—To try to ascertain what experiments in agriculture are most needed, and indicate methods of conducting them.

Third—To discover and define the best methods for uniform standards in the analysis of soils, fertilizers and vegetable products.

Fourth—To discover and define the best methods of stamping out parasites and contagious diseases of all domestic animals.

Fifth—To discover and systematize the principles of stock breeding.

Sixth—To endeavor to find the best combination of foods for growing or fattening animals in various parts.

Seventh—To make discoveries and extend the application of science in dairying.

Eighth—To experiment on fish culture.

Ninth—To investigate insects which are injurious or beneficial in agriculture, and discover improved remedies for those injurious.

Tenth—To learn and point out the best methods for testing each kind of agricultural seeds, and to ascertain their vitality and purity.

Eleventh—To make investigations in vegetable physiology, especially with reference to learning how to keep plants in a healthy and productive condition.

Twelfth—To study the fungi which infest cultivated plants and point out remedies.

Thirteenth—To advance the subject of improving the breeding of plants for seed.

After cultivating them until they learned their value, they voluntarily planted them very extensively, and learned that silk culture was not the only consideration in raising them. They found the timber very valuable for fence posts, outlasting any Russian timber. It was also found very profitable for cabinet work, and was considered one of the most desirable trees for fuel. It also bore edible fruit, which was marketable in Russia.

When the Mennonites came to this country, they brought the seed of this tree with them. They also brought the seed of several other trees, but planted these more extensively than all others combined. We believe that several of these trees will prove very valuable to nurserymen and fruit growers in this country. The Russian mulberry is a very rapid grower. Trees grown from the seed the Mennonites brought are now 20 ft. high and large enough for fence posts. They grow very large and bear abundant crops of fruit. This fruit resembles blackberries in appearance. A very great percentage are a jet black—the balance a reddish-white. They vary in flavor from sub acid to sweet. When mixed with something tart and made into dessert, they are frequently mistaken for raspberries. The habits of growth of this tree are like those of the apple tree. Many of the leaves are lobed or cut with from 5 to 12 lobes. The Mennonites also use it as an ornamental hedge plant, and it makes a beautiful hedge, and stands shearing as well as any tree. This is the only mulberry sufficiently hardy, in the estimation of some nurserymen, to be valuable for silk purposes north of the 40th parallel of north latitude. The Mennonites have interested themselves in the silk business, to some extent, since they have been in the United States, and have some cocoons for sale.—G. F. CLARK, Odell, Nebraska.

New Corn.

EDITORS PRESS—We send you half a dozen ears of corn. The seed came through you from the department of agriculture—three ears "Queen of the Prairie," and three ears "Montgomery." It was planted on the 4th of March. There was one month of cold, frosty weather; still it came forward under disadvantages, and

was fit for the table on the 4th of August. It was fully ripe in the same month, and is ready to grind now. We are not in a corn locality, and do not claim large ears, but solid, ripe corn. The varieties show that they will prove a success in this State, without irrigation, if planted early. The sample sent had no water and not very good cultivation.—Mrs. J. T. Hoyt, San Mateo.

Early-Bearing Walnuts

EDITORS PRESS—In this week's RURAL, a gentleman from Fresno writes: "I have nut trees bearing at four and five years," etc. I think my trees are a little ahead of his. One year and nine months since I received (per express), from a modest nurseryman of Nevada City, a dear little bundle of two dozen nut trees. These trees, last season, had from one to five nuts on each tree, and this year some of them are in the same fix. The only objection I can see to them is that, aside from their first coat, they bear a name which is a hard nut to crack.

I would state here that I bought nut trees from one, and fruit trees from the other, of the two nurserymen who had such a controversy in your paper on the nut question, and found them both equally good and reliable.—W. E. KING, Hazel Dell, Watsonville, Cal.

Linda's Cling Peach.

EDITORS PRESS—The peaches I sent you a few days ago were raised from a seed, and were discovered by me last year. I do not claim that it is a large peach, it being of a medium size, but that it is a good market variety, it being so hard, even when well ripe, that it will bear handling and shipping as well, or better, than many favorite varieties. It is also one of the best for canning, for pickling, for preserving, having a better flavor naturally than can be given with flavoring extracts. The tree is a vigorous grower, being much larger than any of the same age in the same row. It has a heavy green foliage, and is free from mildew rust or curled leaf. Its season is the middle of August. I will probably have something more to say of this peach hereafter.—A. H. POE, Lakeport.

The peach bears out Mr. Poe's description. It is a little beauty, almost white, with a rich blush. Unfortunately, the specimens disappeared before the above note came, so we cannot describe the fruit accurately.

Flax and Jute for Fiber.

EDITORS PRESS—Can you give us the name or names of any party or parties who have grown, or attempted to grow, flax and jute for the fiber?—McAFFEE BROTHERS, San Francisco.

As for flax, there has been much talk about growing the plant for the fiber, but we are not aware that much has been done, because there is no market as yet for the fiber. There were jute experiments made many years ago, and there are others now in progress from the seed distributed from San Quentin. We shall have to call upon our readers for information on both the above questions.

Classes of Peach Leaves.

In his essay before the Horticultural Society, at its last meeting, James Shinn mentioned the peaches which had serrated leaves and glandless footstalks as especially liable to mildew. Some question has arisen as to these marks of peach leaves, and as some growers have evidently overlooked the destructions, we produce from "Downing's Treatise" an engraving of the different kinds of leaves. Downing places the destruction by leaf margin and glands next in value to the freestone and clingstone division, and he thus describes the leaf marks: At the base of the leaves of certain kinds are always found small glands, either round and regular, or oblong and irregular, while the leaves of certain other kinds have no glands, but are more deeply cut or serrated on the margin. These peculiarities of the foliage are constant, and they aid us greatly in recognizing a variety by forming three distinct classes, viz: 1. Leaves serrated and without glands, a. 2. Leaves with small, round or globose glands, b. 3. Leaves with large, irregular, reniform glands, c.

This distinction of leaves is valuable, because it not only assists us when we have the fruit before us, but it may be referred to for the sake of verifying an opinion at any time during the season of foliage.

A HUGE RABBIT WARREN—It is probably impossible to accurately estimate the amount of injury inflicted on graziers in Australia and New Zealand by the introduction of the rabbit into those colonies. Accounts have from time to time been published, showing how large districts of fine grass country have been completely overrun by these prolific rodents, to the entire destruction of all herbage, and the ruin of the owners, whose flocks of sheep have been literally starved out of the district. It has taken the combined wisdom of several Parliaments to devise adequate means for coping with the ever-increasing rabbit nuisance, and the only corresponding advantage has been that unlimited scope has been afforded to the devotees of sport to indulge in coursing and rabbit shooting. The returns of rabbit skins exported from New Zealand alone, averaging some 10,000,000 a year, show how gigantic is the evil which the presence of these destructive animals creates.

FRANCE—It has just been discovered that the ravages of the phylloxera have extended to the department of La Vendee and Haute-Vienne, both of which were hitherto considered exempt.

THE vineyard owners in Berkeley Colony, near Livermore, have found it necessary to build a rabbit-proof fence around the entire property.

Artificial Hay Drying.

In order to assure our California readers of the peerless treasure they have in a dry season for haying and harvesting, we lately mentioned the great efforts and expense to which English farmers were put to save their hay from ruin through the excess of moisture at the haying season. The description of the hay ovens and other contrivances for expelling this moisture must have impressed the Californian with the advantage of having a climate which requires nothing of the kind. But descriptions never enforce an idea so forcibly as an illustration, and so we have reproduced a picture of a modern English hayfield, with the newly invented drying machinery. The engraving in an English journal is accompanied by the statement that Messrs. Thwaites Brothers, of Bradford, distinguished for the manufacture of steam hammers, and ventilating and blowing machinery, have for years devoted a share of their attention to the wants of farmers and land owners. They have lately introduced a most important modification in the mode and means of harvesting crops. The process, which, after more than 20 years of preserving effort, has been brought into practical working order by Mr. Neilson, of Halewood, is regarded by Messrs. Thwaites as certain, in years to come, to save many millions sterling that have hitherto been lost.

Having, from frequent observations in hay making, found that the withering of the fiber in dry windy weather, by continued gentle motion was more favorable, and the loss of color was less than when lying exposed in swathe or even small cocks to a bright sun in calm weather, and by similar observations of the effect of the change of even a gentle wind on a newly built stack of fermenting hay, Mr. Neilson was convinced that the process of curing it might be greatly assisted by the artificial permeation of atmospheric air through the bulk of the stack. He determined, therefore, to put his ideas to practical test. The grass having been cut as soon as it was in flower, a horse tedder was at once employed, and its operations continued until Mr. Neilson considered that the withering process had reached the stage to warrant him in resorting to the new principle of stacking determined upon. The further curing in the stack was accomplished in the following manner: Before building the stacks a nine-inch square wooden pipe was placed upon the ground, to reach from the outside to within a foot from the center of the position of the stack, where a four-bushel sack, tightly filled with chaff or cut straw, was placed on end, and the stack built up round it, the sack being gradually drawn up until it attained about one-third of the intended height of the stack. During the process a light, sheet-iron tube, two inches in diameter, was placed horizontally at about six feet or seven feet from the ground (which would sink to about four feet or five feet), so as to admit of the insertion of a common thermometer at the end of a stick, reaching from the outside of the stack to within a foot of the sack, so as to ascertain the heat of the interior; the stack was then built up to its intended height. To the outside opening of the nine-inch wooden pipe he then connected, by air-tight arrangement, the mouth of a common winnowing fan, and commenced driving in air. The result was not altogether satisfactory. Success was, however, attained after many experiments, when the system was inverted, and instead of driving air into the chimney, and so through the stack outwardly, it was drawn from the chimney inwardly through the bulk of the stack by an exhaust instead of a blowing fan. Adapting this system to a more comprehensive scale, Mr. Neilson afterwards worked the exhaust fan by steam power from a thrashing machine, connecting it by a nine-inch diameter, glazed earthenware pipe, jointed with Roman cement, so as to be air-tight and to operate on every stack in the yard. Each row of pipes was intersected by a chamber 12 inches square, covered with a cast-iron plate, with an air-tight valve, operated on by a half-inch iron rod, extending outside the stack so as to open or close the sliding lid of the valve. These chambers were situated every 25 ft. from each other, which allowed a full-size stack and plenty of room between it and the next to admit of the introduction of atmospheric air. The result was entirely satisfactory, and the system is now working with great success.

The engraving on this page shows the arrangement described, with sectional views of some of the stacks, disclosing the central air spaces. There are seen different modifications of the system and different sized fans, from one driven by a thrashing engine down to a small one worked by hand. We trust the system may save the English farmers from their great loss from heated and molded stacks; and we

cannot but sympathize with a country where the farmer has to fan his stacks.

A long, dry and dusty summer may not be pleasant to the dwellers in towns, but it is a boon beyond estimation to the husbandmen in all the branches of their ingathering of crops.

The English Hop Crop.

When one turns from our heavily-laden hop plants to the afflicted English hop gardens, a most sorry contrast is to be noted. The last issue of the *Mark Lane Express* contains a review of the leading districts, which shows well the wretched character of the English crop this year. We shall make notes as we read along:

It is most melancholy to go through the hop districts at this time and, instead of the masses of foliage and the wreathed clusters of bright flowers, to find shriveled-up leaves and blackened vines. In the "Garden of England," which is the chief center of hop cultivation, the beauty of the scenery is greatly disfigured by the blighted hop grounds, and those who know the expense of hop land, must grieve over the losses of the planters. The Kent hop grounds seem to be nearly all "tarred with the same brush," and to be blighted in almost all districts. Here and there a few bright spots may be seen, but for the most part there is an uniformity of desolation. In the adjoining county of Sussex there is no better prospect. The ubiquitous aphides have ruined the crop, and only left the plants when they had exhausted all their sap.

The plantations of Hampshire and Surrey,

grow close upon an average quantity if the weather is warm and suitable, and if the mold does not run. Mold which is caused by a fungus attacks the cones just as they emerge from the burr stage, and cause their tissues to blacken and decay. It has been very troublesome in the last four years, and it is much feared that the alternations of temperature which have occurred during the past fortnight, and especially the great difference between day and night temperature, will cause it to increase rapidly. Besides a considerable acreage, perhaps amounting to 4,000 acres, of hop land that has been thoroughly well washed, there is a proportion that has only been half washed, in cases where the planters hoped that the aphides would depart, or be eaten by ladybirds; or where they had haymaking to attend to, or hesitated to begin such a costly operation as washing, which requires all the men and all the horses upon the farm, and everything but the hops goes to the wall. The extent of this acreage may be about 3,000 acres, and it is calculated that rather more than an average crop will be produced upon this area, if the conditions of the weather are favorable. Taking into consideration this important element of washing, as well as the fact that many of the planters primed the plants that had a glimmer of life and brightness left in them with nitrate of soda guano, and other stimulants, to make them do their utmost, it is believed that the average return of each acre of hop land will be between 2 cwt. and 2½ cwt., according to the present aspect of the plantations. There are many acres in which not a bin or a basket will be put and not a hop picked, but, on the other hand, there are a certain number of acres which will yield from 6 to 9 cwt., and a certain

Dutch or Holstein.

EDITORS PRESS:—From time to time I find notice taken in your paper of importations of Holstein cattle. Would you, or anyone who knows, inform me through the *RURAL* why it is that these animals (which were, as far as I can remember, all imported from the Netherlands) are called Holsteins? The class this cattle belongs to is what is generally known as the lowland breeds, and mostly found on the north and east sea-shores, on all such low, moist lands as produce a continual rich, green pasture. In no other country has this breed of cattle taken such a definite form or produced such wonderful results as in those provinces of the Netherlands known as North and South Holland, where the pastures are of a most superior quality; and, as this is the most remote part of the Netherlands (being almost entirely surrounded by water), there has been less chance of intermingling with any foreign strains, and from there it is that most of this so-called Holstein cattle is imported.—L. C. C., Forestville, Sonoma Co., Cal.

The use of the name, "Holstein," to designate the black-and-white cattle imported from Holland is a matter of heated controversy among breeders and importers. It would fill one issue of our journal to present all the literature which this one question of name has brought forward. The larger number of breeders in this country adopt the name "Holstein," and maintain their right to do it. Another, a lesser number of breeders, employ the term, "Dutch-Friesian." As we cannot possibly present all the points brought out on either side by the American contestants, we may present a review of the subject, which our correspondent will find is in harmony with the objections he makes to the term, Holstein, and at another time, we may present the other side. We quote the following from the introduction to the Dutch-Friesian Herd Book:

"In the Netherlands Herd Book every animal is described from the province in which it was bred; thus, 'Noord Hollandsch veeslag,'

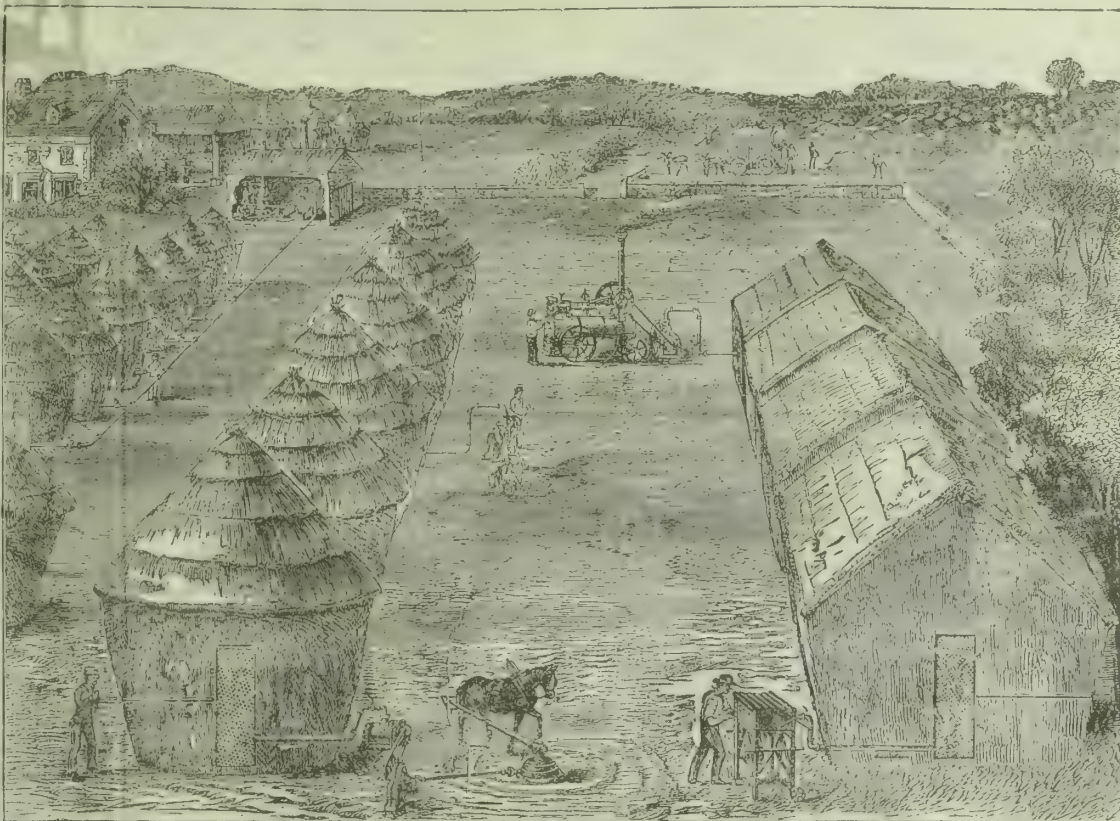
'Friesche veeslag,' literally North Holland kind, Friesian kind. In the certificates of breeding required to entitle imported animals to registry in America, these two kinds are regarded as identical, and are described as 'pure North Holland or Friesian black-and-white piebald cattle.' Upon arriving in America, however, they are popularly given the name 'Holstein.' This name is a peculiarly unfortunate one, from the fact that there is a breed in the province of Holstein, differing widely from this breed, to which Europeans have very properly attached the name Holstein. Hence, it is very likely to lead to misunderstanding and confusion as intercourse increases between American and European breeders; besides, it robs the true originators of the breed of the honor justly due them. The Dutch-Friesian Association has discarded this name (Holstein) and adopted one 'that was applied to the breed as early as 1825, by the European author, Sturm, in a work entitled 'Races, Crossing and Improvement of Indigenous Domestic Animals.' This name (Dutch-Friesian) is comprehensive, including the black-and-white dairy cattle of both North Holland and West Friesland; it designates the origin of the breed, and is in harmony with the importers' certificates.

At the present time there are four different Herd Book Associations registering these cattle—two in Europe and two in America. Both of the European Herd

Books register only selected animals. It matters not that the ancestry are registered; if the candidate does not come up to the standard of size and form, it is rejected. Probably not one in twenty-five of the pure-blooded cattle in Europe comes to this standard. The Friesian Herd Book only registers Friesian-bred animals, but the Netherlands Herd Book registers from all the provinces of Holland. Both these Herd Books register other colors as well as black and white variegated. The Netherlands Herd Book has published a registry of 79 males and 317 females; the Friesian Herd Book, 82 males and 488 females. Of the American Herd Books, the oldest is the Holstein, having published its first volume in 1872. This association is older than either of the European. It has a published registry of 574 males and 1,059 females. The registry of the Herd Book of the Dutch-Friesian Association has a registry numbering 63 males and 204 females.

LODI MELONS.—The growing of watermelons in the vicinity of Lodi, says the *Sentinel* of Saturday, is yearly increasing in importance. The melons from Lodi bring the highest price in the San Francisco market, on account of their great sweetness and excellent flavor. Through the kindness of E. B. Trout, at the Central Pacific depot, we are able to give the following figures: During the month of July, the shipment of melons amounted to 542,358 lb.; in the month of August they amounted to 1,907,308 lb., and in September, up to the 7th, they come to 356,000 lb. Total, 2,805,666 lb., or nearly 1,403 tons. This does not include the shipments of the Nar ow-gauge.

THERE was another earthquake shock at Panama Saturday. Traffic on the Panama railroad is suspended.



A NEW ENGLISH SYSTEM OF STACK AND RICK DRYING.

whose united extent is about 5,300 acres, have been visited by this same scourge, and present, if possible, a more ghastly spectacle than those of Kent and Sussex. There are a few grounds near Farnham where some green shoots have struggled forth, upon which a small crop of hops may be produced; but the yield must be almost smaller than it was ever known to be in all the parishes round about Farnham, and in those in Hampshire from the borders of Surrey to Alton. Precisely the same state of things holds in the hop yards of Herefordshire. One may traverse the eastern part of this county, where 2,700 acres of hop yards are chiefly situated, without finding a really good piece. Round about Hereford, Wellington, Leominster, Ledbury, it seems as if no hops could be grown this year, and the plants look as if they had been scorched by a hot wind, or blasted by lightning. The 6,000 acres in Worcestershire, which are mainly situated on its western side, are in a like predicament.

There has been no such aphid blight experienced in the English hop grounds since 1854. Partial blights have occurred. Certain localities have been affected, but there has not been an attack so fatal or so general since then. In that year the average crop was 1 cwt. 2 qrs. 15 lbs. per acre, taking the plantations all round. It is thought that the yield per acre will be larger this year, because washing has been practiced to a considerable extent, and washing was not dreamed of in the philosophy of the hop planters in 1854.

It will no doubt be of interest to our hop growers to read of the methods the English use to fight hop insects and diseases, and the success they attain. It is said that the results of the washing (or as we would say, of spraying) the plants have been satisfactory in those cases where it has been begun in time. In these cases many of the grounds thus treated will

number on which from 3 to 5 cwt. will be obtained.

Upon the continent, the 100,000 acres in Germany will give close upon an average growth. The plants have been comparatively uninjured by the aphides. Red spider or mold, through the cold, wet weather of the last fortnight, has hindered the burr from coming out into full cones. In France, the crop is expected to be nearly up to an average in quality and quantity.

Aphides have been as troublesome in the Alost district of Belgium, as in England, though in Poperinghe they have not suffered nearly so much from their attacks. It is estimated that the 13,000 acres of hop land in Belgium and Holland will not grow more than 55,000 cwt. The *Mark Lane Express* expects considerable importations of hops from Germany into England, and under average quantity from America, and, perhaps, 20,000 from Belgium and Holland. The whole amount of the importation will hardly exceed 160,000 cwt., which, with the home produce, say 140,000 cwt., will only give a total of 300,000 cwt. to supply a demand amounting to at least 600,000 cwt., which is computed to be the annual average consumption of hops in Great Britain, according, at least, to the number of barrels of beer brewed. It is expected that the prices of hops will be high in all parts of the world.

PURIFYING WATER.—Messrs. Edward Bohlig and Otto Heyne purify water by passing it through a series of cylinders with perforated bottoms, on which is a mixture of magnesia and carbonate of lime. The water enters the cylinder from below. The finely powdered magnesia of the mixture absorbs the carbonic acid of the water, and the carbonate of lime contained in the water precipitates in crystalline form.

Lands for Sale and to Let.

Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Eureka.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

VALUABLE FARM FOR SALE.



One of the best and well-known farms in Alameda County; near station; all heavy bottom land very productive. Two thousand acres at the low price of \$80 per acre, not including the present crop, worth over \$50 per acre. Terms, Cash, or part deferred payments, low interest.

ALBERT E. CRANE.
416 Montgomery St.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE.
Anderson, Shasta Co., Cal.

CAMPTON'S
Self-Opening Automatic Gate,

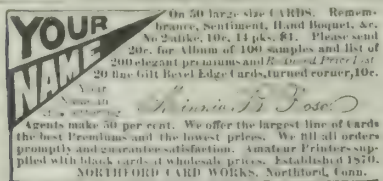
(Patented May 3, 1881)



For Farm Use and Fancy Residences.

It is the Best Gate where ladies have to do their own driving. For simplicity and durability the only reliable automatic gate in use. No complex machinery. By a single lever it is thrown off the center of gravity and opens and closes itself by its own weight. A child six years old can operate it. We manufacture different styles gates from \$25 to \$100, for a cheap farm gate made of Wood and Iron, \$20 for Iron. Tubular and Wire we charge from \$15 to \$100 according to the style wanted. For references as to the merit of this gate we refer you to a few of the following gentlemen who have used the gate:

H. M. Lurie, President of the State Agricultural Society, Davisville, Yolo Co. Cal.; J. D. Carr, Salinas, Monterey Co. Cal.; Judge Weller, Milpitas, Santa Clara Co. Cal.; Juan Gallegos, Mission San Jose, Alameda Co. Cal. For further particulars and Illustrated Price List, Address JOHN AYLWARD, P. O. Box 88, Livermore, Alameda Co., Cal., or JAMES STANLEY, Mission San Jose, Alameda Co., Cal.



THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

M. COOKE R. J. COOKE
PIONEER BOX FACTORY,
Corner of Front and M Streets, Sacramento
ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.
COOKE & SONS, Successors to COOKE & GIBSON

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 23 acres. The 41 acres, connected with the works by rail, are over 800 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel, also the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium of one hundred dollars.

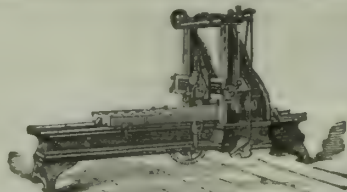
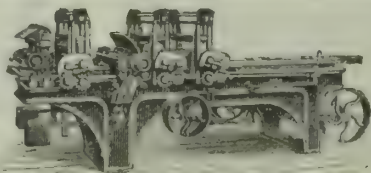
WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller	Hill's Sweepstake Road and Breaking Hills Improved Horse Powers
" " Improved Granger Gang	" " Side Hill Gang
" " Improved Single Sod and Tule Plow	" " Double Deep Tiller
" " Single Plows	" " Fresno Ditching and Grading Plow

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland trade passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and countrymen are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

W. R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

Lift and Force Pumps,

Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.

Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

HARNESS, SADDLES,

LEATHER & SADDLERY
Goods.

WHOLESALE AND RETAIL

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Ropes, Blankets, etc., etc.

W. DAVIN, 410 Market Street.
ANNUAL STATISTICIAN OF 1882: "It is the most complete and accurate work of its kind in the world."—S. F. Call.
Address L. P. McCarty, 602 Taylor St. Price, \$4.
AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. REMONDY & Co., 10 Barclay St., N. Y.

Educational.

The Harmon Seminary,
BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR
YOUNG LADIES.

Will be conducted by REV. S. S. HARMON and Mrs. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 8, 1882.]

For prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,

Or E. J. WICKSON, 414 Clay St., S. F.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

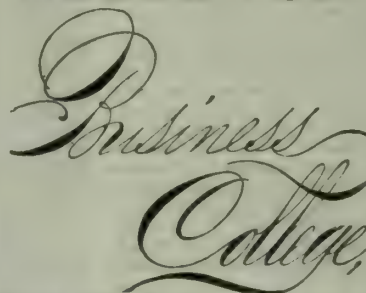
Paid in Installments, \$75.

Send for circulars.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, E. C. ALDEN, Sacramento, Cal.

STOCKTON



Telegraph Institute and Normal School. Corner Hunter street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of Study. Full Business Course, Full Normal Course, Review Course, Special Courses, Teachers Course, Preparatory Course, Telegraph, Languages. The College Journal, containing full information, will be sent post paid to any address. F. E. CLARK, Principal.

SACKETT

(FOR BOYS)

SCHOOL.

Takes first rank for thoroughness and ability of its teachers; also for home care.

Business, Classical, and English Departments.

Next Term commences July 17th

Send for Catalogue to D. P. SACKETT, A. M., Principal, Oakland, Cal.



417 Kearny Street, San Francisco.

C. N. ANDREWS,

President.

G. B. BARNARD,

Business Manager

Send for Circulars.

THE DAVIS GUN.



The best Shooting Gun for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-and-Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12 Gauge, \$32; 10 Gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER Saxe & Son, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle. 1 - sex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2 50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 110, breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. K. Game Bantams. Eggs and fowls for sale.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

Moore's Prepared

SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors, STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

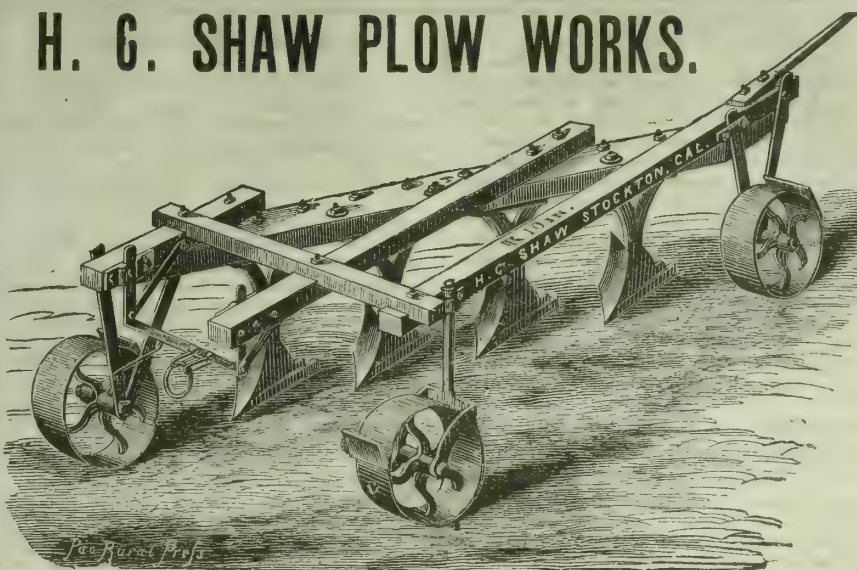
SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to CHAS. DUISENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.



H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys,

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " " 65.
No. 3, " 180 " " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES, Los Angeles, Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address **PACIFIC RURAL PRESS** Office, San Francisco. January, 1882.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.



Calvert's Carbolic SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.

Duroc, or Red Hogs.

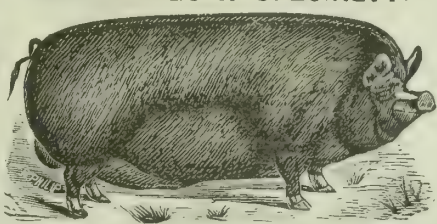


The undersigned are making a specialty of raising this celebrated breed of hogs for breeding purposes. They are gentle, thrifty and of very rapid growth, and better adapted to this climate than any other breed of hogs. We have hogs of this breed now upon our ranch, 11 months old, weighing over 400 lbs. each. N. W. Spaulding, U. S. sub-Treasurer, San Francisco, killed one of these hogs Dec. 14, 1881, at the age of 16 months, that weighed 383 lbs. gross, and 344 lbs. dressed. On Dec. 22, 1881, Messrs. Zimmerman, Strouse & Co., of the Bay City market, S. F., killed one weighing 1018 lbs. net when dressed, 3 years and 3 months old. We are prepared now to ship to any part of this State these pigs 6 to 12 weeks of age. For prices and circulars address,

LAURELLES RANCH,

Monterey, California

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

HOG RINGING A FAILURE!

OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its instrument to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER,

and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.

" " "Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address

G. G. WICKSON,

General Pacific Coast Agent,

No. 319 Market Street, San Francisco, Cal.

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL

DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTPELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co.
J. H. GARDNER, Rio Vista
T. E. TYNAN, Stanislaus Co.
URIAH WOOD, Santa Clara Co.
J. C. MERYFIELD, Solano Co.
H. M. LARUE, Yolo Co.
I. C. STEELE, San Mateo Co.
THOS. MCCONNELL, Sacramento Co.
C. J. CRESSEY, Merced Co.
SENECA EWER, Napa Co.
A. D. LOGAN, Colusa Co.

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty.

COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

Percheron - Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois,

35 miles West of Chicago, on C. & N. W. R'y.

250 OF THE FINEST

Imported from France

by him

THIS YEAR.



NEARLY 400 NOW ON HAND,

The Largest and Most Select Stud ever collected, and making it possible to

SEE MORE FINE SPECIMENS IN A DAY

than one could see in their native country in months.

Come and see for yourselves. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn. Send for Catalogue

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

Has been Applied in Destroying the Phylloxera and Garden Bugs

with Success.

For particulars apply to CHAS. DUISENBERG & CO, Sole Agents, 314 Sacramento St., San Francisco.

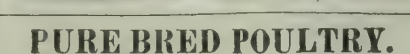
LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FALKNER, BELL & CO.**, San Francisco



PURE BRED POULTRY.

Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock.

For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

PATENTS AND INVENTIONS

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in Dewey & Co.'s Scientific Press Patent Agency, 252, Market St., S. F.

FOR THE WEEK ENDING AUGUST 20, 1882.
 263,412.—INHALER FOR POWDERS.—John E. Adams, Oakland, Cal.
 263,413.—FIRE ESCAPE.—Jacob Bessner, Boise City, Idaho Ter.
 263,414.—BOOTS.—Thos. H. Buckingham, S. F.
 263,415.—MINERS' LAMP.—Bernard Doherty, Greenwood, Cal.
 263,416.—ILLUMINATING BASEMENTS.—P. H. Jackson, S. F.
 263,417.—CALENDERING MACHINE.—E. Landry, S. F.
 263,418.—SHIELD FOR THE COAT.—Katharine S. Lathrop, S. F.
 263,419.—LAMP.—W. W. Lemon, Collegeville, Cal.
 263,420.—COUPLING.—S. Lightburne, Jr., S. F.
 263,421.—FUNDATING MACHINE.—John McDermott, S. F.
 263,422.—ROTARY ENGINE.—John Patten, S. F.
 263,423.—HYDRAULIC LIFT.—H. L. Pike and A. W. Ferguson, Astoria, Oregon.
 263,424.—LAYING ARTIFICIAL STONE OR CONCRETE PATENT.—E. L. Kishner, S. F.
 263,425.—TONGUE SUPPORT.—D. Shelton, Santa Rosa, Cal.
 263,426.—CANDLESTICK.—Chas. E. Sherman and L. Sachse Havelah, Kern Co., Cal.
 263,427.—MUSIC STAND AND WALKING CANE.—John G. Roberts, Morey, Nye Co., Nev.
 263,428.—SUBMERGED PUMP.—L. Herbert, Hicksville, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by Dewey & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s Scientific Press American and Foreign Patent Agency, the following are worthy of special mention:

HYDRAULIC DREDGER.—Henry L. Pike and Albert W. Ferguson, Astoria, Oregon. This is an apparatus for dredging in harbors or rivers, and it consists of a pneumatic and hydraulic tank having nozzles which are so placed that they will discharge a current or currents of water forcibly downward from the bottom when pressure is applied. The upper part of the tank is provided with an air chamber, and a flexible pipe has one end opening into the tank, while the other is led forward to a vessel by which the tank is towed from place to place. Upon this vessel are two sets of pumps, one for air, and the other for water. Each of these pumps is connected with the flexible hose, and a suitable valve or cock enables the operator to use either at will. When the tank is to be moved, air is forced in to float it. When it arrives at the place to be dredged, water is admitted (the air escaping), and it settles upon the bottom or bar, being ballasted for the purpose. The air connections being then shut off, and that with the water pumps opened, the pressure forces the water out through the nozzles in the bottom and loosens the mud, so that it will be carried away by the current.

MUSIC STAND AND WALKING CANE.—John G. Roberts, Morey, Nye Co., Nevada. Dated Aug. 29, 1882. No. 263,427. This invention relates to a combined music stand and walking cane, and consists of a tripod of folding legs with a central standard, all of which, when closed, are secured by a peculiar ferule. The standard is vertically adjustable, and has a crooked or curved end, with a guide support for its back. The rack consists of a central piece tapering to its base and provided with a swinging sustaining leg or brace. To its top are pivoted certain strips or bars, to which others are pivoted to form the rack. To its base are pivoted the folding trough pieces with extension pieces to adjust their width. The strips are adapted to fold upon the central piece, and the trough pieces to fold over both, forming a neat and portable bar. The central piece of the rack is adapted to fit into and be sustained by the guide support upon the back of the main standard. The object of the invention is to provide a portable music rack and stand, which, when being carried, may be made to serve the purpose of a walking cane.

CANDLESTICK.—Chas. E. Sherman and Louis Sachse, Havelah, Kern Co., Cal. No. 263,426. Dated August 29, 1882. This invention relates to certain improvements in candlesticks, and it consists of a suitable base having an elastic candle support fixed upon it, this support being formed of wires or strips of metal bent in such a manner that the candle is, as it were, suspended between them. In connection with the device is employed a self-adjusting shade or reflector, which will maintain its position relative to the candle as the latter becomes shorter by burning.

METHOD OF ILLUMINATING BASEMENTS.—Peter H. Jackson, S. F., No. 263,412. Dated Aug. 29, 1882. Mr. Jackson, who is an inventor who has obtained a number of patents from the Government, now devises a method of illuminating basements by means of glazed tiles, and the method of fixing and supporting the framework in which they are set, so that tighter joints may be made, the danger of warping the casting overcome, and a stronger, neater and cheaper joint provided. This adds another to Mr. Jackson's inventions in the line of improving basements of buildings.

COUPLING.—Stafford Lightburne, Jr., S. F. No. 263,415. Dated Aug. 29, 1882. This invention relates to a device or attachment which is especially useful for making a water-tight connection with the smooth ends of pipes, bibs, basin cock, and which is so constructed that it will fit pipes of different sizes. It consists of a peculiarly shaped elastic joint-former, which is enclosed in a case. The case is so formed as to slip upon the end of the pipe or cock, and is secured there by a set screw or other suitable device. The lower end of this case is provided with any suitable coupling for making connection with filters or other connections, and its end is grooved or recessed to receive the edge of the elastic packing so as to give more spring, and preserve the shape of packing to make a tight joint with the opposite coupling end.

BOOT.—Thos. H. Buckingham, of Buckingham & Hecht, S. F. No. 263,385. Dated Aug. 29, 1882. This improvement in boots consists in the fastening of certain parts and their combination to form the upper of a boot. The object is economy in the cutting and simplicity in construction, with strength and comfort.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
 No. 252 Market St., S. F.

Guide to Silk Culture.

A Useful Manual for Beginners.
 The "Silk Growers' Manual," by W. B. Ewer, contains, in a condensed and clear form, instructions for the sericulturist. We advise our lady friends to buy a copy.—*Freemans Express.*
 Furnishes in a brief and explicit manner all necessary information in the matter of silk culture.—*San Jose Mercury.*
 An interesting compilation to encourage home silk culture in California. Everybody should read it.—*Anderson Enterprise.*
 Anyone interested in silk culture will find this full of valuable information.—*San Joaquin Valley Review.*
 Furnishes all necessary information to begin the silk business.—*Marquette Appeal.*
 It is a very interesting little work, and well worth the price.—*Mountain Review.*
 It is worthy the perusal of all interested in silk culture.—*Conrad Sun.*
 Copies of "The California Silk Growers' Manual" mailed from this office for 25 cents each.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.
 G. W. McGREW—Santa Clara county.
 M. P. OWEN—Santa Cruz county.
 J. W. A. WRIGHT—Merced, Tulare and Kern counties.
 JARVIS C. HOAG—California.
 E. W. CROWLEY—San Luis Obispo and Santa Barbara counties.
 H. H. McDONALD—Solano and Yolo counties.
 C. E. HULL—San Joaquin and Amador counties.
 J. J. BARTLETT—Sacramento and Solano counties.
 L. L. WOODMANSEE—Napa county.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chetump, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none other but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, rice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 19th of October next. For full particulars apply to Mexican Colonization Co. 506 Battery street, S. F.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Our Representative East.

MR. S. E. BAKER, of Springfield, Ohio, a gentleman of first-class recommendations and qualifications, will represent this paper on the Eastern side of the continent. He will occasionally make brief visits to most of the principal cities, and we recommend him to the attention of progressive men of industry for the transaction of business on equally as favorable terms as in our own office. Address No. 14 West High street, Springfield, Ohio.

How TO STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

Volunteer Testimonials.

SAN BENITO STORE, June 28, 1881.

A. R. BOOTH, San Luis Obispo, Dear Sir:—The can of Squirrel Poison I got from you did all you represented to me, and I shall buy no other Squirrel Poison after this. Booth's Squirrel Poison is King. Yours respectfully,
 HUGH RILEY.

PORT HARBOR, June 7, 1881.

A. R. BOOTH, San Luis Obispo, Dear Sir:—The Squirrel Poison sent to me I have received. I have tried three pounds with perfect success, and think it the best preparation ever discovered for killing squirrels. It should, by all means, be used by everybody that is troubled with rats or squirrels. Following is the number of squirrels found dead after the use of each one-pound can: 1st, 27; 2d, 40; 3d, 24. Total, 91. Respectfully yours,
 F. G. HARBORD.

IMPORTANT AND TRUE. James D. Beckett, Chicago's largest horse-dealer, says of the grade Percheron-Norman horses: "They are more generally bred in the West than all other classes of draft horses, and, as a proof of their popularity, the supply is far short of the demand this year, as we pay \$200 and upward to farmers for three-year-old grade Normans to ship to Ohio and Pennsylvania for leaders."—*Chicago Tribune.* Large numbers of Percheron-Norman horses in their purity are sold for breeding purposes by M. W. Dunham, Wayne, Ill., who has imported and bred nearly 1,000, and now has on hand about 300.

To Settlers and Fruit Growers.

Purchasers who wish to secure land in large or small quantities, for cultivation, that will give satisfaction every season, or that will produce a diversity of crops, should call on, or address Edward Frisbie, Anderson Shasta Co., Cal.

Promptness Displayed, Etc.

MESSRS. DEWEY & CO., Patent Agents:—The Canadian patent obtained through you is at hand. This makes three patents received within a month. The ability, energy and promptness displayed by your firm must certainly be gratifying to your numerous patrons—as it assuredly is to
 Yours respectfully,
 THORPE & BRILLI.

Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on or address H. F. D., at this office.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 13, 1882.

Trade has been fair, but values have not changed much. To-day there is a better feeling in Wheat, and quite a large speculative business has been done for two days, awakened by better foreign advices, as follows:
 LIVERPOOL, Sept. 12.—California spot Wheat, steadier, at 9s 6d to 9s 9d. Cargoes, turn dearer, at 4s 6d for just shipped, 4s for nearly due, and 4s 6d for off coast.

The Foreign Review.

LONDON, Sept. 11.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: It is probable that no great damage to Wheat has been caused hitherto by the weather. It may be safely assumed, however, that wheat will be discolored. The markets continue to decline, the condition of new Wheat being such as to compel prices to decline about 3 shillings. Foreign Wheat in London is completely demoralized, and only retail sales are made. The market is beginning to get glutted for all kinds, the granary stocks being very heavy at the ports of discharge. The arrivals during the week have been very liberal. The cargo trade is rather surfeited with the supply, and buyers are awaiting lower rates.

London Wool Market.

LONDON, Sept. 12.—At the Wool sales to-day 106,000 bales were disposed of, chiefly New Zealand, Sydney and Port Phillip. There was a good demand and prices stood unchanged.

Freights and Charters.

Since the last weekly review freights have been quiet and weak, with a slight decline. Present rates are nominal, at about £2 10s, iron, for orders. Charters reported, both spot and prior to arrival, number 9 vessels, of a register of 12,100, or a carrying capacity of 18,150 short tons, or 363,000 cts. The chartered Wheat fleet now in port has a register of 47,829, or an export capacity of 71,000 short tons, or 1,420,000 cts, against 65,352 tons at the same time last year. The disengaged tonnage in port is very large, and, until it is reduced materially, freights will probably continue weak. It amounts to a register of 62,908, or an export capacity of 94,362 short tons, or 1,887,240 cts, against 4,589 tons at the same time last year. There is also a disengaged register of 4,069 at adjacent ports. Tonnage now on the way to this port has a register of 270,829, against 409,743 at the same time in 1881 and 192,404 in 1880.

Eastern Wool Markets.

BOSTON, Sept. 12.—The Wool market is steady and firm, with a good demand from manufacturers. Some holders are indifferent about selling, but buyers find a good assortment of all kinds offering at current rates. Sales of Ohio and Pennsylvania fleeces have been made at 41¢ to 42¢ for X and XX, and are firm at these prices. Michigan X fleeces have been sold at 39¢ to 40¢. Combining and delaine fleeces range from 43¢ to 45¢ for fine delaine; from 43¢ to 50¢ for fine and No. 1. Unwashed Wools have been in demand. Prices range from 32¢ to 35¢ for choice lots, and from 25¢ to 30¢ for fair and good average lots, and from 18¢ to 23¢ for common and coarse. California Wool has been quiet and the sales have been small—35¢ to 36¢ for Spring. Pulled Wools are in steady demand, and Maine fleeces are selling at 42¢ to 47¢ for choice Eastern and Maine superior, and 25¢ to 40¢ for common to good. Foreign Wool is quiet, and both carpet and clothing Wools are in small stock.

Eastern Grain and Provision Markets.

CHICAGO, Sept. 12.—Closing quotations: Wheat, closing strong; Red, 99c September; 94c October. Corn, weak, easy; 63c cash; 62c September; has sold at 60c, or 2c lower. Pork, weak, lower; \$19.65 cash and October; \$19 November; \$18.72 1st January. Lard, firmer; \$11.32 cash and October; \$11.32 1st November.

CHICAGO, Sept. 12.—At 11 o'clock, the receipts being large, the weather perfect and all advices unfavorable to holders, prices on 'Change exhibited a further decline. Wheat is off about 1c, Corn 1½¢, Oats ¾¢, Pork 5c to 30c, Lard 5¢ to 7¢.

BAGS.—Bags are a shade lower. For Calcutta Wheat, spot, \$3.65 was asked on the Produce Exchange. They are worth \$3.50. On the Grain Exchange, \$3.40 was bid, \$3.75 asked for September, and for June, \$3.50 was asked.

BARLEY.—Feed Barley has been declining, and Brewing is dull, but unchanged. We note sales: 50 tons No. 2 Feed, spot, \$1.25, and 100 No. 1, October, \$1.28; 100 No. 1 Feed, September, \$1.23; 100 October, \$1.23; 100, \$1.23; 200, November, \$1.30; 100, \$1.30. An unusually large business was done on the Grain Exchange, sales being 1,200 tons No. 1 Feed, as follows: 100, October, \$1.23; 600, \$1.23; 300, November, \$1.22; 200, \$1.23.

BEANS.—Beans are quiet and unchanged, except that some Pea and Small White sell at \$2.50 per ct.

CORN.—Corn is quiet and unchanged. Call sale of 50 tons No. 2 Yellow, October, \$1.66. For No. 1, spot, \$1.80 was asked; No. 2, January, \$1.37 bid, \$1.42 asked; seller 1882, \$1.45 bid, \$1.55 asked.

DAIRY PRODUCE.—Butter holds at last week's advance, and the trade is proceeding quietly. Cheese is 1c lower per lb, and plentiful.

EGGS.—Eggs over-reached themselves last week, and have receded to 42c for the choicest ranch Eggs. Mean-time consumers are using large quantities of Utah and Eastern Eggs.

FRUIT.—There is not much change, except that some varieties are gradually improving as the flush of the season has passed.

FRESH MEAT.—There is no change, except a slight decline in live Pork.

HOPS.—The price for choice California has advanced to 55c per lb; 52c is the price to arrive for the best Northern Hops. The crop is being gathered in good condition. OATS.—Oats are quiet and unchanged.

ONIONS.—There is much difference in quality and in price, according thereto; the best bring 70c per ct.

POTATOES.—There is very little change in Potatoes this week.

PROVISIONS.—Unchanged and business still quite satisfactory.

POULTRY.—Hens have improved about 50c per dozen. Supplies are not large and sales fair.

VEGETABLES.—There is practically no change in rates since last week.

WHEAT.—Spot Wheat is unchanged in price, although slightly stronger in tone. Futures are, however, 2c higher than before, as will be seen by the following call sales: 100 tons No. 1 White, November, \$1.70; 100, \$1.70; 100, buyer, November, \$1.71; 100, \$1.71. Bids and offers were: No. 1 White, September, \$1.67 bid; \$1.70 asked; October, \$1.68 bid, \$1.70 asked; December, \$1.69 bid; buyer, '82, \$1.73 bid, \$1.75 asked; No. 2 White, October, \$1.62 bid. Sale on the 3 o'clock call of 100, No. 1 White, October, Port Costa, \$1.68. Sales on the Grain Exchange of 1,100 tons No. 2, October, \$1.63; 200, January, \$1.65; 300, February, \$1.65. For September, \$1.60 was bid, \$1.62 asked; November, \$1.64 bid, \$1.65 asked.

WOOL.—Much defective Wool is the complaint of the dealers, and the trade is slow in consequence. The first of the Fall clip is arriving.

San Francisco Metal Market.

(WHOLESALE.)

THURSDAY, Sept. 14, 1882.

IRON.—			
American Pig, soft, ton.....	28	@	30 00
Scotch Pig, ton.....	28	@	30 00
American White Pig, ton.....	28	@	30 00
Oregon Pig, ton.....	28	@	30 00
Clippings, 1 to 4.....	30	@	32 00
Clippings, 4 to 8.....	30	@	32 00
Clippings, 8 to 16.....	30	@	32 00
Clippings, 16 to 32.....	30	@	32 00
Clippings, 32 to 64.....	30	@	32 00
Clippings, 64 to 128.....	30	@	32 00
Clippings, 128 to 256.....	30	@	32 00
Clippings, 256 to 512.....	30	@	32 00
Clippings, 512 to 1024.....	30	@	32 00
Clippings, 1024 to 2048.....	30	@	32 00
Clippings, 2048 to 4096.....	30	@	32 00
Clippings, 4096 to 8192.....	30	@	32 00
Clippings, 8192 to 16384.....	30	@	32 00
Clippings, 16384 to 32768.....	30	@	32 00
Clippings, 32768 to 65536.....	30	@	32 00
Clippings, 65536 to 131072.....	30	@	32 00
Clippings, 131072 to 262144.....	30	@	32 00
Clippings, 262144 to 524288.....	30	@	32 00
Clippings, 524288 to 1048576.....	30	@	32 00
Clippings, 1048576 to 2097152.....	30	@	32 00
Clippings, 2097152 to 4194304.....	30	@	32 00
Clippings, 4194304 to 8388608.....	30	@	32 00
Clippings, 8388608 to 16777216.....	30	@	32 00
Clippings, 16777216 to 33554432.....	30	@	32 00
Clippings, 33554432 to 67108864.....	30	@	32 00
Clippings, 67108864 to 134217728.....	30	@	32 00
Clippings, 134217728 to 268435456.....	30	@	32 00
Clippings, 268435456 to 536870912.....	30	@	32 00
Clippings, 536870912 to 1073741824.....	30	@	32 00
Clippings, 1073741824 to 2147483648.....	30	@	32 00
Clippings, 2147483648 to 4294967296.....	30	@	32 00
Clippings, 4294967296 to 8589934592.....	30	@	32 00
Clippings, 8589934592 to 17179869184.....	30	@	32 00
Clippings, 17179869184 to 34359738368.....	30	@	32 00
Clippings, 34359738368 to 68719476736.....	30	@	32 00
Clippings, 68719476736 to 137438953472.....	30	@	32 00
Clippings, 137438953472 to 274877906944.....	30	@	32 00
Clippings, 274877906944 to 549755813888.....	30	@	32 00
Clippings, 549755813888 to 1099511627776.....	30	@	32 00
Clippings, 1099511627776 to 2199023255552.....	30	@	32 00
Clippings, 2199023255552 to 4398046511104.....	30	@	32 00
Clippings, 4398046511104 to 8796093022208.....	30	@	32 00
Clippings, 8796093022208 to 17592186044416.....	30	@	32 00
Clippings, 17592186044416 to 35184372088832.....	30	@	32 00
Clippings, 35184372088832 to 70368744177664.....	30	@	32 00
Clippings, 70368744177664 to 140737488355328.....	30	@	32 00
Clippings, 140737488355328 to 281474976710656.....	30	@	32 00
Clippings, 281474976710656 to 562949953421312.....	30	@	32 00
Clippings, 562949953421312 to 1125899906842624.....	30	@	32 00
Clippings, 1125899906842624 to 2251799813685248.....	30	@	32 00
Clippings, 2251799813685248 to 4503599627370496.....	30	@	32 00
Clippings, 4503599627370496 to 9007199254740992.....	30	@	32 00
Clippings, 9007199254740992 to 18014398509481984.....	30	@	32 00
Clippings, 18014398509481984 to 36028797018963968.....	30	@	32 00
Clippings, 36028797018963968 to 72057594037927936.....	30	@	32 00
Clippings, 72057594037927936 to 144115188075855872.....	30	@	32 00
Clippings, 144115188075855872 to 288230376151711744.....	30	@	32 00
Clippings, 288230376151711744 to 576460752303423488.....	30	@	32 00
Clippings, 576460752303423488 to 1152921504606846976.....	30	@	32

SAN FRANCISCO MARKET REPORT.

(CONTINUED FROM PAGE 208.)

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Sept. 13, 1882.

BEANS & PEAS.	
Bayo, cti.	25 @ 50
Butter.	37 @ 60
Factor.	35 @ 50
Pea.	25 @ 50
Red.	25 @ 50
Pink.	25 @ 50
Large White.	25 @ 50
Small White.	25 @ 50
Lima.	25 @ 50
Field Peas, bbl.	25 @ 50
do, green.	25 @ 50
BROOM CORN.	
Southern.	3 @ 31
Northern.	4 @ 6
CHICORY.	
California.	64 @ 41
German.	64 @ 41
DAIRY PRODUCE, ETC.	
Butter.	
Cal. Fresh Roll, lb.	35 @ 37
do, Fancy Brands.	40 @ 40
Pickle Roll.	30 @ 32
Pickin, new.	29 @ 30
Eastern.	18 @ 20
New York.	20 @ 22
CHEESE.	
Cheddar, Cal. D., lb.	12 @ 13
EGGS.	
Cal. Fresh, doz.	37 @ 42
Ducks.	4 @ 5
Oregon.	30 @ 32
Eastern, by express.	30 @ 32
Pickled here.	25 @ 35
Utah.	25 @ 35
FEED.	
Barley, ton.	21 @ 50
Corn Meal.	21 @ 50
Hay.	10 @ 50
Middings.	21 @ 50
Oil Cake Meal.	21 @ 50
Straw, bale.	55 @ 60
FLOUR.	
Extra, City Mills.	5 @ 25
do, City Mills.	4 @ 25
do, Oregon.	4 @ 25
do, Walla Walla.	4 @ 25
Superfine.	3 @ 25
FRESH MEAT.	
Beef, 1st qual'y, lb.	7 @ 8
Second.	6 @ 7
Third.	5 @ 6
Mutton.	4 @ 5
Spring Lamb.	6 @ 7
Pork, undressed.	8 @ 9
Dressed.	10 @ 11
Veal.	6 @ 7
Milk Calves.	7 @ 8
do, choice.	10 @ 10
GRAIN, ETC.	
Barley, feed, cti.	17 @ 21
do, New.	15 @ 21
do, Brewing.	12 @ 25
do, New.	13 @ 40
do, New.	13 @ 40
Chevalier.	13 @ 40
Buckwheat.	13 @ 40
Corn, White.	17 @ 21
Yellow.	17 @ 21
Small Round.	16 @ 21
Oats.	16 @ 21
Milling.	16 @ 21
Rye.	20 @ 25
Wheat, No. 1.	16 @ 21
do, No. 2.	16 @ 21
do, No. 3.	16 @ 21
Choice Milling.	17 @ 21
HIDES.	
Hides, dry.	19 @ 19
Wet salted.	9 @ 11
HONEY, ETC.	
Beeswax, lb.	23 @ 25
Honey in comb.	12 @ 20
Extracted, light.	8 @ 9
do, dark.	7 @ 8
HOPS.	
Oregon.	50 @ 52
California.	45 @ 50
Wash. Ter.	50 @ 52
Old Hops.	— @ —
NUTS & JOBBING.	
Walnuts, Cal.	11 @ 12
do, Chile.	11 @ 12
Almonds, hds. lb.	8 @ 10
Soft shell.	15 @ 17
Brazil.	10 @ 12
Pecans.	14 @ 15
FRUIT MARKET.	
Apples, bx.	35 @ 100
do, Basket.	40 @ 60
Apricots, bx.	50 @ 75
Bananas, bnch.	25 @ 40
Blackberries.	5 @ 10
Cantaloupes, crt.	60 @ 100
Casaba, each.	25 @ 125
Cherry Plum, bx.	25 @ 50
Cocoanuts, 100.	6 @ 70
Crabapples, bak.	— @ 50
Cranberries, bbl.	12 @ 50
Currants, chst.	4 @ 50
Figs, box.	25 @ 75
Gooseberries.	4 @ 8
Grapes, bx.	40 @ 50
do, Rose Peru.	50 @ 75
do, Muscat.	60 @ 75
do, B. Hamb'g.	50 @ 75
do, Tokay.	75 @ 125
do, Isabella.	70 @ 75
Limes, Mex.	10 @ 110
do, Cal. box.	75 @ 350
Lemons, Cal. bx.	5 @ 100
Sicily, box.	5 @ 800
Australian.	— @ —
Nectarines.	1 @ 100
Oranges, Cal. bx.	40 @ 500
do, Tahiti M.	40 @ 500
do, Mexican.	15 @ 170
do, Loro.	50 @ 125
Peaches, box.	50 @ 90
do, Crawford.	30 @ 50
do, Bartlett, bx.	2 @ 250
do, do, bak.	1 @ 125
Pineapples, doz.	6 @ 800
Quinces, bak.	40 @ 40
do, box.	75 @ 100
Prunes.	60 @ 75
Raspberries, chst.	10 @ 120
Strawb'ry, chst.	20 @ 100
Watem's, 100.	7 @ 120
DRIED FRUIT.	
Apples, sliced, lb.	4 @ 6
do, evaporated.	9 @ 11
do, quartered.	5 @ 6
BAGS AND BAGGING.	
Eng. Standrd. Wheat.	9 @ 91
Cal. Manufacture.	45 @ 91
Hand Sewed, 22x36.	9 @ 91
20x36.	84 @ 82
22x40.	12 @ 113
24x40.	12 @ 113
Machine Sewed.	12 @ 113
Machine Sewd 22x36.	84 @ 82
Flour Sks. halves.	5 @ 109
Quarters.	5 @ 68
Eighths.	44 @ 44
Hessian, 60 inch.	— @ 12

General Merchandise.

WHOLESALE.

WEDNESDAY M., Sept. 13, 1882.

CANDLES.	
Crystal Wax.	16 @ 18
Paraffine.	20 @ 20
Patent Sperm.	25 @ 28
CANNED GOODS.	
Assorted Pie Fruits.	25 @ 25
Table do.	35 @ 50
Jams and Jellies.	35 @ 50
Pickles, hf gal.	35 @ 50
Hf Boxes.	167 @ 90
Merry, Paul & Co.	— @ —
Preserved Beef.	— @ —
2lb. doz.	35 @ 50
do 4 lb doz.	65 @ 60
Preserved Mutton.	— @ —
2 lb. doz.	35 @ 50
Beef Tongue.	55 @ 60
Preserved Ham.	— @ —
2 lb. doz.	55 @ 60
Deviled Ham, 1 lb.	— @ —
do Ham & lb doz.	25 @ 50
Boneless Pig Feet.	35 @ 75
3lb. doz.	75 @ 75
Spiced Fillets 2 lbs.	50 @ 50
Head Cheese 3 lbs.	50 @ 50
COAL-JOBBER.	
Australian, ton.	8 @ 800
Coco Bay.	6 @ 610
Bellingham Bay.	— @ —
Seattle.	6 @ 600
Cumberland.	13 @ 130
Mt Diablo.	— @ —
Lehigh.	— @ —
Liverpool.	8 @ 803
West Hartley.	— @ —
Scotch.	8 @ 800
Scranton.	— @ —
Vancouver Id.	— @ —
Wellington.	9 @ 900
Charcoal, sack.	— @ —
Ooke, bush.	— @ —
COFFEE.	
Sandwich Id lb.	12 @ 14
Guatemala.	12 @ 14
Java.	18 @ 20
Manilla.	15 @ 15
Ground, in cs.	23 @ 23
FISH.	
Sac to Dry Cod.	— @ —
do in cases.	7 @ 73
Eastern Cod.	7 @ 73
Salmon, bbls.	7 @ 700
Hf bbls.	35 @ 450
1 lb cans.	112 @ 122
Phil Cod, bbls.	— @ —
Hf bbls.	— @ —
Mackerel, No. 1.	85 @ 900
Hf bbls.	185 @ 170
In Kits.	3 @ 325
Ex Mess.	3 @ 325
Pickled Herring.	3 @ 350
box.	3 @ 350
Boston Smoked.	65 @ 70
Herring.	65 @ 70
Plaster, Golden.	3 @ 325
Gate Mills.	3 @ 325
Land Plaster.	10 @ 1250
Lime, Santa Cruz.	125 @ 150
LIME, ETC.	
Plaster, Golden.	3 @ 325
Gate Mills.	3 @ 325
Land Plaster.	10 @ 1250
Lime, Santa Cruz.	125 @ 150
SUGAR, ETC.	
Cal. Cube lb.	— @ 123
Powdered.	— @ 131
Fine Crushed.	— @ 121
Granulated.	— @ 121
Golden C.	— @ 104
Cal Syrup, kgs.	65 @ 65
Hawaiian Molasses.	25 @ 30
SUGAR, ETC.	
Young Hyson.	— @ 45
Moynette, etc.	40 @ 65
Country pkd.	— @ 75
powder & Im-	— @ 35
perial.	35 @ 75
Hyson.	30 @ 35
Poco-Chow C.	27 @ 32
Japan, medium.	35 @ 37

Pacific Coast Weather for the Week.

(Furnished for publication in the PRESS by NELSON GOROM, Sergt. Signal Service Corps, U. S. A.)

The following is a summary of the rainfall for each day of the week ending 11:58 A.M. Wednesday, Aug. 30th, for the stations named:

Date.	Thurs.	Fri.	Sat.	Sun.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.	Tues.	Wed.
Olympia.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Portland.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Roseburg.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Red Bluff.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Sacram'to.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
San Francisco.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Visalia.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Los Angeles.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
San Diego.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Winnemucca.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Pioche.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Salt Lake.	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending Sept. 12, 1882.											
HIGHEST AND LOWEST BAROMETER.											
Sept. 6	Sept. 7	Sept. 8	Sept. 9	Sept. 10	Sept. 11	Sept. 12	Sept. 6	Sept. 7	Sept. 8	Sept. 9	Sept. 10
29.979	29.997	29.961	30.009	30.045	30.102	30.012	29.918	29.934	29.912	29.940	29.914
29.918	29.934	29.912	29.940	29.914	31.000	29.908	63	64	62.5	61.5	64
51.5	51	53	53	53	54	57.5	51.5	51	53	53	54
MAXIMUM AND MINIMUM THERMOMETER.											
63	64	62.5	61.5	64	67.5	70.5	51.5	51	53	53	54
MEAN DAILY HUMIDITY.											
82.7	82	82.7	73	78	86	77.3	82.7	82	82.7	73	78
PREVAILING WIND.											
SW	SW	SW	W	W	W	W	SW	SW	SW	W	W
WIND—MILES TRAVELED.											
285	275	310	280	267	262	180	285	275	310	280	267
STATE OF WEATHER.											
Clear.	Clear	Clear	Clear	Clear	Clear	Clear.	Clear.	Clear	Clear	Clear	Clear.
RAINFALL IN TWENTY-FOUR HOURS.											
Total rain during the season from July 1, 1882.	— inches										

Lumber.

WEDNESDAY M., Sept. 13, 1882.	
Redwood.	
CARPOES.	
Rough.	24 @ 180
Surfaced.	24 @ 230
Floor and step.	27 @ 50
Pine.	
CARPOES.	
Rough.	23 @ 180
Surfaced.	23 @ 230
Retail.	
Merchandise.	22 @ 50
Surfaced, No. 1.	27 @ 50
Tongue & Groove.	30 @ 37
Pickets, rough.	20 @ 30
do, fancy.	30 @ 30
do, square.	21 @ 50

TOWER'S CELEBRATED

OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

BAGS, TENTS, HOSE, TWINES.

SONGS, One Cent Each

1 Baby Mine.	121 Kiss Me, Kiss Your Darling.	245 Among the Roses.
2 The Old Cabin Home.	122 A Flower from Mother's Grave.	246 And Am I Not a Soldier?
3 The Little Ones at Home.	123 The Old Log Cabin on the Hill.	247 The Sailor's Love.
4 See That My Gravy's Kept Green.	124 The Old Log Cabin on the Hill.	248 The Sailor's Love.
5 Grandfather's Clock.	125 Coming To the Rye.	249 The Sailor's Love.
6 Where Was Moses when the Light	126 Must We, Then, Meet as Strangers.	250 The Sailor's Love.
7 Sweet By and By.	127 The Kiss Behind the Door.	251 The Sailor's Love.
8 When You and I were Young.	128 The Kiss Behind the Door.	252 The Sailor's Love.
9 When I Saw Sweet Nellie Home.	129 The Kiss Behind the Door.	253 The Sailor's Love.
10 Take This Letter to My Mother.	130 The Kiss Behind the Door.	254 The Sailor's Love.
11 A Model Love Letter.	131 The Kiss Behind the Door.	255 The Sailor's Love.
12 Wives' Commandments—comic.	132 The Kiss Behind the Door.	256 The Sailor's Love.
13 Husband's Commandments.	133 The Kiss Behind the Door.	257 The Sailor's Love.
14 Little Old Log Cabin in the Lane.	134 The Kiss Behind the Door.	258 The Sailor's Love.
15 Marching Through the Camp.	135 The Kiss Behind the Door.	259 The Sailor's Love.
16 Widow in the Cottage by the Sea.	136 The Kiss Behind the Door.	260 The Sailor's Love.
17 The Mustard Seed.	137 The Kiss Behind the Door.	261 The Sailor's Love.
18 Take Back the Heart.	138 The Kiss Behind the Door.	262 The Sailor's Love.
19 The Laid Out of Blue.	139 The Kiss Behind the Door.	263 The Sailor's Love.
20 Carry Me Back to Old Virginia.	140 The Kiss Behind the Door.	264 The Sailor's Love.
21 I'll be all Smiles to Night Love.	141 The Kiss Behind the Door.	265 The Sailor's Love.
22 Listen to the Mocking Bird.	142 The Kiss Behind the Door.	266 The Sailor's Love.
23 Her Bright Smile Haunts Me Still.	143 The Kiss Behind the Door.	267 The Sailor's Love.
24 Sunday Night When the Parlor's	144 The Kiss Behind the Door.	268 The Sailor's Love.
25 The Gypsy's Warning.	145 The Kiss Behind the Door.	269 The Sailor's Love.
26 'Tis But a Little Faded Flower.	146 The Kiss Behind the Door.	270 The Sailor's Love.
27 The Girl I Left Behind Me.	147 The Kiss Behind the Door.	271 The Sailor's Love.
28 Little Buttercup.	148 The Kiss Behind the Door.	272 The Sailor's Love.
29 You Were False, but I'll forgive.	149 The Kiss Behind the Door.	273 The Sailor's Love.
30 Will You Love Me, Whom I'm Old.	150 The Kiss Behind the Door.	274 The Sailor's Love.
31 Annie Laurie.	151 The Kiss Behind the Door.	275 The Sailor's Love.
32 Sweetheart's March to the Sea.	152 The Kiss Behind the Door.	276 The Sailor's Love.
33 Come, Birdie, Come.	153 The Kiss Behind the Door.	277 The Sailor's Love.

Commission Merchants.

Grangers' Business Association,

SHIPPING AND COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots. Within this town

plat, at the crossing of Palm and Center avenues, is a circular public park, with a fountain in the center. This park will be improved by the proprietors of the tract. Above the town plat will be constructed a small reservoir, from which iron pipes will be laid to supply the town with water under pressure.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names	Acres
J. G. Cook-hutt, Redlands	20
C. W. Kidder, Redlands	20
J. F. Welsh, Redlands	20
B. W. Brown, Redlands	20
Israel Reel, Redlands	10
C. E. Tinsdell, Redlands	20
R. B. Morton & Co., Redlands	30
C. A. Smith, Redlands	10
C. W. Smith, Redlands	10

Mrs. R. W. Brown, Redlands	10
Mrs. E. E. Seymour, Redlands	20
P. R. Brown, Redlands	10
A. G. Simms, Redlands	20
Simon Cook, Redlands	20
J. E. Sinclair, Redlands	20
John Carroll, Redlands	10
George Cassady, Redlands	10
Orren Van Leuven, Redlands	10
C. K. Dewell, Redlands	10
E. J. Waite, Redlands	20
W. N. Mann, Riverside	20
A. S. White	20
L. M. Holt, Riverside	20
K. F. Overton, Riverside	20
G. W. Boggs, Riverside	10
A. W. Boggs, Riverside	20
S. R. Walr, Riverside	10
S. Edwards, Riverside	10
Geo. Frost, Riverside	20
Mrs. V. V. Annabel, Riverside	20
J. P. Groves, Riverside	10
D. U. Findlay, Riverside	10
A. G. Saunders, Riverside	10
E. K. Henderson, Riverside	10
Rev. F. M. Colburn, Riverside	10
E. P. Moody, Riverside	10
T. R. Stephenson, Riverside	10
A. H. Averill, Riverside	10
S. C. Cover, Riverside	10
S. McCoy, Riverside	10
E. H. Averill, Riverside	10
F. P. Morrison	25
H. E. Allett, Riverside	10
H. E. Branch, Riverside	10
E. M. Weatherbrook, Riverside	10
J. B. Kimball, Riverside	20
N. H. Kingsley, Riverside	20
Hugh Marshall, Eureka Mills, Plumas county	20
T. E. Inch, Eureka Mills, Plumas county	20
J. Hosking, Eureka Mills, Plumas county	20
T. W. Ladd, Eureka Mills, Plumas county	20
Mrs. Sarah J. Morey, Eureka Mills, Plumas county	10
C. N. Hill, Eureka Mills, Plumas county	20
G. N. Stark, Grundy Centre, Iowa	20
F. P. Morrison	25
A. T. Dwyer, San Francisco	12
W. B. Ewer, San Francisco	12
B. F. Watrous	10
H. L. Rutgers	20
J. W. Bashford	5
S. Covey	5
Mrs. E. O. Johnson, Deep River, Conn.	10
J. D. Dowell, New Haven, Conn.	10
Eugene B. Curtis, Carson, City, Nevada	10
W. A. Merriam	10
J. T. Ford, San Bernardino	20
T. S. Ingham, San Bernardino	10
L. Jacobs, San Bernardino	20

Total sold.....1,004

Judson & Brown (San Bernardino, P. O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

Five Music Books

Of a very superior character, for use during the ensuing Fall and Winter.

The Peerless SINGING SCHOOLS.

(Price 75 cts.) A new, fresh and every way desirable book, with abundant material for the instruction of singing classes, and for social singing. By W. O. Perkins.

Song Bells. FOR COMMON SCHOOLS.

Has had a year's trial, with universal approval, in a multitude of schools. Large variety of wide-awake songs. By L. O. Emerson.

Light and Life. FOR SUNDAY SCHOOLS.

(Price 35 cts.) Great success has attended this exceptionally fine collection, which has been before the public but a few months. Enthusiastic commendations wherever used. By R. M. McIntosh.

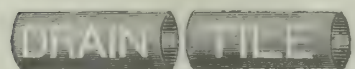
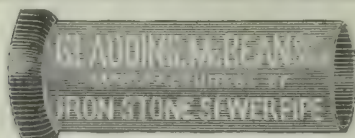
The Choral Choir. For Choirs & Conventions.

(Price \$1.00) It is the companion book to THE PEERLESS, is larger, and has a much greater number of pieces for choir. The singing class course is the same as that in the smaller book. By W. O. Perkins.

The Welcome Chorus.

FOR HIGH SCHOOLS (Price \$1.00) This book, although of recent issue, has come to be regarded as a standard book for use in the higher schools. By W. S. Tilden.

Any book mailed, post-free, for the retail price. OLIVER DITSON & CO., Boston. C. H. DITSON & CO., 343 Broadway, New York.



For the Drainage or Irrigation of Lands.

TERRA COTTA

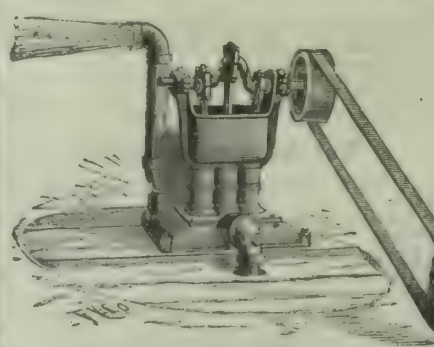
CHIMNEY PIPE & TOPS

VASES, FLOWER POTS, FIRE BRICKS, &c.

MANUFACTORY AT LINCOLN, CAL.

SEND FOR ILLUSTRATED CATALOGUE

O Market Street, SAN FRANCISCO.



CHEAPEST.

BOOTH'S SURE DEATH



FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 41 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER, 111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

Dewey & Co. { 252 Market Street, Patent Agts

TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE-POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These Pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.



F. W. KROGH & CO., Manufacturers

And Sole Proprietors,

No. 51 Beale Street, SAN FRANCISCO

California's Exposition for 1882

Sacramento, Cal.,

Opens Monday, September 11th; Closes Saturday, September 16th. A Holiday Week of Recreation and Sport.

\$40,000 in Cash

To be Awarded in Premiums.

The Premium List is full and complete, and is divided into Seven Departments. The Society's Gold Medal, (valued at \$100) will be awarded to the most meritorious display in each department. The exhibition of Live Stock promises to be large and fully up to the standard in each class. The latest and newest designs in Agricultural Implements will be upon exhibition. The Products of the Soil, representing California's greatest interest, will be fully shown. The Speed Programme (for entries see small bills) is within itself a distinct exhibition, wherein the produce of California's Breeding Establishments will be shown in their respective classes. Wing Shooting, Ladies' Equestrianism, and other sports will be held daily at the Park during the Fair.

The C. P. R. B. Co., will transport articles to and from the Fair free of charge. Wells, Fargo & Co. will deliver packages free not weighing over 20 lbs. Application for space, both at Park and Pavilion, should be made at once to the Secretary.

Season Tickets, admitting self and family.....\$5.00
Single Admissions......50

HUGH M. LARUE, President.

EDWIN F. SMITH, Sec'y.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$5; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12. I pay the express charges. I sell nothing but my own manufacture.

Only "PEBBLE" Establishment.

Muller's Optical Depot, 135 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

J. A. POPPE, Sonoma, Cal.



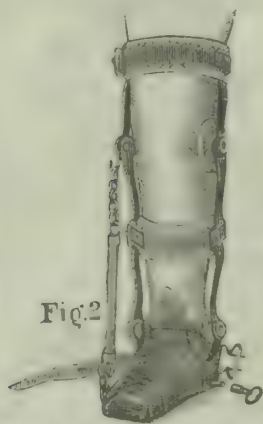
A Rapid and Permanent cure for
DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

And all diseases arising from a disordered or diseased stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the bowels. A mild and sure purgative for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.

N. B. Correspondence solicited from Wholesale Druggists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,
Sole Proprietors and Manufacturers,
293 Cutter Street, CINCINNATI, OHIO

CLUB-FOOT SHOE.



ANTENWRIGHT'S CELEBRATED

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and bandages of every description. Also, in stock a full line of the celebrated A. Antenwright's Club Foot Shoe. Send for catalogue. WM. ANTENWRIGHT, 71 West Sixth Street, Cincinnati, Ohio.

FRUIT DRYING!

THE ZIMMERMAN
Portable Galvanized Iron

FIRE-PROOF DRIER!

Is the best thing yet introduced for

fruit evaporated by the Zimmerman Process commands the highest price of any fruit product should send for descriptive catalogue with testimonials.

LINFORTH, RICE & CO.,
225 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Leish, Marysville; T. B. Wall, Salem; Or T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

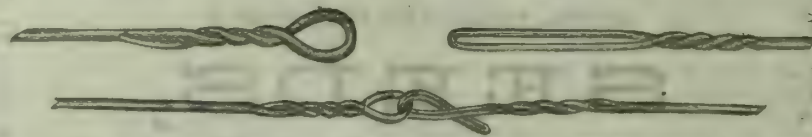
BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasture, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

PATENT STEEL WIRE BALE TIES.



Why do you waste Time making Ties in the field when you can buy them Ready Made Almost as Cheap as the Wire in the Coil?

We have on hand a large quantity of steel wire bale ties ready for immediate delivery which we will sell at the prices named in the following table:

No. 15 wire, 8 ft. 6 inches long	\$18.00 per 1,000
No. 14 wire, 8 ft. 6 inches long	22.40 per 1,000
No. 14 wire, 9 ft. long	23.50 per 1,000

For Dederick Presses, 17x22 bale, use ties 8 ft. long. No. 14 for heavy work, No. 15 for light. For Dederick Presses, 14x18 bale, use No. 15 wire, 8 ft. 6 inches long. For the California Chief and Economy Presses use No. 14 wire, 9 ft. long. For the Price or Petaluma Press use No. 15 wire, 9 ft. long. For all other upright presses use No. 15 wire of such length as may be required by the size of the bale.

Advantages of Adjustable Steel Ties.

1. They are adjustable, hence sure, and no delay.
2. When secured, they stay, and never come loose.
3. They hold the bale so that more hay can be packed in it.
4. They are quite strong enough to pass them through.
5. They require no stretcher.
6. Yet are the only tie adapted to the use of the stretcher.
7. They may be removed from the bale and used over again.
8. Hence will all be returned at low prices.
9. They may be worked with heavy gloves without inconvenience.

Comparative Cost of Coil Wire and Prepared Bale Ties

Experience will teach that the same number of tons of hay can be more safely secured, and at less cost by our prepared ties than by the use of coil wire. In the use of coil wire one or two men larger is required, and then, the wire is not reliable at the fastening. Add to this, the bother and loss of time that use the coil wire, cost of transporting and loss of hay in transit and in the market by reason of broken bales, and we are certain coil wire cannot be economically used.

JACKSON & TRUMAN,
Cor. Sixth & Bluxome Sts., S. F.

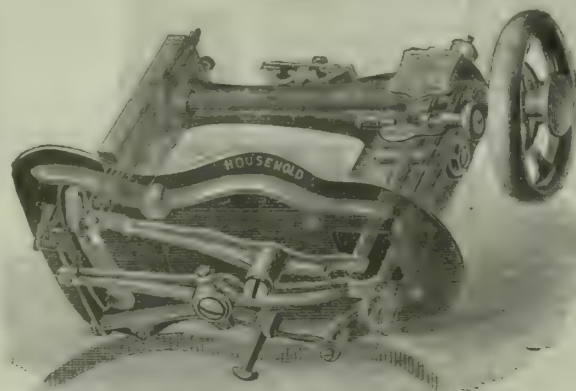
JACOB PRICE,
San Leandro, Cal.

SEND FOR PRICE LIST OF THE

Easy Running, Simple and Beautiful

"HOUSEHOLD."

This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



HOUSEHOLD HEAD.

THE SHUTTLE

Is very simple, of cylinder shape and open at both ends. The

BOBBIN

Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

It has a loose fly wheel for winding Bobbin without running the Machine. The

TREADLE

Sets on anti-friction bearings and never requires oiling. It is the Finest Finished Machine ever offered to the public.

MARK SHELDON,
Wholesale Agent,
9. 11 & 13 First St., S. F.

COOKE & SON, Pioneer Box Factory, SACRAMENTO, CAL.



Mission Rock Dock and Grain Warehouse,
San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - Proprietors

Office—318 California Street, Room 2.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. F. MERRILL, Florida, Sacramento Co., Cal.

Garmore's Artificial Seal Drum.
Invented and worn by him perfectly curing the deaf. The drum is made of a material not observable, and is worn in the ear. It is a perfect cure for the deaf. **CAUTION:** Beware of cheap imitations. **JOHN GARMORE,** 101 N. 1st St., St. Louis, Mo.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewar & Co., at published rates.

CREDIT SALE

Of 3,000 Acres

OF THE—

BEST FRUIT LAND IN THE STATE,
To be Sub-divided in Lots to Suit Purchasers.

In part—well improved grain land; some rich bottom land, and a large tract of timber and pasture land, from \$5 per acre upwards.

These lands are situated from 5 to 10 miles from the town of WATSONVILLE, in the celebrated Pajaro valley, Santa Cruz county, Cal.

Terms—One-fourth cash; one-fourth in one, two and three years.

PRODUCE AND WOOD

Taken at Market Rates in Payment for this Land. Apply to

"Pacific Coast Land Bureau,"

22 Montgomery St., San Francisco.

Or to

W. E. KING,
Hazel Dell, Watsonville, Cal.

HOLLAND BULBS



ROSES AND PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the most complete ever issued. It contains full descriptions of all the latest and most improved varieties of roses, plants, and bulbs. Sent FREE.

HIRAM SIBLEY & CO.

Rochester, N. Y. & Chicago, Ill.

For FALL PLANTING

Fruit and Ornamental TREES, SHRUBS, ROSES, ETC.

The largest and most complete general stock in the U. S., including many Choice Novelties. Mailed Catalogue Free to all applicants. Address: **ELLWANGER & BARRY,** Mt. Rose Nurseries, Rochester, N. Y.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of praise it receives, and the thousands of testimonials respecting Dr. Hays' Asthma Cure, prove that it is a most reliable remedy for this disease. It is a most reliable remedy for this disease. It is a most reliable remedy for this disease. It is a most reliable remedy for this disease.

Prepared by Dr. Hays & Son, 101 N. 1st St., St. Louis, Mo.

JOHN ELLIS,

Landscape Engineer and Garden Architect, Practical Nurseryman and General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done satisfactorily. Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

CANCER Scientifically Treated and Radically Cured. No knife, no cautery, no pain. Book sent free, containing convincing testimony, containing convincing testimony. Address, **DR. J. McLEISH,** No. 215 West Fourth Street, Cincinnati, O.

LANGSHANS.

My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR,

1416 Folsom St., S. F.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium flock for four years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the **Mining and Scientific Press, San Francisco,** at favorable rates.

PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 23, 1882,

Number 13

Baron Bates, 6th.

We continue our live stock illustrations, as pertinent to the fair season, when so many of our readers have their minds turned upon the excellent in animal growth. We are giving engravings of the foremost of each breed at the East, in order that those who are looking up cattle may see how the animal they see at the fairs, may come up to the points of the breed in the older States. This week we give a portrait of Baron Bates, 6th, 22,009, bred by the late Ezra Cornell, of New York State, and now owned by Mr. Strawther Givens, President of the Union Bank, Abingdon, Ill., who owns the Maple Grove herd of about 50 head of Short Horns. Baron Bates, 6th, is evidently a splendid animal.

It may be remarked for the edification of those who are not informed in Short Horn history, that the cattle bred by Mr. Bates were handled so as not to impair the milking disposition, while other breeders bred for form and weight, and the milking tendency has been repressed in the effort to develop the beef points of the animal. For this reason the descendants of stock bred by the Bates, are in great request by Short Horn breeders, who have a dairy inclination. An English writer in the *Live Stock Journal*, recently contrasted the Bates with the other Short Horn cattle as follows: "In old time, and starting with the aboriginal period, such distinct and decided stress was laid upon the supply of milk and butter, that, in making research for cattle so qualified nowadays, one should approach as nearly as possible to the registered descendants of that stock, for qualities once inherited are easily overlaid, but never obliterated, and you have only to scrape away to find the treasure beneath. These dairy attributes are nursed and cultivated, especially in our northern counties, on the holdings of the small yeomen, whose dependence is so strong upon the milk yield; and there a Gwynne bull always fetches a good price, that tribe having a special reputation that way, as also have the Princesses. Bates was more for milk than Booth, who declared himself better contented with broad, beefy backs. Mr. Carr, the historian of the Booth cattle, tells us that "many of the cows" selected by the first of that improving family "were deep milkers; but running dry sooner than was then usual, when they gained flesh very rapidly. The late Mr. Ewbank questioning the milking capacity of some of them in this condition, Mr. Thomas Booth pointed to their broad backs, and exclaimed: 'Look there, that's worth a few pints of milk.'" On the other hand, Mr. Bates was very particular about the milk; hence were his cattle not so strongly knit together, and wide along the back; for the regular combination of well-filled udder and outspread meaty chine yet awaits the solu-

tion of the philosopher's stone. Some cows, undoubtedly, do not dry as quickly as others, when the beef begins to gather.

In this country the breeding of Short Horns for their dairy value on the one hand, and for the show ring or for the butcher, is pursued as distinctly as in the old country. For this reason anyone desiring Short Horns for a special use should ascertain carefully the objects for which the animals in question have been bred.

PIUTE HARVESTERS.—Where there is harvesting to be done, the Piute squaws go into the field and tackle the grain with a club. The *Virginia Enterprise* says that Chief Natches, with 14 squaws thus equipped, this season harvested

Work of the Immigration Association.

The report of the Directors of the Land Office of the Immigration Association of California, for the month ending September 18th, shows that they have been engaged principally during the past month in making maps of Sonoma, Lake, Lassen and Monterey counties, on which are shown the Government lands, and in furnishing immigrants daily visiting the office with necessary information directing them when where and how to find the unoccupied land. There is considerable inquiry for land in Mendocino, Humboldt and Lake counties. While the information from these counties is sufficient

A Local Febrifuge.

While it remains in doubt whether we can grow cinchonas in this State, and thus produce home-grown quinine, it is of interest to know that we have an indigenous plant fit to enter the lists for trial as a substitute for quinine. The last report of the Department of Agriculture has an article upon a plant which is found in the mountainous regions of Oregon, California, Utah, Colorado, Nevada and Montana, and popularly known as "Oregon grape root" (*Berberis aquifolium*, variety *repens*). It is, in fact, an indigenous species of the barberry. The article states that the root is said to be much used in a form of decoction for the treatment of what is known as "mountain fever" among the Western miners. By them, it is reported to be an efficient tonic and anti-periodic, capable of replacing quinine in the treatment of malarial diseases. It seems that barberry root has attained a good name as a febrifuge in other parts of the world, as it was used with good results in Algeria as early as 1837. This was *Berberis vulgaris*—the common Eastern barberry.

The analysis by the chemist of the Department disclosed the presence, in the root, of two alkaloids, to which, he thinks, may be described the medicinal effects of the root. One is a yellowish alkaloid, with a decidedly bitter taste, which is easily dissolved from the root with water. The other alkaloid is white, and bitter to the taste. The report contains an elaborate report of the analyses made, to which the reader is referred. Should the root prove efficacious as a febrifuge, the hills might thus contribute to baffle the malaria of the valleys.

ARTIFICIAL LIMBS.—Attention is invited to the advertisement of the Artificial Limb Manufacturing Company, of Pittsburgh, in another column. It is said every member of the company wears an artificial leg, and hence are competent to advise their customers as to the appliance best suited to their needs. They assure us that they employ the most skillful workmen in the manufacture of artificial limbs. Write for a descriptive circular to the office of the company, at 279 Penn avenue, Pittsburgh, Pa.

LOOK OUT FOR THE AMBER WHEAT MAN.—For two weeks past the Post Office Department has been receiving complaints from Western postmasters that farmers have been victimized by a man advertising a new amber wheat for planting. The advertiser disappeared before the department could give any order, but various postmasters have been directed to return to the senders registered letters for him.



THOROUGHbred SHORT HORN BULL BARON BATES 6th, OWNED BY S. GIVENS, ABINGDON, ILL.

some 20 acres of wheat. The squaws bent the wheat heads over baskets, and then belabored them till they yielded up their grain. The operation is harvesting, thrashing and sacking in a nutshell. Natches is of the opinion that a squaw comes very close to the latest and best harvesting machines of the white man.

VITICULTURAL CONVENTION.—The Convention of Vine Growers is in progress in this city as we go to press. It is a notable meeting in attendance, and in the interest manifested. The show of grapes is probably the best ever made in the State. We are unable this week to prepare a suitable report of the meetings, but will inform our readers as fully as possible hereafter, concerning all important topics presented to the meetings.

A vast prairie fire is raging in the western part of Nebraska, the tableland between the Platte and the Republican rivers being dried up, with disastrous effects to hay and grass. No loss of life is reported there, though two men were fatally burned some days ago north of the Platte. There are heavy cattle ranges in the devastated section, and unless rain comes, great loss will follow.

to justify sending immigrants to them, yet there is hesitation in sending single families there, on account of the strong tendency adverse to stock interests. The only feasible plan for the settlement of the lands now used in tracts of from 2,000 to 25,000 acres, is to send out a settlement of not less than five families in each. Several families have been successfully located in the southern part of Monterey county, and one of the settlements in San Luis Obispo county is fairly started, and promises to be an interesting one. It is deemed advisable to list, plat and examine the foothill lands of the Sierra Nevada as soon as possible. Samples are being gathered of productions of the soil from different parts of the State, and quite a display is already on exhibition at the office of the Immigration Association of California, No. 10 California street. The acting Secretary's report for the month ending the 18th of September shows cash on hand, August 14th, \$2,088.69; disbursements during the month, \$610.65, leaving a balance in the treasury of \$1,478.04.

AT PENSACOLA many colored people are stricken with fever.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Ede.

Profits of Alfalfa.

EDITORS PRESS:—The following figures, showing, from a practical example, the profits of alfalfa in our Mussel Slough country, are obtained from Mr. James Andrews, whose ranch is little more than a mile southwest of Hanford. He has three acres of alfalfa, well set, which he has used since last spring, not as pasture, but for mowing alone, or, as our English cousins would call it, as a meadow. He has cut it for hay four times this season, selling all the hay from the first three cuttings and retaining the fourth cutting for home use. Mr. Andrews has carefully figured out results as follows:

First cutting, 4 tons, sold at \$10.00 per ton	\$40.00
Second cutting, 5 tons, sold at \$8.00 per ton	\$40.00
Third cutting, 5 tons, sold at \$7.00 per ton	\$35.00
Totals, 14 tons, sold for	\$115.00

Cost of seed, fertilizer, and other expenses	\$10.00
Cost of mowing and hauling	\$10.00
Cost of interest on money advanced	\$10.00
Total cost	\$30.00
Net profit	\$85.00

It follows that the profits from the first three crops of hay were \$65.25. The fourth cutting, stored at home, yielded five tons, valued at \$7 per ton, and the expense of mowing and hauling was \$10. This makes an additional profit of \$25, or a total profit from the four cuttings of \$90.25. Here, then, is an average profit of \$30 per acre from the three acres. Then, we must remember that this alfalfa will be pastured for the next six months, or till some time in March, and will provide well, during that time, for at least 10 head of cattle or horses, or at least twice that number of hogs or sheep.

This certainly compares favorably with the profits per acre of a wheat crop, even where the latter may average 40 or 50 bushels per acre. Hanford, Sept. 14th. J. W. A. W.

The Anti-Debris Convention at Sacramento.

EDITORS PRESS:—It is now more apparent than ever before that the Sacramento valley people must depend mainly upon their own exertions if they are to be delivered from the curse of hydraulic mining. Both great political parties have held conventions, and both alike have ignored in their platforms the demands and rights of the residents of the valley.

The Democratic Convention asserted their firm belief in the upholding of the right, but it was too puerile a body to specify the rights the anti-debris party have over against the executive of the State. The clause respecting the debris question which was introduced into the Republican platform would, if it had been adopted, have given the suffering valley residents some cause to trust the party. It was rejected mainly through the efforts of political wire-pullers and professional politicians, whose interests demanded that they be enabled to enter upon the canvass untrammelled by any pledges to local sections. The convention was intimidated by the threat that the voters of the mining counties would "bolt" in a body if their instructions to let slickens alone were not heeded.

If the valley residents had been as determined in their sentiments, and as well prepared to co-operate with one another as were Hamilton Smith and his followers, the Republican platform might not have been so unsatisfactory an instrument to the valley residents. The majority of the delegates were, no doubt, convinced of the justice of the demands of the valley people, but they either were too weak to uphold their firm convictions, or else they allowed their better judgement to be subjected to the so-called "good of the party."

As long as we have such representative men to follow, just so long will our Democratic powers be influential only in rearing up colossal edifices to the intriguing and perfidy of the few political hucksters who always manage to screen themselves behind the many; and who never dare express any honest convictions for fear that their political standing may be injured by so doing.

Politics are getting more and more to be a machine for the manipulation of the public funds. Public offices are not sinecures, but they are sought for by a certain class as if they were, and the people are left at liberty to infer that the actual emoluments of office are far greater than is generally supposed, or than is represented by the official salary. It is becoming more and more apparent that public opinion and the demands of justice are seldom consulted; yet each party makes a great ado about its regard for the "rights of the people," and pledges itself to such actions as seem to make it most apparent that its intentions are far from being as unselfish as they would have them seem.

The debris clause, as presented to the Republican Convention, was neither radical, nor did it disregard any legal rights of the hydraulic miners.

It was meant to provide for the shortening of the processes of law necessary to bring the

equities of this debris controversy to a final settlement.

It in no way touched upon the equities of the case; and had it been adopted, it could, in no wise, have influenced the legality of hydraulic mining. The question of jointure of defendants has been an open one in the courts for some time. As it stands now, both the Federal and the State courts have, in several cases, upheld Judge Keyser in his judgment that all hydraulic miners contributing to the fouling of a stream may be made the defendants in a single action.

According to this, the clause, as offered to the convention at Sacramento, had but little value other than to test the sentiments of the delegates; and owing to the manipulations of the few, it utterly failed to do even this. If it had been adopted, it could have been little else than a vindication of the law. As it was not adopted, it is made more evident that it was rejected out of policy alone.

The hydraulic miners were resolved to have the question slighted, and they succeeded in their intentions; but it cannot be slighted on the 26th at Sacramento. The Anti-debris Convention, to be held on that day, will be composed of resident property owners from 10 counties. The united vote of these 10 counties was, at the last election, 32,581 votes, and so firmly are the valley residents aware of their danger that they will vote as a unit in this matter, and will only support men who are known to be opposed to illegal hydraulic mining.

It is of little importance to the man whose property is in the most imminent peril, which party is in the ascendancy, so long as his rights are respected and the danger averted.

The threatened danger from hydraulic mining is neither uncertain nor distant. On the other hand, the destruction of 100,000 acres of alluvial land, and the impairment of the Sacramento river and San Francisco bay systems, have already been consummated. The impending danger to the remainder of the Sacramento valley, and the destruction of Sacramento, Marysville and other towns is certain and imminent. Even the San Joaquin valley must directly suffer when the Sacramento becomes somewhat more choked with debris.

Is it not a question of paramount importance when the destruction has advanced so far? Can it be wondered at that in Yuba county, where, in some places, the taxes are \$6.50 on the hundred, and where land that, in other sections of the State, would be worth \$250 to \$750 per acre, has only a nominal value, every other consideration is unhesitatingly subjected to this most vital one of self-preservation and integrity of property?

Four counties are in large part but unsightly blots on the face of the valley, and the time necessary to reduce the remainder of the Sacramento valley to the same deplorable condition is very limited if hydraulic mining continues in its progressive destructiveness.

It seems like a satire upon our form of government, to be told that debris has no place in politics; that politics can not deal with such questions; and that we of the valley must look to some other source for a settlement of the wrong, and an assurance of our rights in the future. Nowhere is the degeneration of our political leaders more apparent than in their consideration of such local questions as these. Political parties were once the medium through which the people governed, and through which rights were assured and wrongs redressed. Now it would seem as if they were the tools whereby the few political schemers make every incidence bend to their own selfish, and often questionable ends.

Judging from the past, it is not to be supposed that 25,000 or 30,000 voters may be told, with impunity, that they have no demands on the Legislature, and that, if they suffer wrongs, they should bear them patiently, and not try to burden the "poor, overworked politicians," with their local troubles. These 30,000 voters are not going to waste their franchise on a party of men who cannot hold up their heads before the world, and say: "We will see justice done to all, and will promote the speedy settlement of your wrongs by all the means within our power."

It has been suggested by some, and even the recognized anti-debris organ has been shortsighted enough to concur in it, that the anti-monopoly and anti-railroad men be invited to pool issues with the valley residents and put a combination ticket in the field. Such action would be unwise in the highest degree. The anti-debris movement must not be saddled with measures not of the greatest moment. It cannot afford to carry any side issues. We have the decrees of the courts and the rigid demands of justice as our recommendations, and it is not advisable for us to try to help along movements which have not as clear, definite and well-defined limits. We are fighting for right, justice and the inviolability of property. We can sincerely and honestly ask for the assistance of all men who have the love of country and the perpetration of our federal system of government at heart.

With us it is "Will you support the law, or will you not?" and it is easily, quickly and definitely answered by the monosyllable "yes" or "no." While we sympathize with all who suffer and are oppressed, yet we cannot put their wrongs on a par with our own. With us it is a matter of very existence, and there is no time for equivocal haggling and compromise schemes.

There must be an end to the present method of hydraulic mining, and our executive must not be allowed to whitewash us with protestations of interest, at the same time conciliating

the trespassers by assuring them that the slickens question shall not get into politics. The dominant party is the true sovereign, and it lies with the people of the ten counties to be represented in Sacramento on the 26th to say which shall be the dominant party. The proper course for them to pursue is to select a full ticket, if possible, from the two tickets, of men who will pledge their sacred honor to stand by the principles of right and justice, and to facilitate by all legislative means within their power an equitable settlement of this question. As the law interprets it to be a misdemeanor to corrupt the waterways, cover property below with sand and clay, and to interfere with others in the enjoyment of their property, it seems advisable that the prime source of all these effects (dumping of hydraulic tailings into the rivers) should be permanently prohibited by legislative action.

M. H. DURST.

Oakland, Sept. 18, 1882.

THE GARDEN.

"Going to Grass."

EDITORS PRESS:—In this driest month of a dry season, there is nothing so refreshing to the eye as a strip of velvet sward—a luxury that it is most difficult to maintain. Only the rich can afford a lawn made of the standard mixture of blue grass and clover, and this requires such incessant irrigation that there is no idea of repose connected with it. It is too damp for a wholesome couch or carpet; the children cannot safely roll and tumble or go to sleep on it.

The Bermuda is the poor man's grass, and if the same pains is taken to prepare the ground for it, I believe it will make a more satisfactory lawn than any other. It has been kicked about and slandered, but what we should do for door-mats without it, I am sure I do not know. It never seeds here, and its close mats do not spread very fast, unless the contiguous surface is kept cultivated. A concrete edging, or one of slate or tiles, will effectually limit its advances into the walks. The lawn mower and iron roller will keep it soft and velvety. I have been thinking much of it lately, a grass avenue being one of the coveted adornments of our demesne, and quite unattainable, unless the much-abused Bermuda is made use of.

The idea of a grass avenue bordered with masses of roses, then again having a background of close-set evergreens, is not original, for upon this plan the lovely grounds of our State capital were planted. There being no lack of water, other more delicate grasses were selected, but when these are lying under their annual top-dressing, one would prefer a hardier turf. The Bermuda will keep good for a dozen years with no manure but its own clippings.

I have a fancy that a poultry yard laid down in Bermuda grass would be a very agreeable innovation upon established usage. A neighbor of mine has with difficulty maintained a little patch by the kitchen door, the biddies like it so well. Outside the regular corral, every one who keeps more than a dozen hens should provide a scratchery, which can be plowed often, but a grass like Bermuda, which can be swept with a stable broom, would be pleasant around the houses and roosts. I have provided somewhat for the tastes of more esthetic fowls by enclosing the yard with Mission grapevines, planted inside the picket fence, and by planting Downy's ever-bearing mulberry for shade and sauce. On these hot days, when gravel and the bare earth become super-heated, the poultry are always to be found under the cool grape leaves.

One thing I like about Bermuda grass is that one is not obliged to keep it always green. Let it grow russet, when this color is appropriate to the season, with just enough sprinkling to keep it clean; it will still furnish a soft carpet for weary feet.

Bermuda grass, by all means, for the yards of our school-houses, and a lawn mower as a piece of school apparatus, to be used under the direction of the teacher. If the unconscious tuition of lovely surroundings for our country schools were taken more into the account, the occasions for discipline would be vastly diminished.

Foreign Frosts.

The other day, while searching for an article in *The Garden* for 1879, I came across a list of plants and shrubs killed by the frost that year in Derbyshire, England. We think of England as having a soft climate, tempered somewhat by the Gulf Stream, but among the plants killed were *Agave americana*, our century plant, the sweet-scented verbenas, *Aloysia citrifolia*, tritoma, laurestinis, pampas grass, magnolia, plumbago, berberis, Marshal Neil roses, etc. I could but think what, if all those plants were swept from our gardens, would be left to us?

An occasional number of the *Revere Horticulturist* gives us the same evidence of the superiority of our climate over that of France for all the choice grapes. The cotlet, or parsley-leaved chasselas, does not fully ripen its bunches in ordinary seasons without artificial heat. Here it succeeds perfectly. "They say" in both England and France that be their own grapes ever so ripe, they are always excelled by the

Spanish grapes which, packed in cork dust, are frequently laid down in London at 2 d per lb.

Grapes on Trellises.

The beauty of the grapes in our young experimental vineyard has made us resolve to put some of them on trellises another year, where their rich clusters and colors can be more fully enjoyed. At the last planting season, we furnished a good many suites of choice cuttings for family graperies and small gardens, and I can think of nothing more delightful during this hot weather than an outdoor dining-room, where the dessert hangs in purple and amber clusters from the roof. And here, again, a well-shorn grass carpet covering 10 of the 12 ft. between the vines would add much to the pleasantness. Bamboo chairs and small low bamboo tables should be the furniture. Everything, however fanciful, that tends to keep us out of doors is to be encouraged. It is better for health and happiness to broiler the earth with living grass, flowers and luscious fruits, than to cover rich stuffs with pictures of these. I sometimes feel like saying to my esthetic sisters:

"O' yours is rude, and quite enough."

But aye the best is mine!"

When I drape the rough walls of our habitation with pendant hops and feathery clematis, and a big bowl of such fruit as only Brooks can paint, adorns our frugal table. JEANNE C. CARR.

Pasadena, Sept. 8, 1882.

THE APIARY.

California Bee Notes.

W. A. Pryal, of North Temescal, Alameda county, sends the *Beekeepers' Exchange* some notes on beekeeping in the upper part of this State, which may be of interest to some of our readers:

The honey season has closed, and now the wise beekeeper is working to get his bees to fill their hives with honey for the winter requirements. No matter how good the yield may have been at the regular season, the bees will, as soon as it is over and the short drouth is lasting, empty the greater part of the cells of the sweet liquid. This spell of no honey and indoor boarding commences, as a general rule, toward the middle of July, and continues perhaps for some weeks. During its continuance, all the drones are banished from the hives, never to be replenished till the following March. In this short time, too, the large force of workers that remained at the close of the last honey, consume fully one-half of the supplies; and as there are but few flowers of any consequence after July, the wise apiarist has to manage his bees carefully to keep them from consuming the remainder of their stores. It is true that there are some flowers to be found at all seasons of the year in this climate, but where many bees are kept, no one colony can manage to lay in anything like an adequate supply of winter provisions from these flowers, unless the bloom is abundant, and the flow of nectar free and plentiful, as it is some years. At this time, too, the queen ceases to lay eggs, except in two or three frames; the bees gradually begin to grow less. So it is important for the apiarist to be attentive to the needs of the apiary at this season. Just a little judgement will save him, perhaps, many a valuable swarm of bees.

From 5 to 15 lbs. of honey will suffice to winter a swarm in this climate, if the beekeeper is only careful and watches them. A few ounces of honey, fed to them at the proper time, may take them through the worst part of the season, and from thence on they will be able to earn their own living.

My bees have gone through the "hard times" with the aid of a few pounds of honey that was fed to them. The eucalyptus will soon be in bloom, and this feed, with the juice they will "steal" from peach and apricot orchards, will provision them for the winter. In the middle part of February they may require a little more feeding; in fact, if they do not really require it, it is always a good plan to give them a few ounces every evening, to stimulate the queen to greater exertions toward filling the combs with eggs, so that a large force of bees will be ready for the first honey flow.

Orchardists in this vicinity do not complain of the bees as do their brethren in the lower part of the State. Their great annoyance is caused by birds, especially the linnet. When a fruit is once pecked by a bird, it is no longer of any account, and the neighborly fruit grower would sooner have the bees get the rest of it than his arch enemy, the bird.

The latest reports from the honey section of the State say that the crop will be about a fourth of a crop. Still, though the crop is light, it is of good quality, and the beekeepers have made such material advances in knowledge, etc., during the last year, that they are demanding higher prices for their honey. No more do they intend to let speculators grow fat at their expense, and we hope they will succeed in their demands.

This county (Alameda) is not noted for its beekeeping interests, it being more of a manufacturing, commercial, agricultural and horticultural county. As far as I know, I am the only individual in it who has made any success of apiculture, and then only to a limited extent. No other person has an apiary "equipped" with the modern appliances like myself. In the adjoining county, Santa Clara, on the south, there are several successful beekeepers.

I have, during this unfavorable year, taken

46 lbs. of extracted honey from my hives; this is nearly half a crop. The honey is of three grades, corresponding to the season in which it was gathered. The first is of a dark amber, and of a fine flavor, being what we call eucalyptus honey; the second lot, which was taken during the principal honey flow, is of a pale amber, and is a fine article, and the last is a little darker than the second, and nearly as good. There are none of the honey sages in the woods hereabouts that they have in the south, and consequently we don't obtain any of the peculiar honey they get down there; but still our honey sells as readily as does theirs. We get five or six cents per pound more for ours than they do; not that we claim that ours is superior, but we are near a pretty thickly settled community—only a few miles from Oakland, the second city in the State, and only 9 or 10 miles from San Francisco. We can get a fair crop of honey any year, while lower down they cannot. We believe that, just across the Coast range of hills from us, in Contra Costa county, many a fine spot for an apiary may be found, and that during a season like the last, from 60 to 100 lbs. of extracted honey per hive could be taken, and that 150 to 200 could be obtained during a good year. When the craze for white, or perfectly clear, honey has somewhat died away, we will see the day when there will be as much honey raised in the northern portions of the State as there is now produced in the south. Take Shasta and adjoining counties, where they have the small amount of nine feet of rain every year—the lower counties hardly had six inches, we believe, this year, say a foot, anyway (here we had only 17 inches)—the flowers grow in remarkable profusion, and we have heard that bees do remarkably well there.

People in the East may begin to think that California beekeeping is played out, but they are sadly mistaken, for it is only in its infancy. It is now only confined to a small section of the State, while in a few years it will extend all over its vast surface, from Del Norte on the north to San Diego on the south, and from the Sierras on the east to the sea on the west. Then, when there will be a sure crop every year, the immensity of which was never known before, will the world look for its regular supply of the heavenly distilled sweets from these shores; then will our apiarists have overcome the middlemen, and then will the industry be only second to our wine crop, and peace and happiness be the lot of every ardent keeper of God's grandest insect gift to man.

EASTERN DEALERS' VIEW OF THE CALIFORNIA HONEY CROP.—Mr. J. M. McCaul, of the New York firm of H. K. Thurbur & Co., writes to an Eastern beekeepers' journal his view of the California honey crop of 1882: The outlook for the honey crop of 1882 is but little better than that of 1881. After returning from the Golden State, and placing California's crop of honey in 1878 at 720,000 lbs., about a quarter crop may be looked for there this season, some 180,000 lbs., this amount about 90 tons, according to the best available reports, will constitute the excess of honey produced in 1882 over that in the previous year. New York State, a leading honey-producing center, will run short of its general good average, but this deficiency will be offset by gains in Illinois, Michigan, and other Western States, which produced less than usual in 1881. California promises a quarter crop this year, against a total failure in 1881. This will constitute the surplus over the quantity of honey marketed in 1881. The heavy honey year in California was 1878, the crop has not equalled the output of the bee since that date. The taking up of alternate sections of land for grazing, and allowing sheep to range across the intermediate plots, tend to destroy the blossoms on which the industrious bee has depended. A fire swept across a county or two in Southern California two years ago, and all verdure was destroyed. This discouraged the beekeepers, as well as the bees. Although by next season, the present prospect is that honey blossoms will be fairly plenty once more. This explains the failure of the honey crop in that State last year. But the probability of recurrences of fires, together with the grazing trouble, point to the steady reduction of the honey product in California from now on, unless measures are taken to cultivate bee food in the canyons and elsewhere, which plan is meeting with serious consideration with California beekeepers.

THE VINEYARD.

Varieties and Care of Cuttings.

EDITORS PRESS:—Some practical hints concerning the planting of vineyards may be of use to some of your readers, in view of the great number of inexperienced men who are constantly turning their attention to viticulture. The selection of soil and location is the first important consideration. Grapes can be grown successfully in a greater variety of soils than is often supposed, and the location may be hill-side or valley, hot or cold, according to the results desired. The red, gravelly and calcareous soils produce a finer quality of wine grapes than the richer valley lands, but the latter give a much larger yield.

Raisin and table grapes require rich, bottom lands, size and appearance of fruit both being essentials in this branch of viticulture. The

deep, black, gravelly soil of many parts of Napa valley is unsurpassed for producing both quality and quantity, and the heavier and richer soil of the lower and middle of the valley will undoubtedly yield still larger crops, but the fruit will be a week or two later in ripening. The more interior and warmer valleys are better suited to raisin and early table grapes for Eastern markets.

The varieties recommended by wine growers are Zinfandel, Burger, Golden Chasselas, Burgundies, Chasselas Fontainebleau, Malvoisie, Grey Riesling, Johannisburg and Franken Riesling; those for raisin making, Muscat of Alexandria, Canon Hall Muscat, Muscatella, Sultana and Zante Currant, and for shipping as table grapes, Muscat, Flame Tokay, Malaga, Emperor, Verdel and others.

The Burgundies and Riesling should be more planted, and in lowest parts of vineyards, being less liable to injury from frost than Chasselas, Zinfandel, etc. These latter, however, are leading varieties, and bear immensely on good soil, in a more or less elevated position, and do not require high staking. The Zinfandel has the peculiar advantage of invariably maturing a second crop. The Riesling generally need to be staked to four feet above ground, and then they will often bear enormous crops. The winter has seen 50 to 60 lbs. per vine on Grey Riesling when trained high. Tokays, Muscats, Malagas, and grapes of that class, if grown for Eastern markets, should not be planted in the warmest parts of the State, for the skin is then liable to become more or less tender; but if they are planted when it is too cool, they will not get their color and flavor, and will get the fall rains. Grapes for raisin making need a climate like that of Yolo or San Bernardino. In Brown's valley, west of Napa, are grown some of the finest table grapes, which are sold at \$40 to \$50 per ton to Eastern shippers. They are later than those from Solano county, but generally finer in appearance. The subject of table grapes for the Eastern markets deserves more attention than it has had hitherto. I am expecting some new varieties from European nurseries this fall, which are strongly recommended for their shipping and keeping qualities.

Cuttings.

It is necessary that those intending to plant vineyards should procure their cuttings from responsible parties; that short-jointed wood should be used, the cuttings being not more than 20 inches long, and that they get them early, healing them in loosely in trenches, so that the earth is well scattered around them. The simplest and best way to heel in cuttings is to commence on the north side of a barn or fence, open the bundles and spread them out against a bank of earth; then dig a trench, shallow, immediately in front of this row, covering up the cuttings to four or five inches from top with the earth taken out of the trench, and so on, repeating the process each row. The cuttings, if treated in this way, will get all that they need—moisture and exclusion from air, and warmth.

The bundles are often left unopened for days and even weeks, the butt ends being merely pushed into the ground a short distance. I have seen large vineyards planted with cuttings that had been thus treated, and the result was a stand of 30% to 40% instead of 95%, as it might have been. If cuttings are received from a long distance in a very dry condition, they should be placed just as they are—in bundles—in running water for a few days, special care being taken to keep them moist after they are taken out.

Planting.

It is not possible to fix the day, or even the month when the vineyard must be planted. It depends upon the season, the locality, and the nature of the soil. In a naturally warm and well-drained soil, the cuttings may be safely set out in February, supposing the ground to be properly prepared. In heavy soils or those very retentive of moisture, they should not be planted until all danger of heavy and continued rains is past.

The small percentage of cuttings that is found growing in so many new vineyards is undoubtedly owing to the fact that the work is done too hurriedly. That cuttings are often made too long, I believe to be one reason why they will make but a feeble growth the first year or two. Cuttings will only root when they have a certain degree of heat, as well as moisture, and it is a great mistake to plant them 15 to 20 inches in the ground—9 to 12 inches is plenty; neither should there be more than two eyes above ground. It is often argued, by practical men, too, that if a cutting is not planted very deep, a foot or more in the ground, the roots will strike out so near the surface that they will be cut by the plow. An utter fallacy. A very long cutting will invariably throw out feeble roots from near the surface downwards, while one of moderate length, say 10 inches in the ground, will root vigorously from near the lower end, because it is not too far down to be out of a sufficient degree of heat.

Planting with the bar is generally conceded to be the most practicable and expeditious method, but it is absolutely essential that the cuttings be firmly set in the ground, so firmly that they cannot be moved up or down by taking hold with the hand. If this is not scrupulously attended to, all other previous care has been in vain.

The after cultivation and pruning have often been treated of, but I think some of the above points, while all important, are frequently overlooked.

LEONARD COATES.

Napa, Sept. 15, 1882.

SERICULTURE.

Why the Mulberry Tree Should be Cultivated.

EDITORS PRESS:—The Philadelphia yearly report affirms what California has demonstrated, namely, that we produce silk equal to the best raised in the world; and they have also demonstrated that four pounds of dried cocoons produce one pound of reeled silk, equal to the best Italian or French, worth from six to eight dollars per pound.

Silk raising, now in its infancy in this country, is destined to become one of its greatest sources of wealth. India and Ireland are two of the richest and best agricultural countries in the world, yet facts prove they have grown poor by agriculture alone, while England, manufacturing for them, has grown rich.

We have passed through the frontier mining and agricultural stages, and it is now time we turned our attention to home manufactures. North, South, East and West are gradually becoming united by a silken thread. The silkworms of Europe have been stricken for more than two decades with a mysterious disease, which proves fatal before the victims reach the spinning point. It is, therefore, of prime importance to the silk-manufacturing interests of the United States, to encourage home production, and whatever aid and protection, in the way of encouragement, may be necessary to start American silk culture and put it on a firm basis, is a matter of national importance.

We should plant the mulberry tree, for its uses are manifold. Its wood is compact, elastic and susceptible of a fine polish. It is useful for the cabinet-maker and joiner; it makes durable fence posts and vine stakes, lasting much longer than any other wood. It is for casks and barrels as good as oak. We are planting throughout California, a great quantity of trees which are neither useful nor ornamental, and should we not think at last, can we not plant more useful trees as they have done in France, where the roads are ornamented with mulberry trees. The mulberry grows in California as rapidly as the eucalyptus, if planted in good, light, loamy soil. It stands the hardest winters. No other tree can be compared with it in resisting winter's frosts and summer's drouth. The mulberry tree produces quantities of fruit, upon which all fowls will feed and thrive. This tree should be planted in Southern California, as it is claimed that no other tree has so great an influence in drawing rain to the parched and thirsty soil; it is known as having a great influence on the climate by producing atmospheric changes. The mulberry tree should be planted on account of its gay, healthy foliage, so repelling to the eye, with its pale green leaves, and myriads of blossoms. Its berries are the delight of children and the feathery tribes.

Should not the above-named points entitle the mulberry to a place of honor in the village, on the farm, and around country cottages? The farmer blessed with a large family should plant mulberry trees for his children's sake, and raise silk-worms. It will enable them to make a nice profit in two months' time of every year, thus adding to the income of the farm.

We can produce the raw material, so largely imported, draining the country every year of millions of dollars. This capital, if kept at home, would greatly benefit the sons and daughters of American soil. The best varieties of mulberries are the *Morus alba*, *Japonica* and *Moretti*.

Every element of motherly care and prudence is needed in rearing the silk-worm, and the reeling of the thread from the cocoon will furnish delightful and profitable employment for the mother and children all the year round. Such an industry cannot fail to develop a spirit and disposition of true womanhood, now too deplorably lacking in the young women of California. If, in their youth, they can be trained to habits of self-reliance, if they can be employed in pleasing and profitable industry at home, then, on account of their nobler and better culture, there will radiate from them the influence of a newer and purer life for California.

It is for our safety that we build up and consecrate the great industry to our home life. More than any other occupation it will dignify labor in our homes. It is pre-eminently a family industry. Scarcely any capital, a very small amount of land, and no skilled labor is needed. Women and children can bestow nearly all the required labor. In no event need the work interfere with other home and farm operations, and the industry can be pursued when other matters are not pressing.

We owe something to our children and the generations after them. Men and women alike have duties to discharge for the good of the race and the hopes of mankind. We owe something to the community besides taxes. We should heed the cry of "Give us work." Let us provide an industry which gives an easy occupation like silk culture. Reformatory schools will then lose their chief source of supply. We will plead with farmers to join us for the sake of their wives and children. We will plead with the wealthy and the patriotic men to give us the help we need, and thousands will bless those who have worked for the development of this industry.

Sec. Cal. Silk Culture Association.

722 Turk street, S. F.

FORESTRY.

Forest Trees of California—No. 13.*

The Noble Silver Fir.

(*Abies [Picea] nobilis*.)

AND ITS MAGNIFICENT VARIETY—A. MAGNIFICA.

When the bright sunset fills
The silver woods with light.—Longfellow.

Among the most stately trees of the world stands the noble silver fir of the far West, one of the truest types of nature's noblemen, towered and terraced to the skies, aloft on the high mountains, from 6,000 to 8,000 ft. altitude, or more, attaining from 200 to 300 ft. in height, and 5 to 10 ft. in diameter; bark of the grand trunk, dark cinnamon-red, or burnt carmine color.

"Abroad their fan-like branches grew,
And where the sunshine darted through,
Spread a vapor soft and blue,
In long and sloping lines."

Thickly mantled in light and ever-living green, softly silver-lined, the grand horizoned round tables of velvety verdure, rising series above series, the branches only lessening their ample area near the summit, strikes the eye of the stranger with amazement at the marvelous, majestic port, and perfect elegance of symmetrical beauty. To the appreciative eye, this noble fir is instinct with the air of magnanimity and frankness, suggestive of the bluntness of honest candor, and, altogether expressive of natural good nature, as we sometimes see, where truth springs from a generous ground of good, with manifest laudable purpose. Its language, indeed, is manifold. Listening with ears, seeing with eyes, or singing as every bird sings, as the proverb saith, according to its own bill, one may at least, earnestly commend this noble sylvan glory to the high consideration and enthusiastic praise of the choicer songs, for none can ever cease to admire the noble silver fir.

Our detailed notice of this typical tree will be brief, in view of a fuller description of the more common variety of *Magnifica*. From Mount Shasta, south, along the Sierras to King's river, we have seen and collected specimens of the cones, with protruding bracts; indeed, in some places they appear to be the rule, in others exceptions, but these cones were only very imperfectly covered—unlike the *nobilis* sketched and painted for Dr. Newberry. (See Vol. VI, U. S. R. R. Repts., page 50.) There are many points of contrast and comparison of more interest to the scientific than to the general reader.

The leaves of the fertile branches are shorter, flat-quadrangular, thickness not more than one-half or nearly two-thirds the width, upwardly curved, but not twisted, thickly set close all round. Cones set like birds upright upon the very short top branches, five to six inches long or high (or even more), two or three inches in diameter, usually cylindroid-ovate, nearly mantled by protruding bracts, bent back and so thickly set and closely pressed as often to nearly hide the scales, the outer part broad, rounded, or heart-form; end, either fringed or cut-toothed, the middle awl-shaped; point, elongated. These tongue-like bracts or scaly appendages, it is claimed, never become shorter than the proper cone scales, or so as to be hid from outside view. Seeds oblong, or rather obliquely subtriangular, base wedge-form, pale shining or clayey hue, like the wings, cotyledons seven or eight. This great red silver fir, of Northern California, forms large forests about the base of Mount Shasta, at from 6,000 to 8,000 ft. altitude, and said to extend north through the Cascade mountains to the Columbia.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

OCEAN TELEPHONE.—An interesting telephonic experiment was recently made between Brussels and Dover. A submarine cable is practically a condenser, which, by its inductive action, materially interferes with the speed of signaling. It was feared that this condensation would prove for a long while a great difficulty in the case of telephonic currents, so transforming them as to render them unintelligible. The difficulty, however, has been overcome, the honor of the achievement belonging to a distinguished Belgian physicist, M. Van Rysselberghe. On the 9th of June the new telephonic apparatus, designed for the purpose of counteracting the effects of induction on air lines and condensation in submarine cables, was tried with success. Conversation was freely exchanged through the 60 miles of cable and 200 miles of air line. The experiment is very hopeful for ocean telephony. It may be remarked in this connection that the telegraph is seldom used between Denver, Colorado, and the mountain towns anywhere from 20 to 60 miles distant. Nearly all the business is done by telephone. When the weather is fair and the atmosphere clear and dry, persons 60 miles distant can talk as readily as though they were in the same block.

WOODEN PLATES.—The bulk of the wooden plates now in use come from Newbern, N. C., where they are turned out at the rate of 50,000 a day. They are made from the old sweet gum, with which the swamps and river low grounds abound, a tree which the farmers and land owners generally could find no use for.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

California Farmers' Mutual Fire Insurance Association.

We have received the following official report of the latest turn in the affairs of the above company:

In the case of the People, etc., ex rel, Schindler vs. Thos. Flint, et al, proceedings brought by the Attorney General against the defendants, as the officers and directors of the California Farmers' Mutual Fire Insurance Association, for the purpose of obtaining the judgment and decree of the court, "that said defendants and each of them, have usurped and intruded into, and do wrongfully hold and exercise the said corporate franchise, and that they be ousted and excluded therefrom, and that it be decreed that said California Farmers' Mutual Fire Insurance Association has not now, or ever had any legal existence as a corporation, and that defendants and each of them be perpetually enjoined and restrained from exercising, usurping and intruding into said corporate franchise."

The case was tried August 30th, Messrs. Fox & Kellogg, acting as counsel for the State, and on Monday, September 18th, the court rendered judgment in favor of plaintiffs, and entered decree as prayed in the complaint as above set forth. The effect of the judgment is to completely annihilate the company, and relieve the farmers who had insured with them of all liability to pay the assessments levied by the company on their policies.

Another Account.

We find in the *Evening Bulletin*, of Sept. 18th, the following account of the case:

A year ago last month, a complaint in the nature of a writ of habeas corpus was filed in the Superior Court by Attorney-General Hart, on the relation of David Schindler against Thomas Flint, J. G. Gardner, A. D. Logan, G. W. Colby, J. C. Merryfield, J. C. Steele, G. P. Kellogg, A. W. Thompson, F. K. Reese, Uriah Wood, C. S. Abbott, C. J. Cressey and E. W. Steele, who claimed to be a corporation under the name of the California Farmers' Mutual Fire Insurance Association, praying for a decree that said defendants had usurped and wrongfully held and exercised said corporate franchise, and that they be ousted and excluded therefrom; that said association never had any legal existence as a corporation, and that plaintiff recover his costs of suit. On the recent trial of the case, the plaintiff introduced in evidence the certificate of incorporation of the association, which showed that its capital stock was \$5,000, and thereupon rested his case. The defense offered no evidence. This morning Judge Wilson rendered judgment in favor of plaintiff, holding that the law required an insurance company to have a capital of \$100,000, no more and no less, with 25% thereof paid in, and the certificate showed a subscribed capital stock of \$5,000 only, which was insufficient. If that amount was sufficient, then one dollar, or any other amount, would be sufficient. It was claimed by the defendants that the certificate did not show but what \$100,000 had been subscribed, although it states that \$5,000 was the amount subscribed. "There certainly can be no presumption to that effect," said Judge Wilson, "and there is no evidence other than that given by the certificate. I am, therefore, of the opinion that the defendant's have wholly failed to justify in the proceeding or to show any authority for transacting the business of fire insurance as a corporation, and it follows the plaintiff must have judgment as prayed for."

State Grange Accommodations.

Mrs. L. E. Overhiser, Secretary of Stockton Grange, sends the following information to the *Press*:

Board and lodging at the Yosemite house may be had for \$1.50 per day; at the Grand Central house, for \$1.25; at the Commercial house, for \$1 per day; at the Mansion house, for \$1 per day; at the United States house, for \$1.25 per day; at the Eagle House, for \$1 per day.

Rooms can be obtained at lodging-house, or in private families, for reasonable rates. The accommodations will be good in all cases.

Conveyances will be at the train and boat for the Yosemite house, the Grand Central, the Commercial, and the Mansion house.

Arrangements have been made with the Transportation Company to take passengers by boat for \$1.50 the round trip. Meals may be had for 50 cents, berths 50 cents, state-rooms, \$1. The boat leaves Market street wharf, San Francisco, at 5 P. M.

Passage by rail is at the usual rates. Train leaves San Francisco at 8 A. M., also at 4 P. M. First-class fare, \$3; second-class fare, \$1.50.

All communications for information must be sent to A. Wolf, Stockton, who is chairman of the committee of arrangements, or to the proprietors of the hotels.

The next regular meeting of Temescal Grange will be held Saturday P. M., at 2 o'clock, Oct. 21st. —N. G. Thompson, Secretary.

Mrs. Mary Atkins Lynch.

Written for the RURAL PRESS by CLARA DUNN.

Mrs. Mary Atkins Lynch, a lady well known throughout the State as a very successful instructor of young ladies, died at the mature age of 63, at her home, in the midst of her loved work, on Thursday, September 14th.

Hundreds of ladies in the State owe the success of their lives to her influence. Her ideal of woman and woman's work was a grand one, and her endeavor was to have her pupils live up to that standard of excellence. She had secured a very able corps of teachers to assist her in the great work of molding the characters of noble women for the future; and at her request, these highly accomplished ladies will carry on the work and her ideas, and under their guidance the school cannot help but be a grand success. Mrs. Lynch was a native of the State of Ohio, and a graduate of Oberlin College. She came to California in 1854, and, at the request of the Trustees of the Benicia Young Ladies' Seminary, became at once its Principal, and soon after its sole proprietor. It was then the only institution of the kind upon the coast, and she was one of the pioneer ladies who ventured into the State for the sake of others. The institution gained a very high reputation under her influence. In 1865, she retired from teaching, and spent her time in traveling in the East and Europe. In 1868, she visited this coast, and was given a reception at the home of her early labors. But she came to her friends under a new name. Miss Mary Atkins had become the wife of the Hon. John Lynch, a lawyer of prominence and a gentleman much interested in the cause of education.

In 1878 she again returned to Benicia and took possession of the Seminary where she has striven to raise the standard of the school to the highest point of excellence, until her course was arrested by organic disease and acute suffering which she endured for several weeks, and she was called upon to lay down the scepter which she had held for so many years, and the loved spirit winged its way to Heaven and rest.

The funeral took place from St. Paul's Episcopal church of which she was an active member. Many friends gathered from all parts of the State to pay the last tribute of respect which we can pay to those we have loved in life, and many loving hearts brought their offerings of sweet flowers to lay upon the grave of their friend and teacher.

Vallejo, Cal.

State Fair Notes.

[By J. C. HOAG.]

Mr. L. E. Wick, the inventor, exhibited what seems to be the strongest and one of the very best forms of spring mattresses yet turned out. Place of business is No. 1114 Market street, Sacramento. His device will likely be illustrated in our paper before long.

H. P. Moore, of Woodland, exhibited artificial stone, manufactured by himself, of a firm character. Ray's laborers' sunshade, worn by himself at times, attracted much attention from its novel appearance.

The California Agricultural Works, Robinson's patent, was exhibited in the weaving department, Woodland, a pair of trousers, at West Chester.

A. J. McKon, of Livermore, exhibited his XXX Squirrel Pinner, which is most highly recommended by farmers in his neighborhood. They say they have used it for the last two years, and "cheerfully say that it gives perfect satisfaction."

MORRIS WICK, of Oroville, Butte county, had a fine exhibit from his well-known Durham herd. Mr. Wick found a good sale for his young bulls.

SORNEY BROS., of Sacramento, exhibited their "boss tooth" for grain threshers. These teeth are made of the best Norway iron, well forged and fitted, and give satisfaction to those who use them.

EXHIBITION PATENT FISHING SHEDS attracted much attention from blacksmiths and machinists. They are a great help to those who have to cut or punch heavy iron or steel plates.

S. S. DRAKE'S Standard-bred stallion, "Admiral," is noticed in the stock parade, but is worthy of special mention here. He is a magnificent animal, and is fairly entitled to the premiums awarded to him and his progeny. He is used to taking prizes, as his record at Vallejo, in 1879, Peninsula and Golden Gate District, in 1881, will show. Mr. Drake has published a neat circular, giving the history and pedigree of "Admiral," which should be consulted by horse owners. His place is Sunnyside farm, two miles east of Vallejo, on the Sulphur Springs road.

A Fine Display.

The display of home-manufactured agricultural implements at the State fair by the Benicia Agricultural Works was a notable feature of the fair, and the gold medal which was awarded was but a recognition of the popular opinion of the exhibit. Aside from the gold medal, the Benicia Agricultural Works obtained a host of premiums for their exhibits, more than any other concern from the prominent exhibitors.

Our Representative East.

Mr. S. E. BAKER, of Springfield, Ohio, a gentleman of first-class recommendations and qualifications, will represent this paper on the Eastern side of the continent. He will be in the city from the 1st of October to the 15th, and we recommend him to the attention of progressive men of industry for the transaction of business on equally as favorable terms as in our own office. Address No. 14 West High street, Springfield, Ohio.

AGRICULTURAL NOTES.

CALIFORNIA.

LOS ANGELES.

EXTRAORDINARY ARTESIAN WELL.—*Commercial*: There is being bored, on the lands of Robert Cathcart, Pomona, an artesian well. At 15 ft. surface water was struck. After going a few feet further, the surface water rose to within 10 ft. of the surface. The boring then went on to 111 ft., and there they struck a perfect river of water, 28 ft. deep, which came to the top of the pipe with such irresistible force as to almost knock the men off the lever. After going through the 28 ft. of water, struck clay at 139 ft., which lasted until the depth of 145 ft. was reached, then struck gravel and third strata of water. They are now in this strata. The boring is superintended by Mr. Frederick Foster, who thoroughly understands his business. This well promises to be the best well in Los Angeles county.

HOPS.—*Santa Ana Herald*: Mr. Raine, the hop raiser of this section, informs us that he has finished picking the crop, and is now baling the same. It is in excellent condition. He has already shipped 186 bales, or 31,838 lbs., and thinks he will have about 25 tons in all. Representatives of the largest hop dealers in the world have been examining Mr. Raine's yard.

MENDOCINO.

GRAZING AND DAIRYING.—*Beacon*. The cry of the whole country as well as in our section is beef getting scarce and high. The fair prices obtained for wool for many years and the general success attending the raising of sheep in this country, has had the effect of turning the hill ranges, formerly devoted to cattle and horses, almost exclusively into sheep pastures. No doubt many of the steeper hillsides are much better adapted for sheep than cattle, but in many instances the change from cattle to sheep has not proved as advantageous as expected. The higher rates obtained for beef cattle will no doubt stimulate the production again, and more of the pasture lands will be utilized for cattle, but we think more of the farming land, also, should be devoted to assist in the rearing and feeding of stock. Dairying is eminently calculated as a most important branch in diversified farming, tending to provide the means whereby to maintain well the standard of fertility of the soil, while its products find a practical home market. As it is now, many of our valley farmers raise grain and then transport it by wagon from thirty to fifty miles and more to the terminus of the railroad to Cloverdale, without being able to obtain a price there that will afford them a fair remuneration for the investment and labor, and our coast farmers are too apt to stake too much on a potato crop, relying almost solely on the San Francisco market, which will often bring them to grief, while at the same time we import into this county butter and cheese, lard and bacon from San Francisco, beef cattle from Humboldt county, and work cattle from other localities. Though stock will do tolerably well on good ranges in ordinary winters in this county, yet they would do much better by being assisted by systematic feeding during the season, and if this is provided so as to keep the animals in good condition they will then always command an extra price for butchering.

SAN BERNARDINO.

THE COMING CITRUS FRUIT CROP.—*Riverside Press*: The Riverside lemon crop is very light this year. Last season the yield was nearly 4,000 boxes; but this season it will not exceed probably 1,000 boxes. Next year the yield will increase to 10,000. This is the first partial failure of the lemon known in this section for many years. The orange crop, which was 10,000 boxes last year, will probably be double that amount this season.

SAN MATEO.

THE CATTLE PARASITES.—*Redwood Falls Press*: Stock raisers are becoming somewhat uneasy over the disease which has been prevailing to some extent among calves in the coast region. The symptoms are a wheezing, and then a cough, as if smothering, followed by death in a short time. Worms are found in large quantities in windpipe and lungs. The worms are all lengths, from three inches long down to mere nites, usually thin, but have been found as thick as a pencil. Cayenne pepper, administered in time, has, in some cases, proved to be a remedy, but must be given before the parasites become too numerous. This matter is worthy of more thorough investigation than it has yet received. One farmer has lost 40 calves, others various numbers, and but few who have not lost some, though not always aware of what the trouble is. In nearly every case the symptoms are the same.

SANTA BARBARA.

PAMPAS PLUMES.—J. K. Sexton, in *Press*: In the spring of 1872, I planted some seed of the pampas and raised several hundred plants, which were sold to all that wanted them to ornament their grounds. Some proved good and others worthless. I have over a hundred hills that were left in nursery rows. The plumes are of all shades. I have taken up each year some of the best plants and divided them, that being the only safe way to propagate them, after getting plants that are satisfactory. They plume the second season after planting the seed. In 1874 the discovery was made, by the

children, that by tearing plumes out and exposing to the sun, some would become fluffy and others would hang heavy and shatter off. We saved the best of that year's crop; sold some in Santa Barbara and a few in San Francisco. Those were the first good plumes that were sent to San Francisco. In February, 1874, I sent a small box, by express, to Peter Henderson & Co., New York. They wrote me that they thought they would sell a quantity of them, if there before the holidays, and ordered 300 to be sent at once. The following day I received orders to send by express and double the order. Those sent that year were the first good plumes that were sent to New York. This was the starting point of the present important industry. Since then I have shipped East 250,000 plumes, and extended my plantation to about 2,500 hills. I expect to ship 50,000 of my own during the coming season. The pampas has been extensively planted during the past few years, and Santa Barbara has the reputation of raising the finest plumes that go to the market. The grass attains great size in this section. Some of my oldest hills are in the nursery, which prevents their growing as large as they would if starting alone. Some of my largest hills stand over 15 ft. high, before the plumes come out, which run some distance above the grass. I shipped one hill to Los Angeles last year that weighed, after trimming close, 1,350 lbs. The freight down was over \$20.

CROP NOTES.—*Editors Press*: This has been rather a dry year; no one is exuberant, and, what is a matter of much more importance, no one is complaining. All crops are fair, none remarkably heavy. Some slightly conflicting accounts of the Lima bean crop, in Carpinteria, are reported, but I think, on the whole, most bean raisers are fairly well satisfied. I have just finished cutting up my corn, and, while not heavy, it is, perhaps, the best crop I have raised in the State, especially as concerns the fodder, a very important item, and one too often neglected. I make considerable use of sorghum as a forage plant, besides making my own molasses from it. With this, and plenty of squashes, my horses, hogs, and especially milch cows, do very finely, and require little hay or grain.—S. P. SNOW, Santa Barbara, Cal., Sept. 13th.

SIERRA.

HAY.—*Truckee Republican*: Sierra valley has produced a large quantity of hay the past season, notwithstanding the festive and much-dreaded grasshopper threatened at the beginning of the season to gorge himself.

SHEEPING.—The sheep men in this vicinity are shearing their sheep, and will soon take their departure for the valleys. They report the yield as being very good. The vicinity of Truckee is getting to be quite a wool-raising district, large flocks of sheep being driven up here every spring, sheared and driven back in the fall.

SOLANO.

GRAPES.—*Napa Herald*: Mr. F. Durbin, of Green Valley, Solano county, has 21 acres of bearing vines, from which he has shipped 100 tons to the Uncle Sam wine cellar, in Napa, and 3,000 boxes of 35 lbs. each to San Francisco, and still has 10 tons left. The balance sheet for that crop will stand about as follows:

For 100 tons at \$1.00 per ton	\$100.00
By 3,000 boxes at 2 cents per pound	2,100.00
By 10 tons at \$20 per ton	200.00
Total	\$2,400.00

To vineyard expenses at \$1 per acre	\$21.00
To commission at 5%	120.00
To freight	100.00
Total	\$2,641.00

Net profit.....\$1,759.00

It will be observed that vineyard expenses are put in at the highest estimate, and that the freight charges are high also, and yet this leaves a net profit of \$217.66 per acre. For comparison, suppose he had raised wheat instead, and produced two tons to the acre and sold it at \$2 per hundred, the gross receipts would have been \$80 an acre.

STANISLAUS.

AN UNUSUAL STORM.—*Editors Press*: A hail past ten this morning began a storm, the equal of which has never been seen in this valley at this time of the year. At that time the wind was in the southwest, blowing quite a breeze and bringing with it a heavy black cloud making the air so dark that lights were almost needed in the house. Thunder and lightning were constant. Hail and rain fell in torrents for a few moments, pieces of ice, rough and jagged, as large as a ten-cent piece were plenty. In a short time the ground was white with hail and all the low places filled with water. Hail fell for twenty minutes and rain for two hours, the ground in wet from 5 to 8 inches. The thunder and lightning, the rain and hail made a sound and sight such as has not been seen (at this time of the year) in this part of the State in the last twenty-eight years. The damage will be considerable to farmers, as a good deal of hay and grain are yet in the field. To stockmen, especially sheep men, will the rain prove disastrous, as the dry feed will be destroyed.—J. B. B., Upper Dry Creek, Sept. 16.

TUOLUMNE.

EDITORS PRESS.—Lately we were treated to an old-fashioned rain and thunder storm. A few miles above my place the hail came down

in earnest, pieces as large as a pigeon egg. The earth received a thorough soaking, and the atmosphere a cleansing, enough to frighten away much of the sickness lately prevailing. From planetary causes, or otherwise, the atmosphere has been of a sickly nature, and many young and seemingly healthy people have succumbed to a lingering fever, which was almost universal in this county. The glass fell in 24 hours from 96° to 56°, necessitating fires and overcoats. Dried fruits exposed suffered some. Dry feed was also injured by being washed of its nutriment. Flocks of sheep are leaving the mountain range for the harvest fields and the plains. Those still in the upper Sierra must suffer, for the snow appeared upon the hills in the vicinity of Sonora. If not snow, it was hail, showing a very cold condition of the atmosphere. —JOHN TAYLOR.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 252, Market St., S. F.

- FOR THE WEEK ENDING SEPTEMBER 5, 1882.
- 263,744.—STOPPER FOR BOTTLES—John Q. Adams, Sacramento, Cal.
 - 263,745.—COMPOUND OPTOMETER—L. A. Berteling, S. F.
 - 263,746.—TIRASHING MACHINE SEPARATOR—John B. Dixon, Dixon, Cal.
 - 263,755.—EARRING—S. L. Braverman, S. F., Cal.
 - 263,765.—CAR COUPLING—A. W. Coats, Yuba City, Cal.
 - 263,772.—FRUIT-JAR FILLING ATTACHMENT—Wm. M. Doily, Higgins station, Cal.
 - 263,785.—TUCKING ATTACHMENT FOR SEWING MACHINES—A. A. Fisher and A. Hart, S. F.
 - 263,787.—HAY SLING—A. F. Hillman, Stockton, Cal.
 - 263,788.—PROTECTING PILES—Wm. N. Horton, S. F.
 - 263,911.—LUBRICANT—Chas. J. Inman, Eureka, Cal.
 - 263,789.—PLOW—Jas. W. Jory, Marysville, Cal.
 - 263,912.—DRIER FOR FRUITS, ETC.—H. S. Jory, Salem, Oregon.
 - 264,041.—ROPE RAILWAY—Joel B. Low, S. F.
 - 263,800.—CAR COUPLING—N. D. Mussey, Reno, Nev.
 - 263,719.—GATE—Jos. S. Peck, Indian Valley, Cal.
 - 263,808.—DRY ORE SEPARATOR—P. W. Reardon, San Jose, Cal.
 - 263,786.—MOLD FOR CEMENT PIPE—N. W. Stowell, Los Angeles, Cal.
 - 263,751.—LUBRICATOR—H. Baldrige, San Bernardino, Cal.
 - 263,920.—TRACE CARRIER—H. Marshall and C. S. Reinhart, Goldendale, W. T.

Mexican Colonization Co.

Is now fully organized, and has 1,000,000 acres of the finest lands in Mexico, State of Chapeas, district known as Soconusco, now opened for settlement. These lands are located on the slopes of the Sierra Madras, facing the Pacific ocean, and adjoining the celebrated coffee lands of Guatemala. Being a new district just opened to settlers, to be disposed of to none others but actual settlers, very cheap, with ten years to complete payment. No better to be found for coffee, sugar cane, corn, tobacco, indigo, ice, grass, and hence all kinds of stock, as well as a great variety of fruit, vegetables, spices, medicines, etc. A large variety of valuable timber is also to be found in great abundance. The climate is healthy and delightful, the thermometer varying only from 60 to 85 degrees the year round. A large colony will leave here, under the most favorable conditions, on the 10th of October next. For full particulars apply to Mexican Colonization Co. 506 Battery street, S. F.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

THE NEW PATENT California Refrigerator.

Will keep meat and food at an equal temperature without ice. All sizes made to order. Address,

HOBBY & ELLSWORTH, 317 J Street, - - SACRAMENTO, CAL.

Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, DR. J. J. McLEISH, No. 215 West Fourth Street, Cincinnati, O.

HEAR YE DEAF
Garmore's Artificial Ear Drum.
As invented and worn by him perfectly cured deafness. It is a perfect device, and is not overvalued. It is a new and original discovery. Price, \$1.00. Sent by mail on receipt of the price. CAUTION: Beware of cheap imitations. Name of the inventor is on the box. JOHN GARMORE, 1011 & 1013 St. Louis, Mo.

FRUIT DRYING!

THE ZIMMERMAN Portable Galvanized Iron FIRE-PROOF DRIER!

Is the best thing yet introduced for the purpose.

Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to

LINFORTH, RICE & CO., 325 Market Street, S. F.

Or to the following agents: Jno. B. Niles, Los Angeles; L. S. Leeb, Marysville; T. H. Wall, Salem; Or T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review. DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 20, 1882.

Matters have been rather quiet this week, with a tendency toward dullness, and, in some cases, lower rates, although holders are firm, as a rule. The latest from abroad is the following: LIVERPOOL, Sept. 20.—Wheat—California spot lots are dull at 9s 5d to 9s 8d. Cargo lots, 44s for spot shipped, 45s for nearly due and 45s for off coast.

The Foreign Review.

LONDON, Sept. 18.—The Mark Lane Express, in its review of the British Grain trade for the past week, says: In Scotland, Ireland and the northern counties of England harvesting has proceeded satisfactorily, while in the earlier districts it is virtually over. Barley is discolored and the trade has yielded to the pressure of an abundant foreign supply. Red Wheat is relatively lower than white. In foreign Wheat sales are difficult. Beyond retail transactions, most buyers are awaiting rates which are not yet obtainable. In some cases, on Friday, 6s less was accepted for new Wheat. The receipts in London the past week were 88,267 quarters. There was a large arrival of foreign Flour, which sold at 6d lower. Maize is lower and weaker. Grinding Barleys are cheaper, and prices for Oats are fairly maintained. Cargoes are inanimate, the only feature in American Grain being an advance of 9d in Red Winter Wheat. There have been 25 arrivals; 9 cargoes were sold and 16 withdrawn; 17 remain, 16 being American. The sales of English Wheat during the past week were 42,429 quarters, at 44s 5d, against 43,795 quarters, at 51s 1d, for the corresponding week last year.

Freights and Charters.

Although the Liverpool market is almost lifeless at still lower quotations, with hardly any demand, this market is higher, owing to the depression in freights, which are demoralized at, say, £2 1s 6d, for United Kingdom. Ships are in excessive supply, and are pressing the market. Charters down during the week, both spot and prior to arrival, number 11 vessels, of a register of 14,494, or a carrying capacity of 21,741 short tons, or 434,320 cts. The chartered Wheat fleet now in port has a register of 49,577, or an export capacity of 74,365 short tons, or 1,487,300 cts, against 66,659 tons at the same time last year. There is also an engaged register of 1,663 at San Diego. The disengaged tonnage in port has now a register of 75,512, or an export capacity of 108,763 short tons, or 2,175,360 cts, against 2,396 tons at the same time last year. There is also a disengaged register of 9,883 at Wilmington. Tonnage now on the way to this port has a register of 265,497, against 469,743 at the same time in 1881 and 192,404 in 1880. As will be seen by the above statement, the tonnage in port for Wheat is excessive, numbering 94 ships, while at adjacent ports there are 10. Of course, freights will be weak as long as this glut of tonnage continues.

London Wool Market.

LONDON, Sept. 18.—At the Wool sales to-day, 99,000 bales were disposed of, principally New Zealand and Cape. Good spirit was manifested and prices are firm.

Bearing the Wheat Market.

CHICAGO, Sept. 18.—The Tribune, reviewing the Wheat situation and noting the very strong bear position of some of the New York papers, says they have begun the old song, that the West shall forward the Wheat harvested this year to New York as fast as possible, and that those who sell their Wheat most expeditiously will get the best prices, because there is so much in the country that the latest to market will have to take the price offered, for the stock is largely in excess of any want. They urge farmers to hurry their Wheat forward, by sale, by steam, by railway and canal, so that it can get here to be sold before the rush shall so fill the market that it can be sold for something and not refused as not worth store-room. The Tribune demonstrates that the Wheat lines and granaries were nearly empty when the new crop began to move, and that the crop estimate of 600,000,000 this year is probably somewhat too high; that we exported more Wheat last year than usual, because of high prices, and that our usual reserve amount will have to be drawn from this year's crop. The Tribune concludes with the advice to hold Wheat until a fair profit is obtained. It will not be a drug in the market.

Eastern Wool Markets.

BOSTON, Sept. 19.—Wool is firm and the demand good. Sales of Ohio and Pennsylvania fleeces are at from 41c to 45c for X and XX. Michigan fleeces are quoted at 39c to 40c for X, and are firm at these prices. Unwashed fleeces are in demand at 17c to 23c for low and coarse; 25c to 32c for fine and medium, and 33c to 35c for choice medium selections. Combing and delaine selections are firm at 42c to 46c for combing, and 46c to 50c for fine and No. 1 combing. Coarse combing is now inquired for at 32c to 43c, as to quality. California Wool is quiet and sales are reported at 25c to 30c for Spring. Pulled Wool is in fair demand at 42c to 45c for super; 26c to 30c for common and good. The stock of choice super is quite reduced. Foreign Wool has been quiet, and no sales of any importance are reported.

Eastern Grain and Provision Markets.

CHICAGO, Sept. 18.—Wheat, steady and firmer; regular, 98c September; 94c October; Red and Spring, 98c. Corn, firm for cash; futures, weak and lower; 66c cash; 63c to 63c October; 59c November. Pork, strong and higher; \$20.70 cash and October; \$19.95 November.

BAGS.—Bags are dull at 8c to 8c wholesale.

BARLEY.—Barley has been arriving freely, but rates have held up well, and are now a little better than at the time of our last report. Call sales of 300 tons No. 1 Feed, October, \$1.32; 100, January, \$1.32; 100, seller \$2, \$1.30; 100 No. 2 Feed, September, \$1.28; 100, November, \$1.26; 200 No. 1, Brevoy, seller \$2, \$1.35. Sales on the Grain Exchange of four tons No. 1 Feed, October, \$1.31; 200, \$1.31; 200, December, \$1.31; 100, \$1.35; 100, \$1.45.

CORN.—Corn is quiet and unchanged.

DAIRY PRODUCE.—Butter is unchanged. It seems hard to get above the 40c mark, and only the fancy brands bring that, in large lots. Cheese is abundant, there being quite an amount of Eastern Cheese on hand. The rate for California is the same as last week.

EGGS.—Eggs, too, are depressed by the large receipts by rail from Utah and farther East. Prices are lower, as shown in our table.

FEED.—Bran is now strong at \$19 per ton. Middlings are \$1 higher this week.

FRESH MEAT.—Pork is about 5c lower per lb. Veal is high—higher than it has been for months. Beef, Mutton and Lamb are unchanged.

FRUIT.—Our Fruit list shows some fluctuation, but no great difference in rates. Grapes are plentiful, but sell fairly. Figs to-day are in excess, and are sacrificed.

HOPS.—Prices are unchanged, and the tone about the same as last week.

OATS.—Oats are dull and weak, and about 5c lower per ctn.

ONIONS.—Onions are unchanged.

POTATOES.—River Reds are now arriving freely. Early Rose and Sweet Potatoes are considerably lower this week, as shown in our list.

POULTRY AND GAME.—Hens, Roosters and Broilers and tame Ducks are worth about 50c per dozen more than last week. Turkeys are 1c lower. Game Ducks are now in and sell fairly. Quail are worth much more than a week ago. Our table gives to-day's prices.

PROVISIONS.—Provisions are still active and firm. The

drop in Pork must, of course, have an effect, if it is maintained.

VEGETABLES.—Corn and Okra are inclined to advance. Green Peas and green Limas show a decline this week. The market is stocked with Tomatoes, and rates are just above dumping.

WHEAT.—Wheat is dull and quiet, and the few sales which are made are shaded off in rate a little. Holders are firm in their demand for \$1.70 for No. 1 Shipping, and buyers do not like the figure. We note sales on call: 100 tons No. 1 White, October, \$1.70 and 100 do, November, \$1.71; per ctn. At the Grain Exchange the sales included 100 tons No. 1, November, \$1.70; 200 do No. 2, September, \$1.61; 1,000 do, October, \$1.63; 200 do, \$1.63; 100 do, October, \$1.63; 100 do, November, \$1.64; 200 do, \$1.64 per ctn.

WOOL.—The Fall Wool now coming is reported defective, and does not sell readily. The whole market is much as before—dull and limited in amount.

Domestic Produce.

WHOLESALE. WEDNESDAY M., Sept. 20, 1882.

BEANS & PEAS. Bayo, ctn. 3 25 @ 30. Red, 3 40 @ 40. Baked, 3 25 @ 30. Silverskin, 50 @ 70. Castor, 3 50 @ 40. New, ctn. 50 @ 75. Pea, 2 50 @ 30. Early Rose, 65 @ 85. Red, 2 50 @ 25. Petaluma, ctn. 50 @ 75. Pink, 2 50 @ 25. Hummel, 50 @ 75. Large White, 2 50 @ 25. Kidney, 50 @ 75. Small White, 2 50 @ 25. Peachblow, 50 @ 75. Lima, 2 50 @ 25. Jersey Blue, 50 @ 75. Field Peas, 2 50 @ 25. Cuffey, 50 @ 75. do, green, 2 50 @ 25. River, red, 50 @ 75. Southern, 3 40 @ 40. Chiles, 50 @ 75. Northern, 4 40 @ 40. do, Oregon, 50 @ 75.

POTATOES. California, 50 @ 75. do, Peas, 50 @ 75. German, 50 @ 75. do, River Reds, 50 @ 75. DAIRY PRODUCE, ETC. Butter, 12 1/2 @ 12 1/2. Cal. Fresh Roll, lb. 35 @ 37 1/2. do, Fancy Brads., 30 @ 32 1/2. Pickle Roll, 30 @ 32 1/2. Baking, new, 18 @ 20. New York, 18 @ 20. CHEESE. Cheese, Cal., lb. 12 @ 13. Eggs, 30 @ 40. Ducks, 25 @ 30. Eastern, by exp., 25 @ 30. Pickled hare, 25 @ 30. Utah, 25 @ 30. FEED. Bran, ton, 10 @ 11. Corn Meal, 10 @ 11. Middlings, 10 @ 11. Oil Cake Meal, 10 @ 11. Straw, bale, 55 @ 60. FLOUR. Extra, City Mills, 5 25 @ 50. do, Country Mills, 4 75 @ 50. do, Oregon, 4 75 @ 50. do, Wyo. & W. 4 50 @ 50. Superfine, 3 50 @ 40. FRESH MEAT. Beef, 1st qual, lb. 7 1/2 @ 8. Second, 6 1/2 @ 7. Third, 5 1/2 @ 6. Mutton, 4 1/2 @ 5. Pork, dressed, 10 1/2 @ 10 1/2. Dressed, 10 1/2 @ 10 1/2. Veal, 8 @ 9. Milk Calves, 7 1/2 @ 8. do, choice, 10 @ 10 1/2. GRAIN, ETC. Barley, feed, ctn. 1 70 @ 1 75. do, New, 1 75 @ 1 75. do, Brewing, 2 12 @ 2 15. do, New, 1 35 @ 1 42 1/2. Cheviatier, 1 35 @ 1 50. Buckwheat, 1 35 @ 1 50. Corn, White, 1 50 @ 1 75. Yellow, 1 50 @ 1 75. Small Round, 1 50 @ 1 75. Oats, 1 50 @ 1 75. Milling, 2 00 @ 2 25. Wheat, No. 1, 1 02 1/2 @ 1 07 1/2. do, No. 2, 1 02 @ 1 07. do, No. 3, 1 50 @ 1 55. Choice, 1 50 @ 1 70. HIDES. Hides, dry, 19 @ 19 1/2. Wet salted, 9 1/2 @ 11. HONEY, ETC. Beeswax, lb. 23 @ 25. Honey in comb, 12 @ 20. Extracted, light, 9 @ 11. do, dark, 7 @ 8. HOPS. Oregon, 50 @ 52. California, 45 @ 55. Wash. Ter., 50 @ 52. Old Hops, 50 @ 52. NUTS.—Walnuts, Cal., 11 @ 12. Walnuts, Chile, 11 @ 12. Almonds, lb. 15 @ 17. Soft shell, 15 @ 17. Brazil, 10 @ 12. Pecans, 14 @ 15. Peanuts, 7 @ 8. Filberts, 14 @ 15. FRUITS AND VEGETABLES. Apples, bx., 35 @ 1 00. do, Basket, 40 @ 50. Apricots, bx., 50 @ 75. Bananas, bunch, 20 @ 40. Blackberries, 5 00 @ 7 00. Cantelews, crt., 50 @ 90. Casaba, each, 12 @ 12 1/2. Cherry Plum, bx., 25 @ 75. Cocoanuts, 100 @ 7 00. Crabapples, blk., 50 @ 60. Cranberries, blk., 12 @ 50. Currants, chst., 4 00 @ 5 00. Figs, box, 25 @ 50. Gooseberries, 4 @ 8. Grapes, bx., 40 @ 50. do, Rose Peru, 60 @ 90. do, Muscat, 50 @ 75. do, B. Ham's, 60 @ 90. do, Tokay, 1 00 @ 1 25. do, Isabella, 70 @ 75. Limes, Mex., 10 @ 11. do, Cal., box, 75 @ 3 50. Lemons, Cal., bx., 50 @ 1 50. Sicily, box, 8 @ 10. Australian, 8 @ 10. Nectarines, 50 @ 60. Oranges, Cal., bx., 4 50 @ 5 00. do, Tahiti M., 40 @ 50. do, Mexican, 16 @ 17. do, Loreto, 10 @ 11. Peaches, box, 50 @ 1 25. do, Monoak, 50 @ 60. Pears, blk., 65 @ 1 00. do, Bartlett, 1 50 @ 2 00. do, do, 1st, 1 00 @ 1 25. Pineapples, doz., 6 00 @ 8 00. Plums, 40 @ 60. Quinces, blk., 40 @ 60. do, box, 7 @ 10. Prunes, 60 @ 75. Strawberry, chst., 20 @ 100. Water-melon, 100 @ 12 00. DRIED FRUIT. Apples, sliced, lb., 1 2 @ 6. do, evaporated, 1 2 @ 11. do, quartered, 5 @ 8. APRICOTS. Apricots, 13 1/2 @ 14. Blackberries, 14 @ 16. Citron, 28 @ 30. Dates, 9 @ 10. Figs, 3 @ 4. do, loose, 3 @ 4. Nectarines, 11 @ 12 1/2. Peaches, 5 @ 6. Pears, sliced, 7 @ 8. do, whole, 6 @ 7. Pitted, 10 @ 12. Prunes, 10 @ 11. Raisins, Cal., bx., 10 @ 2 75. do, Halves, 10 @ 2 75. do, Quarters, 10 @ 2 75. do, Eighth, 10 @ 2 75. Zante Currants, 8 @ 10. ARTICHOKES. Artichokes, sh., 25 @ 30. A. paraguay, box, 75 @ 100. Beets, ctn., 75 @ 100. Cabbage, 100 lbs., 87 1/2 @ 1 00. Carrots, 30 @ 40. Cauliflower, doz., 1 00 @ 1 25. Celery, green, st., 1 00 @ 25. Cucumbers, bx., 30 @ 45. Eggplant, box, 10 @ 50. Garlic, lb., 1 1/2 @ 2. do, pom., 1 @ 1 1/2. Lettuce, doz., 10 @ 12. Mushrooms, bx., 10 @ 12. Peas, green, lb., 2 @ 3. Peas, green, lb., 2 @ 3. Parsnips, lb., 2 @ 3. Peppers, 50 @ 75. do, Chile, 50 @ 75. do, Black, 25 @ 75. Squash, Marrow, 50 @ 60. do, 1st, 50 @ 60. String Beans, 2 @ 4. do, wax, 2 @ 4. do, 1st, 2 @ 4. do, 2nd, 2 @ 4. Tomatoes, box, 10 @ 25. Turnips, ctn., 75 @ 1 00.

Commission Merchants.

Grangers Business Association, SHIPPING AND COMMISSION HOUSE. No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON CONSIGNMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Werran Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and

Promt Returns. Advance Liberally on Consignments.

PETER MEYER. LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders. P. O. Box 1940.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

JAS. P. HULME, JACKSON HART.

Late Miller & Co.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

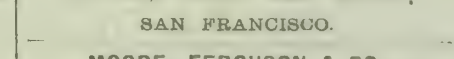
Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments

SEND YOUR CONSIGNMENTS TO



AND WHOLESALE DEALERS IN

CALIFORNIA & OREGON PRODUCE

100 & 110 SAN FRANCISCO

"THE OLDEST HOUSE"

ASTHMA. The greatest

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of

of the human body of



Go Away.

With a bumpy swish and a curdled roar,
Sweet Mary's churn goes drumming;
Young Reuben leans on the low half-door,
And hopes that the butter is coming;
Then sighs and sighs and drops his eyes—
"What words can his feelings utter?"
"Oh, drop me down in the churn," he cries,
"And make me into butter!"
She rests her hands, and gazing stands
At sound of his words' vagary;
Then plies the staff with a lightsome laugh—
"Oh, go away!" says Mary.
If a maiden's word means aught, they say,
The opposite sense is in it;
So Reuben finds in her "Go away!"
A "Just come in a minute."
"I hope," says he, "I may make so free,"
With a grin and a nervous stutter.
"My answer should be to your ears," says she,
"If I could but leave the butter."
His arm on the shelf that holds the delf,
He looks across the dairy;
"Shall I go to her side? Shall I dare her pride?"
"Oh, go away!" says Mary.
He takes the hint, and he takes a kiss,
With fears and inward quaking.
She does not take what he takes amiss,
Nor think it an awful "taking."
The heart of the boy is wild with joy;
He has won her—his bird, his fairy.
"I'll go outright for the ring to-night!"
"Oh, go away!" says Mary.

Aunt Keziah's Story.

[Written for RURAL PRESS by M. L. W. C.]

I own a comfortable homestead in San Leandro, the house standing back from a wide, shady street, and a fruit orchard running toward the foothills, and there niece Letitia lived with me up to the day she was married.

Niece Letitia, if I did bring her up myself, was as pretty and smart a young woman as the county held—a trim little body, with a surprising dignity, considering her smallness, curly hair twisting around her forehead, brown eyes, and a very cute decided little way with her. As sensible a girl and womanly as ever I see in the sixty odd years of my life.

But I calculate that sense don't count when the counting day comes, and niece Letitia ended by marrying Barstow Brown, the telegraph operator, from Oakland. I didn't take kindly to him, myself, I'm free to own. I'm counted a smart woman, with a pretty good opinion on most things, but he beat me, Barstow Brown did. I'd come to look for amiableness and easy going, along with blue eyes and yellow hair in a man. My poor John had blue eyes, and the land knows what he'd adone without a wife that could manage for him. But lightning could come out of Barstow Brown's eyes, real, blue, forked lightning, and his square chin looked as sot—well, as sot as Tamalpais down by the bay, and no woman likely'd go to move it. Then he was so nigh perfection, folks would e'en a'most hate him outright. There wasn't a thing he couldn't do—dancing, fiddling, singing, painting and what not. Forin' languages, too, he managed to make out he knew most of 'em. Then his clothes had such a way of fitting him, no matter if 'twas only the blue flannel shirt and old trousers he went shooting in, that threw all the boys of our neighborhood out of comparison.

A smart young man, oh yes, a very smart young man, but some way he held his head too high for me. I own it made me mad, for I like to hold my own with any man, and he had an air of superiority that even I couldn't stand up against. And sometimes I thought the glint in his eye and the snotness in his chin didn't argy well for his wife, if she looked for soft dealing.

But niece Letitia, she thought he was a god come out of a fable, and as I make it a pint always to have my own way, so I had to approve it all, for niece Letitia, for all her winningness, up to then, had always, somehow, seemed to carry out her own intentions.

But law! I knowed how 'twould be, and so 'twas from the beginning. He just sot her aside. Niece Letitia, she said as how there wouldn't be no wine to her wedding, for it went agin her principles. And Barstow Brown never said a word, but when the wedding breakfast came, and some friends of his, along with her'n, around the table, he just beckoned to Tiny Minnick with his finger—Tiny, she was helping—"Tiny, bring me a couple of bottles from that champagne basket in the milk-room." And that settled it.

So it was when niece Letitia said she couldn't bear to board in the hotel, but she'd stay to the old home, if he'd rather, till he'd rented a house for her, or some rooms. No, he'd rather board, though that she begged him not. But no word he said, till one day when they was going riding, and then he run back and said in a hurry, but amazingly cool, "Aunt Keziah, the dray'll come for our things at three o'clock, and I wish you 'nd Tiny 'd see Mrs. Brown's be all there—Mrs. Brown and me, we're going to move to the Estudillo house for the present," and not a word to her, but just driv her there when they was done a-riding.

Sometimes I looked in niece Letitia's quiet

eyes and wondered how 'twould end; for what with his city friends, and his Sunday fishing excursions, and his trips to town and one thing and another, to me it begun to look like neglect.

A considerable spell after, sister Elizabeth, down in Maine, was left a widow and destitute, with five little boys, and as I'm not a woman to shirk my duty when it's put before me, and though I hadn't been 20 mile before in 20 year, I packed my trunk and went down to the State of Maine to look after sister Elizabeth. I was gone a considerable time, and the long and short of it was just what I was afraid 'twould be—I brought her and the boys back to the homestead. And niece Letitia I found, in a very pleasant cottage, furnished to her taste, not so very far from the old house. A little proud and distant she'd been, when first she was married, but now she was herself again, and told me over every word of what had been happening to her all along, as confiding as she was when she was a baby, till I had to rub my nose pretty hard with my silver spectacle case, that was my poor John's, to keep from having to out with my handkerchief and wipe the spectacles themselves.

But I never thought as how niece Letitia could be so sly and wicked as she was a few weeks afterwards, in one little remark I heard her make. I was to her house in the afternoon when old Mis' Clayton called, and went pekin' around, as her custom is.

"And to think," ses she, "that you've got a house after all, and I always thought you and Mr. Brown differed so about housekeeping, now, and some other things, mebbe, hey?"

"So we did, p'raps," ses niece Letitia, cheerful like, "but then we're good Christian folks, after all, and the 'Piscopal minister reconciled us long ago."

"Well, it's a marcy to have one's husband converted," ses Miss Clayton, "and I hev noticed he 'companies you to church, now."

And I just looked at my niece Letitia and knowed the demureness of her, all but the little laugh in her eye.

"Oh, yes!" thinks I to myself, "a great deal he did to reconcile you, sure enough." For my niece had told me all about it, and it was just this way:

Mr. St. John, the new minister, when he come to town, wasn't by no means the favorite minister San Leandro ever had. It was his appearance that was against him, for he was a great tall, thin man, as awkward as a booby. What little hair he had was black, and stood up straight on top of his high, narrer head. He hadn't no beard, and his mouth was fearful large. He had great knuckles to his hands, and his eyes was always red from reading so much at night. He didn't get on very fast with the women, only but niece Letitia. She took a liking to him after a fashion, and after all, he had a pleasant voice and led in the singing, and she belonged to the choir. Mebbe it wasn't onnatural niece Letitia should take considerable interest in church matters, not having a great deal to do at home, seeing she boarded, and her husband away all his extra time. So she took hold with the Sunday-school and one thing and another, and the minister gave her the name of a great worker for Zion. But somehow it never got mentioned to Barstow Brown at all, or he forgot about the new minister. But one Sunday night he got home rather early from a jaunt he'd been to the fish ranch, and took himself to bed at the Estudillo house. A little later, the new minister, good man (for he was a good man, the new minister was), walked home with niece Letitia from evening service, and sot down for a call in Barstow Brown's sitting-room.

When he was gone, Letitia, she found what made her quake, I'll be bound, for I know she was afraid of her husband in those days. And there was Mr. Barstow Brown, riz up on the floor, and a-walking up and down, with a black-looking face, and his features all a-working as you never see, and just his long nightgown on, as he came out of bed.

"Come here, Letty," ses he, agitated, and talking with a hoarse, low voice. "Come here," ses he, and he brought his hand down heavy on her shoulder. "I won't ask you no questions, my girl, but I've been facing this thing half an hour, while you was talking 'tother side of that door, to a strange man. A strange man that talks to you about deep love prompted his profession, Lettie, and he hadn't no wish to turn his feet back," and Barstow Brown groaned. "I didn't ask you no question," ses he, vehement like, "perhaps you don't love me no more, and perhaps I've been a fool, but that's all over now. Make your choice this instant, and you shall leave me now, to-night, this moment, and go to him for good and all; or else give him up forever."

"Go to the minister for good and all!" ses niece Letitia, "poor man, what would he say?"

And when she told him he hadn't no cause for jealousy, he took her in his arms and kissed her as he had never done before. It's plain to be seen that Barstow Brown wouldn't never had made no kind of a husband for my niece Letitia, if he hadn't found out he could be jealous of his wife; and a very good thing it was, to my notion, that the new minister reconciled 'em.

Aug. 23, 1882.

A NEW nurse maid had been engaged for the family of John Leech. On her appearing in the nursery, she was thus addressed by Master Leech: "Nurse, papa says I am one of those children that can only be managed by kindness, and I'll trouble you to fetch some sponge cake and oranges at once."

Hints to Home-Makers.

The House in the Middle of the Lot.

[Written for RURAL PRESS by JOHN ELLIS.]

Well, I suppose you are satisfied now? Well pleased now you have been very particular in locating this house in the very center of the lot? Spent much time in particularizing? Well, you should be satisfied, for you have a perfect right to do as you please with your own. After this, the coach-house must be built, and, as it is necessary that the latter should indicate the wealth of the proprietor, this stable must come into the center, too, as near as possible. There are some other very necessary places to erect, but this place we will put away at some distance from the house; but in order that all persons visiting the house or otherwise should not mistake its character, we will have a walk leading from the front door directly to it, and to make it more effective, we will be sure to put an arbor over it, covered with some delicious grape. This is economy—true economy.

Now that we have placed the house and stable in the middle of the lot, we will go to work and lay out the garden. This can easily be done, for, having finished the arrangements of the house inside, the outside is of comparatively no consequence, so we plant the trees and flowers ourself. But before planting, we will lay out the carriage road and walks. Let us see: The house being in the center of the grounds compels me to have the drive straight, or nearly so. It would look much better, I think, if the drive was on the curve, but there is no room for a curved road now, the house being in the center of the grounds, so the drive must be a straight drive. Well, this don't matter much, although it would look much better if I had it the other way, but the house is in the center of the lot and prevents it. Walks and everything else follow suit. Planting it will cover this little defect up, so that we need not mind this blemish. Mr. A will tell us what kind of trees to plant, so we shall be all right in this respect. So we will go over to him and inquire, for he has just completed his planting and will know thoroughly what we want. So to him we go, and see for ourselves, and get pretty similar trees, etc., as Mr. A. has got. After a while we finish, and we sit down and contemplate our beautiful home.

A few years pass away, and trees, shrubs and flowers have grown prodigiously, and we find out that mistake of placing the house in the middle of the lot, for its consequences are manifold. We find that we planted too large a variety of trees, and planted them too close to the drive, and also the same trouble in connection with the walks, and consequently had to cut the lower branches off the pyramidal trees in order to get by them—trim them up, in fact, like liberty-poles surrounding drive and walks. With all this cutting and trimming, we found that John could hardly drive out from the stable through this road for trees, and now we see the turpentine running out and down the trees from the knots, dried and crystallized white pitch, and finally wish the nasty looking things were all out of the way; and further, they are so large that they cover up everything else, and consequently we think we shall cut them down and plant something else more suitable, especially if we can sell this place to buy another, when we will avoid placing the house in the middle of the lot and planting the place up incongruously.

San Francisco, Cal.

Pomegranate Drink.

Any delicately flavored fruit juice may be taken as a basis, but that of white currants or grapes is especially to be preferred. A sufficient quantity of the freshly-expressed white currant, or other juice, is first to be raised quickly to the boiling point and maintained at 212° Fahr., for three or four minutes, after which it should be covered over and allowed to cool, after having been diluted with from one to two volumes—according to its strength and degree of acidity—of water previously boiled. To each quart of this liquid from 6 to 12 pomegranates should be allowed, which must be carefully denuded of their outer covering with the aid of a silver or bone knife, as iron in any form should not be placed to come in contact with this fruit. Placing the fruity portions upon a porcelain colander, or a coarse piece of canvas, the pectinaceous juice may be readily disengaged from the seeds without breaking the latter, by means of a fluted wooden "butter-pat," or other suitable utensil, a little water being permitted to drop upon the seed-mass during the latter part of the operation; the whole of the pomegranate juice thus obtained is then strained and added to the fruit liquor before mentioned; about a quart of the cleansed seeds and rind are next slightly crushed and boiled or infused for a short time, hard spring water being employed, by preference, for this purpose. Simple syrup, sufficient to sweeten the fruit liquor moderately, having been added to the same, enough of the rind decoction is stirred in to impart a distinct, but not overpowering bitter, flavor to the whole.

This pomegranate drink is an eminently wholesome one, possessing great powers as a tonic and febrifuge, and when properly made, it will keep for days with all its properties unimpaired.—*Monthly Magazine.*

Marriage.

Children should not marry. A young woman cannot be in any sense prepared for this union under 21; 25 is better. She is not mentally or physically developed before this. Solemn duties, cares, and responsibilities await her, to meet which she needs large development, mature judgment, good calculation, domestic training, and knowledge of men and things. Girls of 16 and 18 cannot have these. They do not know whom they really like or dislike—who and what will meet their necessities—until matured themselves.

Young women should not be so impressed with the duty, privilege, and eclat of marriage as to rush into the relation without due thought, time, and acquaintance. You cannot over-estimate the importance of a thorough knowledge of the man whom you design to marry. Uprightness, fixedness of principle, and unselfish and generous disposition, with good business abilities, should be regarded as indispensable. If a young man is a good son and brother, he will make a kind husband, provided you do your part.

Do not be won by trifles. A handsome face, a fine figure, a noble bearing may be desired, but they constitute a small part of what you really need.

Neither is it wise to aspire far above your present station in life, as this would give rise to solicitude lest you fail to adapt yourself to your changed circumstances.

Marriage should not be entered upon without a knowledge of its physiological laws, else much domestic misery may be expected. Neither should it be sought for worldly gain or position.

I would also suggest that those graces and charms which won a lover's heart be still kept for the husband. Never consider it too much trouble to dress tastefully, and in your best, for your husband's eye. Give him freely of those graceful and pleasant surprises which will make him happy, if you expect a continuance of those lover-like attentions from him. Hide all the disagreeables in person, toilet and home, and keep the best for love. Such a course would be likely to make a good man of a bad one, if anything would.

Consider, also, that marriage is for life—"till death do us part"—the laws of man to the contrary. "What God hath joined together, let no man put asunder," is the clarion voice of Him who ordained marriage. Alas! how many turn the solemn edict into a farcical jest. Where is the voice to reach every home, in protest of the shame, disgrace, ruin and outrage of so fatal a wrench as divorce? Its unhallowed license should be hissed out of this world. Therefore, look well before you leap, young ladies, and "suffer not trifles to win thy love."

PARCHMENT.—Parchment is made of skins of sheep and lambs, though that kind which is used for the head of drums is said to be made of goat skins. Vellum is a finer, smoother, white kind of parchment, made of the skin of young calves. The mode of preparation is first to take off the hair or wool, then to steep the skin in lime, and afterward to stretch it very firmly on a wooden frame. When thus fixed, it is scraped with a blunt-iron tool, wetted and rubbed with chalk and pumice stone, and these scrapings and rubbings are repeated several times on each side of the skin till it is fit for use. Parchment was employed in very ancient times, and it is curious that from about the seventh to the tenth century, it was beautiful, white and good, but that in later times a very inferior, dirty-looking kind of parchment came into use, which has the appearance of being much older than the good. The reason for this is supposed to be that the writers in these latter centuries used to prepare their own parchment, while at an earlier date it was a curious art, only possessed by the manufacturers. Parchment was sometimes so rare and scarce, that great numbers of the older manuscripts were erased with pumice stone, or the ink washed out with some chemical substance, in order that they might be used again for writing upon.

A NEW MILK TESTER.—A newly invented instrument, by Professor Heeren, for the purpose of testing milk, seems to work well. It is named the "piscoscope," and consists of a disk of black vulcanized india rubber, having in its middle a very flat circular depression. A few drops of milk well mixed are put in the hollow, and covered with a plate of glass painted with six shades of color, radiating from a small uncolored circular spot in the middle. The colors range from white gray to deep bluish gray. The layer of milk is seen through the uncolored spot in the center, and its color can thus be compared with the radiating colors, and its quality is judged according to the color with which it coincides. Thus, the richest color stands for cream, the next for very rich milk, and then follow normal, inferior, poor and very poor.

COL. PERCY VERGER was complaining confidentially to Hostetter McGinnis of the frequency with which his mother-in-law paid him visits—that she came to see him four or five times a year. "My wife's mother," responded McGinnis, "has visited me only once in the last five or six years. The last time she came to see me was when I was first married, five years ago." "Lucky man! When is she going to visit you again?" "How can I tell? She has not got through with her first visit yet—but I can't see where the luck comes in."

Chaff.

THE poet who sweetly referred to the "sighing of the winds," should go out West and experience a sigh-bone.

A BOSTON lecturer astonished his audience by bringing down his fist on the table and shouting: "Where is the religiosity of the anthropoid quadrupana?" If he thinks we have got it he can search us. We never saw it in the world.

THE horse has been spoken of as the noble animal; but the instantaneous photographs which have been made of him threaten to bring him into well-merited contempt. You can't respect an animal which looks like a kangaroo with a broken back.

RATHER a funny bull was that made recently by a member of Parliament, in discussing the question of trial by jury in Ireland. Becoming excited, he exclaimed: "With trial by jury have I lived, and, by the blessing of God, with trial by jury I will die."

A LITTLE six-year-old boy went into the country visiting. About the first thing he got was a bowl of bread and milk. He tasted it, and then hesitated a moment, when his mother asked if he didn't like it, to which he replied, smacking his lips: "Yes, ma'am. I was only wishing that our milkman in town would keep a cow."

AN artful jurymen, addressing the clerk of the court, while the latter was administering the oath, said: "Speak up. I cannot hear what you say." "Stop!" said Baron Alderson, from the bench. "Are you deaf?" "Yes, my lord, of one ear." "Then you may leave the box, for it is necessary that jurymen should hear both sides."

AN ignorant Yorkshireman, having occasion to go to France, was surprised on his arrival to hear the men speaking French, the women speaking French and the children jabbering away in the same tongue. In the light of the perplexity which this occasioned, he retired to his hotel, and was awakened in the morning by the cock crowing, whereupon he burst into wild exclamations of astonishment and delight, crying, "Thank goodness, there's English at last!"

Honesty in Building.

Honesty is, perhaps, more abused than that of any other ethical or intellectual virtue. It is applied as a cloak of ignorance, as the apology for bad manners, or even for worse purposes. The man who, without regard to time, place or company, gratifies his vanity in blurring out his crude notions on any possible subject, is too often called an honest fellow. In fact, he is only so ill-bred and so ignorant as to be supposed incapable of deceit. That may be so, or not. We have known cases—and no doubt some will recur to the memories of most of our readers—in which a man may be held to have purposely adopted the disguise of incivility, have lived for years under the title of "Honest Tom Speakforth," and at length, generally too late for human retribution, has been discovered to have left behind him only an unexplained deficit, or sometimes an equally unexplained family of children. The honesty which causes this kind of pitying, or even of affectionate regard, is simply that, so far as it exists at all, of not telling lies, or rather of not putting matters in such a light as may be most agreeable to the sympathies of others. This kind of honesty is sometimes applied to building. A man will declaim against the importance of stucco, and will give you hideous brick work in place of it. "Honest brick and mortar," he calls it. But he omits to mention two points. One, that the imperfections of English stucco are mainly due to the very rude and imperfect way in which we treat our lime. Those who are most familiar with the use made of this material in Italy, from scagola work to the preparation for fresco painting, will be aware that this is the case. Secondly, while there is a real beauty in brick work, it requires so much care in the selection of clay, and in the making, burning and laying of bricks to insure it, that noble brick work is almost a lost art in England. Our honest friend, therefore, only gives the cheapest and meanest material that comes to hand, and excuses that slovenliness of his work by calling it "honest."—*The Builder*.

THE SABBATH DAY.—We are commanded to "remember the Sabbath day, and keep it holy." If the sacredness of the Sabbath is destroyed, the life of the nation will be imperiled, and the church, as a visible organization among men, cease to exist. Should we happily live to see the day when the Sabbath is universally observed and its sacred duties and privileges delighted in, then the horrible plagues of intemperance, lust and crime, which are undermining society and destroying millions of our race, would be blotted out, and a day of universal joy and peace reign instead. To the laboring classes the Sabbath is an unmixed blessing. It replenishes what the six days' labor has exhausted, and supplies strength for the coming week's toil. On that day the farmer quits his plow, the merchant his store, the blacksmith his anvil, the children the labor and confinement of the factory, the miner emerges from the bowels of the earth into the brightness and glory of the hallowed day, and the toilers in every department of life's busy scenes rest their weary limbs, drink in the invigorating air, commune with nature and nature's God, catch a glimpse of the Celestial city, and, with fresh inspiration and renewed strength, press forward.—*Dr. Snowden*.

Young Folks' Column.

Nellie and the Moose.

Nellie lived in the country, several miles from any village, and as it was 40 years ago, that part of the country in which her father's farm was situated was not so thickly settled as it now is. Her home was in the beautiful Black River valley, that most picturesque region of Northern New York.

One evening Nellie was standing at the window, watching the falling snow-flakes, when she saw a group enter the gate and come toward the house until they stopped before the door.

The group consisted of three men and a mammoth animal, of a kind that Nellie had never before seen. At first she thought it was an immense ox, but a glance at the huge branched antlers and thick mottled neck, showed her that her guess was an incorrect one.

"What is it?" said Nellie's father, stepping to the door, while Nellie's mother, brothers and herself crowded timidly out, "a deer, isn't it?"

"No," replied one of the men, "not a reindeer, though some call them moose-deer, but a moose."

The animal was startled at the sight of so many people, and plunged about so that it required all the strength of the three men to hold him.

As soon as he was quieted, one of the men explained that he had been captured 20 miles east of the river, and that they were taking him to Utica, and would be glad to have the farmer keep them over night.

Nellie's father hesitated, for it was not easy to provide accommodations for such an unusual visitor, but realizing the condition of the roads, and that many miles might have to be traveled before another place could be found, he said he would "fix it some way."

So after much ado, the large wood-house was converted into a bed-room, a supply of straw thrown in, and the guest invited to retire. It was with great difficulty that he was persuaded to accept the invitation, as he evidently preferred to take the overland route to his favorite haunts, but at last he was secured and left to enjoy his solitary meal of browse, which the men had brought in huge bundles upon their shoulders.

The three men were hunters, and the stories they told of adventures in the forests were very thrilling, and far more interesting to Nellie and her brothers than the brightest of fairy tales.

When at last Nellie laid her head on her pillow, it was so filled with visions of glaring eyes and prowling forms, that it was utterly impossible to coax sleep to visit her eyes. At last, she grew so tired of lying awake, that she arose softly and stole from the room. The house was very dark, and she could hardly find her way down the long stairs and out through the dining-room and kitchen.

As she passed her mother's door she heard her mother say, "Who's that," but she kept so very quiet, that her father said, "Oh, it's only the moose thrashing around," so she passed on and stealthily opened the wood-house door.

There, in a bright patch of moonlight stood the moose.

Nellie was frightened, and was about to run back when the animal gave a little stamp with his hoofs, and said very pleasantly, "Come right along, little girl; it has been many a day since I have seen so pretty a face as yours."

Nellie blushed, for a compliment from a moose is a rare thing, and she felt immensely flattered.

The animal stamped again and said, "Can you tell me where the men who brought me here have gone?"

Nellie replied that they were asleep, and inquired if the moose would like anything.

"Alas!" replied he, "there's" but one thing I desire, and that is freedom."

Then he told her of his forest home where the birds sang in the trees in summer, and the rabbits darted in and out of the bushes, and where the browse was tender and green, and the wild animals roamed at will through the leafy shades, and were like one vast happy family. "But," said he, "I must now belong to what men call a circus. No more happy strolls by the water's edge, but instead, I must ride about in a dismal cage, and be looked at by vulgar men and women. A friend of mine was once in a circus and escaped; he told me these things."

Nellie wiped her eyes in sympathy, and the moose shook off a tear from his brown cheek as he continued:

"Then I shall be trained to perform for the people, and they'll pierce me with sharp spears if I rebel, and perhaps I, a moose from the famous Moosehead lake, will be placed side by side with a cage of monkeys!"

Nellie wondered how he knew anything of monkeys, but said nothing, for the moose, coming as near her as his chains would permit, said in a plaintive voice: "You have heard my story; now, will not the sweetest of little girls allow me to escape? If you will open the door and unfasten the chain, I can be far away before my cruel captors know it, and I will tell all my friends of the brave little girl you are, and they will be your friends forever."

Nellie hesitated. She knew it was wrong, but she was very much afraid to refuse; besides, she did really pity him, so she softly lifted the bar which held the door fast and was about to try

to unfasten the chain, when a loud, rumbling noise broke on her ears. The whole house seemed falling, and as the moose dashed out of the open door she screamed and—awoke.

She was lying in her own little bed and all around was darkness, but through the house she could hear the sound of wild, confused questions, and the tread of many feet about the different rooms.

She sprang up and ran down stairs to her mother's room. "Oh, is he gone mamma?" cried she. "I did not mean to let him go, but I was so afraid, and they were going to punch him and make him sit with the monkeys—"

"Why, Nellie, what are you saying?" cried her mother in amazement. "The moose is all right, only he pulled the wood-pile over onto him."

GOOD HEALTH.

Light and Near-Sightedness.

Professor Pickering, of Harvard Observatory, points out in *Nature* that the color of gaslight has nothing to do with its painful effect upon the eyes of students and others. To test this question, he had a tin lamp-shade constructed, consisting of a tube six inches in diameter by eight in length. One end was closed by a reflector, and the other by a piece of very light blue glass. Two holes were made in the sides, through which passed the glass chimney of an argand gas-burner. By experimenting with a shadow photometer, a position was found where the light received on a book was of the same intensity and very similar color to that from a window in the daytime at a distance of about six feet. A few minutes reading, however, was sufficient to convince him that the new light was far more trying to the eyes than an ordinary gas flame would be, the ill effects being due to the intense heat thrown down by the reflector. And this, he thinks, is the source of the whole trouble in the ordinary gas-burner. The heat radiated by the flame, the heated chimney and shade, and reflected from the printed page and all other white paper lying on the table, dries the eyes, the lids, the forehead and temples. Temporary relief may be found by bathing the face and eyes in water, but it is only temporary. The hot, dry air from the lamp is also harmful, and no doubt contributes its share of injury to the vision. These evils may both in part be remedied by placing a pane of glass so as to intercept the rays about the lamp before they strike on the book or the face; but it must be placed at such a distance from the lamp as not itself to become heated.

The hotter the flame the whiter it is, and the more light is thrown off in proportion to the heat. Hence, oculists are recommending lights as the students' and moderator lamps, which burn with a small, hot and very brilliant flame, as compared with that furnished by the argand and fish-tail burners. Statistics, said Professor Pickering, show how alarmingly prevalent near-sightedness has become of late among students. Hence anything which will tend in the future to prevent this widespread defect will be a boon to mankind. He had great hopes of the electric light in this respect. In it there was the maximum of light with minimum of heat. The ever-varying intensity was an objection, but he thought we might look forward to the success of the light from the incandescent carbon strip, in the near future, as a remedy for "the most widespread evil that afflicts the human vision."

Unsuspected Poisons.

It seems as though we are bound to undergo a certain amount of poisoning, eat what we will, and it is, upon the whole, perhaps, a happy thing that we are, as a rule, able to submit to it with so little interference with our mental composure. The *Pharmaceutical Journal* quotes the opinion of an eminent analyst, from which it appears that decided symptoms of poisoning result more frequently than we are aware of from any considerable consumption of potatoes. Among the poorer classes, who live largely on potatoes, such symptoms are said to be common, more particularly when the tubers are very young or very old. Such potatoes, we are told, contain considerable quantities of solanine. The poison was found in very unmistakable quantities in the stomach of a man who had been, for two or three days previous to his death, living on nothing but raw, unripe potatoes, and there seems to have been no room for doubt that this diet accounted for the presence of the poison. It is said to be found chiefly, if not entirely, in the skin of the potato, and is soluble in boiling water, and we may, we suppose, assume therefore, that a very young or a very old potato, boiled in its skin, must be, to some extent, permeated with solanine, and must be unwholesome to an extent that may become serious, if partaken of in large quantities.

Another unsuspected source of poison is said to be maize or Indian corn. A disease as fatal in Italy as consumption is in this country, is attributed entirely to the exclusive use of this cereal, which is thought to be especially dangerous if ground in a damaged condition—damaged, we suppose, by incipient decay, though that is not stated. There is said to be one remarkable fact connected with the disease which is thought to have its origin in this source—the disease known as pellagra. Sufferers from it who commit suicide, always do so by drowning,

DOMESTIC ECONOMY.

CUCUMBER MANGOES.—Select the largest sized pickling cucumbers, and put them into a strong brine for two weeks; then take them out, drain well, and heat the brine to a boiling point. Pour it over the pickles immediately, and let them stand until the next day. Repeat this process nine times, and after they are cold the last time throw them into pump water for eight hours. Drain them well, and dry each one upon a coarse towel, then with a sharp knife make a slit in the side and remove the seeds. Make each one perfectly dry, and fill with the following mixture: To three dozen cucumbers take six large onions, chop them very fine, and add half an ounce celery seed, one ounce turmeric, one pound white mustard seed, one ounce chopped mace, half an ounce powdered nutmeg, half a pound grated horse-radish and a quarter of a pound of ground mustard. Mix all into a paste with a cup of salad oil. Tie a string around each pickle in order to keep the filling in, and pack them down into a stone jar. Take as much vinegar as will be necessary to cover them, and let it boil up once with a handful of cloves, a head of garlic, and a tablespoonful of sugar. Pour this over the pickles while it is hot, and tie the jar closely. Do not open for five or six weeks, and they will be ready for use.

PICKLED PEACHES.—Take seven pounds of sugar to one quart of vinegar, boil the peaches in this until a broom splint will easily pierce the skin; stick some cloves into the peaches before putting them into the vinegar, and scatter a handful of stick cinnamon over them. If you have only ground cinnamon in the house, make a little muslin bag and put the cinnamon into it and boil in the vinegar. If the amount of sugar frightens you, do not weigh it, but just keep putting it in until the right taste is imparted. Some extremely fastidious cooks peel the peaches and do not boil them, but pour hot vinegar over them for several mornings; but I confess that I like them best "cloth and all," as the little girl said. Peaches may be put up after this recipe; they, however, ought to be peeled, the skin is so tough and has no association of down or red cheeks connected with it.

GREEN CORN.—A novel way to serve green corn, and one which is pronounced a notable addition to the house-wife's bill of fare, is as follows: Take one dozen ears of tender corn, choosing ears that are nearly of the same size and those of medium size; grate them; then add one quart of sweet milk, in which you have stirred till free from lumps three tablespoonfuls of flour, a quarter of a pound of butter, or a piece as large as an egg will do; four eggs, whites and yolks beaten together, with pepper and salt to your taste, are all the ingredients called for; butter a large earthen pudding dish, and bake this mixture for one hour; this will be long enough if the oven is hot when the dish is put in. This is to be served with meat and potatoes as a vegetable, though with the addition of sugar, and with a rich sauce, it takes the place of a pudding.

PEACH MERINGUE.—Put on to boil a quart of milk omitting half a cup with which to moisten two tablespoonfuls of corn-starch; when the milk boils, add the moistened corn-starch. Stir constantly until thick, then remove from the fire; add one tablespoonful of butter, and allow the mixture to cool; then beat in the yolks of three eggs till the mixture seems light and creamy; add half a cup of powdered sugar. Cover the bottom of a well-buttered baking dish with two or three layers of rich, juicy peaches, pared, halved and stoned; sprinkle over three tablespoonfuls of powdered sugar; pour over the custard carefully, and bake 20 minutes, then spread with the light-beaten whites well sweetened, and return to the oven till a light brown. To be eaten cold with rich cream.

PEACH PUDDING.—A delicious peach pudding is made by putting enough whole peaches (with the skins removed, of course) in a pudding dish and pouring over them two cups of water. Cover the dish, and set in a hot oven. When the peaches are soft, take the dish from the oven, drain off the juice, and let it stand until it is cool, then add to it a pint of sweet milk, four eggs well beaten, a small cup of flour with a teaspoonful of baking powder mixed with it, stirred in so gradually and carefully as not to be at all lumpy, a tablespoonful of melted butter, a little salt and a cup of sugar; beat them all together for three or four minutes, then pour over the peaches, set the dish in the oven, bake until the top is a rich brown. Serve with sugar and cream.

BREADING.—The "breeding" of any article, consists of simply rolling its moist surface in sifted bread crumbs or cracker dust; if the crumbs are unlikely to stick, the article is next dipped into beaten egg, and then again rolled in crumbs. The crumbs should always be sifted so that they may be of one size, and as fine as possible, or they will be apt to fall off during frying. They are made by drying stale bread, rolling it fine, and sifting it through a fine sieve; the coarser crumbs may again be rolled and sifted, or kept for stuffing or puddings. Crackers can be rolled in the same way; cracker dust is sold ready for use.



DEWEY & CO., Publishers.

A. T. DEWEY. W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the advance for each THREE MONTHS DELAY which may become necessary on account of the non-receipt of the paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20
Half inch (1 square).....	\$1.50	\$3.00	10.00
One inch.....	2.00	6.00	14.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. BYRONG

SAN FRANCISCO:
Saturday, September 23, 1882.

TABLE OF CONTENTS.

EDITORIALS.—Baron Bates, 6th; Work of the Immigration Association; A Local Febrile, 213. Mrs. Mark Atkins Lynch, State Fair Notes, 216. The Week; Cutting Up the Pork; The Progress of Civilization, 220. The State Fair of 1882, 221. The State Fair, 221-23-27. The Old Home and the New one, 224. Parents and Inventors, 232.

ILLUSTRATIONS.—Thoroughbred Short Horn Bull, Baron Bates, 213. Method of cutting pork, 220. The Old Home, The Remodeled Home, 224. Plans of Interior of Old and New Homes, 225.

CORRESPONDENCE.—Profile of Alfalfa; The Asia-Pacific Convention at Sacramento, 214. THE GARDEN.—"Going to Grass," 214.

THE APIARY.—California Bee Notes, 214-15. THE VINEYARD.—Varieties and Care of Cuttings, 215.

SERICULTURE.—Why the Mulberry Tree Should be Cultivated, 215.

FORESTRY.—Forest Trees of California—No. 13, 215. AGRICULTURAL NOTES, from the various counties of California, 216 and 232.

PATRONS OF HUSBANDRY.—California Farmers' Mutual Fire Insurance Association; State Grange Association, 216.

HOME CIRCLE.—Go Away (Poetry); Aunt Keziah's Story, Hints to Home-Makers; Pomogranate Drink; Marriage, Paraphrase; A New Milk Tester, 218. Chaff; Honesty in Building; The Sabbath Day, 219.

YOUNG FOLKS' COLUMN.—Nellie and the Moose, 219.

GOOD HEALTH.—Light and Near-Sightedness; Un-suspected Poisons, 219.

DOMESTIC ECONOMY.—Cucumber Mangoes; Pickled Peaches; Green Corn; Peach Meringue; Peach Pudding; Breeding, 219.

QUERIES AND REPLIES.—How I Raise Blackberries, 220.

ARBORETCULTURE.—Questions and Suggestions, 225.

MISCELLANEOUS.—The Forestry Congress, 225. State Fair Premiums, 227-32.

Business Announcements.

Benicia Agricultural Works, Benicia, Cal.
Triumph Grain Drill, Baker & Hamilton, S. F.
Wagon, Studebaker Bros., Manufacturing Co., S. F.
P. Ows, ex. Frank Bros., S. F.
Chamuel Iron Harrow, Benicia Agricultural Works, Cal.
Ely-Moeker Sun Drier, Meeker & Porteous, S. F.
Agricultural Implements, Hawley Bros., S. F.
Abel Stearn's Ranches, A. Robinson, S. F.
Hortop Buggies, David N. Hawley, S. F.
California Refrigerator, Hobby & Ellsworth, Sacramento
Manufacturers Wanted at 425 Front St., S. F.
Squirrel Poison, A. J. McLeod, Livermore, Cal.
Artificial Limb, J. W. Thompson, Pittsburg, Pa.
Cream Clearer, California St. S. F.
U. B. Star Windmill, D. C. Paul, Livermore, Cal.
Rosen, The Dingee Conard Co., West Grove, Pa.

The Week.

The early storm which visited the foothills of the Sierra and some parts of the great interior valleys was notable in its extent and features. Our correspondence this week shows that the precipitation was enough to drench the soil to a depth of several inches. The hail in the foothills did some injury to exposed crops, and the rain was thought to be enough to injure the dry feed. On the Sierras there was a snow flurry—a foretaste of the winter, which is a reality on those lofty peaks and plains. So far as we have heard, the storm was wholly confined to the parts of the State east of the Coast range. After the storm has come a period of summery mildness, with mornings of delightful balminess of air and brilliancy of sunlight. "What a perfect morning!" is the general exclamation—for some mornings are better than others, even in California.

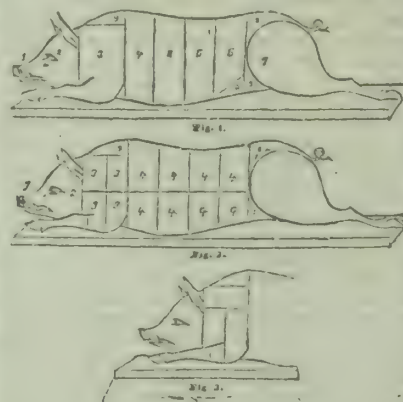
The fairs go on. This week Stockton is the center of attraction, and next week San Jose

will entertain the multitude. We publish this week a RURAL of extra size, and with an enlarged edition to allow the distribution of copies at the Stockton fair. To those who may see the paper for the first time we may say that our fair time issues do not fully represent the scope of the paper, as many valuable matters are crowded out by the crush of fair reports. We can assure all that the RURAL will be better when we can settle down to the quiet discussion of farm work and farm life, as is our custom from week to week.

Cutting up the Pork.

Now that winter is drawing on, and the pork is hardening under the influence of the fall feed of grain, it will be timely to put in a few words about cutting up pork for the manufacture of salt pork and bacon. More and more of this work is being done each year by California hog growers, and the smaller towns are coming to be supplied by the neighboring farmers to a much greater extent than formerly. It is quite likely that, by a little work and care, the pork grower can realize much more for his animals if he will work them up into salable form himself, than if he should dispose of them alive to the butcher, or the agent of the city packers. This is being done by men in different parts of the State, and there is room for much more of it, because it is ridiculous to ship hogs to San Francisco, and then to ship back bacon to the villages which lie near the ranches. Freight and commissions, and packers' and dealers' profits can be saved by a more direct trade between the farm and the village.

There are many ways of cutting up the hogs, each packing center having to a degree local methods, but there are some leading styles of cutting which are applicable everywhere. We find in the Boston *Cultivator* some diagrams of the cuts made by the packers in that city and a description of the same. Fig. 1 illustrates the manner in which the various parts of the hog are cut when it is desired to make mess pork. The sides of heavy, well-fatted hogs



Methods of Cutting Pork

are used altogether. No. 1 is the snout, 2, the head; 3, the shoulder; 4, shoulder cut; 5, middle cut; 6, flank cut; 7, ham; 8, the rump; 9 goes into lard. The ham shoulder and head are not used in mess pork, simply cut in strips, as indicated by 4, 5, 6, which latter go into the barrel.

The hog is split through the backbone and no bones are taken out. Each piece is properly flanked and "back-strapped." The pieces, of which there must not be over sixteen, are placed on their edges in the barrel and the meat must weigh 196 pounds. It will thus be seen that hogs of a certain weight only can be cut for mess pork. Scattered between the layers of pork and at the bottom and top of the barrel, must be placed not less than forty pounds of good foreign salt, or forty-five pounds of American salt, and the barrel must be filled with clear brine as strong as salt can make it.

Clear pork is made from the sides of extra heavy, well-fatted hogs, cut, selected and packed the same as mess pork, except that the backbone and half the ribs are taken out. Extra clear pork is the same as clear, except that the whole of the ribs are removed.

Mess ordinary, or thin mess, as it is sometimes termed, is the same as mess, only it is cut from hogs which are too light for mess, but which are reasonably well fatted, and must not exceed 22 pieces to the barrel.

Prime mess pork is made from the shoulders and sides of nice, smooth fat hogs, weighing from 80 to 170 lbs. net, cut regularly into square pieces, weighing as nearly four pounds each as possible, the shank cut off close to the breast. Fig. 2 will show how this style is cut: 1 is the snout; 2, head; 3, 3, 3, the shoulder; 4, 4, 4, 4, 4, prime pieces; 7, ham; 8, rump; 9, parts which are made into lard. Each barrel must contain 200 lbs. of green meat, in the proportion of 20 pieces of shoulder to 30 pieces of side cuts, or prime pieces (the shoulder pieces not to exceed 90 lbs. in weight), 20 lbs. of good coarse salt, and four ounces of saltpeter.

In prime pork still another variation is made in the style of cut, this time, however, confined to the shoulder, which is cut in three pieces as shown in Fig. 3. It is packed with side cuts, or prime pieces, the same as in prime mess pork, and the barrel may also contain three

half heads (the brains, tongue, snout and ears having been removed, and the heads soaked before packing), three rumps, and the balance shoulder pieces. Each barrel must contain 200 lbs. green meat with salt and brine added, the same as in mess pork.

Barreled pork is the great specialty of the Western packers, although they are also very large manufacturers of bacon. In Boston and vicinity, on the contrary, the business, which is very extensive, is principally confined to box meats or bacon.

From small hogs, weighing 140 to 180 lbs., is made what is called long ribbed bacon, used largely for foreign shipment. In making it, the ribs are not taken out, but the backbone and neck ribs are; the breast-bone is cut off with a knife, the shoulder-blade is taken out, the shoulder-bone is left in, and the back ends and brisket are trimmed off. The side is then dry-salted, Turk's Island salt being used, and after it is sufficiently cured it is all ready to be boxed up for shipment.

Boston clear sides are made from selected hogs, which ought not to weigh less than 250 lbs. net, and are considered the best sides made, being in great demand in the South. They are made by taking out the spare-rib, chine and all other bones, and cutting off the ham, which leaves a boneless side.

Short clear sides are the same as the former, except that they are cut off behind the shoulder; that is, only the meat between the fore and hind leg is used. Staffordshire sides are cut the same as long clear, except that the shoulder bone is left in, and they are made of the next lower grade of hogs. Stretford sides are the same as Staffordshire, with the belly end of the ribs left in. In the Cumberland sides the backbone is sawed off and removed, the ribs are scribed; that is, sawed in two, and the hock is left on. What is known as long backs are fat strips cut the entire length of the hog, entirely free from bone or lean meat. Smoked breakfast bacon is a choice article made from thin brisket pieces, and mildly cured. Large quantities are consumed in the Eastern States. These cuts of bacon sides described above are standard; but there are many variations which are cut to order, and given fancy names. Except the breakfast bacon, none is smoked, all being sold dry salted. In packing for shipment boxes holding from 500 to 600 lbs. are used.

The Progress of Civilization.

The onward progress of civilization brings out these two points most conspicuously: 1. The world is getting too small for the material and scientific appliances of mankind. 2. History, science, art, etc., are getting too large for human capacity, meaning thereby for the general study of an individual. All who have lived in the country as children, can recollect how small was the area familiar to them; how great was the awe with which they ventured outside the precincts, and how their minds were exercised with the consideration of how boundless were the forests, wildernesses and spaces beyond. When they grew to manhood, the little space became contemptible. The area was enlarged to the national boundaries, traversed at railway and steamboat speed. So it has been with the world and the race. In olden days nations ventured but little beyond their limits. Travelers crawled over a few hundred miles along a path beset with dangers and difficulties, to return and boast of what they had done. To the mind of the people, the world was a limited space intersected by great and storm-tossed oceans. Now, that the world can be traversed in a few weeks, and a message can be sent round it in a few minutes. Even the sun has become but a slow coach. The storm-tossed oceans were our best highways, but they have given place in the race of competition to the land transit; and soon a trip into central Asia will be but the excursion of a few days. The impression of the globe now conveyed is that of littleness, a growing feeling of confinement and want of space—for after all, what now is 24,000 miles, and that is its utmost girth? If invention continues, this conquest of matter by mind, the feeling cannot fail to increase and to become more generally entertained.

As our mind grows big, and the world grows small, the capacity to grasp the creation increases, though this can never be anything to us but a fathomless well. That the earth should be but a dot in the heavens whirling round the sun, was incredible to people of the middle ages, while to us it appears but a small estate. To them it was so vast that they could not comprehend its insignificance in the universe; to us, as it begins to appear insignificant, we can comprehend its insignificance in creation. All this shows that the mind of man is enlarging; that the food on which it feeds is multiplying; and while that food, notwithstanding the greater mental comprehensiveness, has grown in bulk, to an extent not to be grasped, the globe itself decreases in bulk to the enlarged capacity, to an extent which is beginning to make it appear small.

DESERT LANDS.—The General Land Office at Washington has made the following ruling: "Lands which produce wild grass, but not in sufficient quantity to pay for cutting as hay, are desert lands, and may be entered as such; but when the character of the land is such that a crop of hay may be produced without irrigation, such land is not subject to desert entry."

QUERIES AND REPLIES.

How I Raise Blackberries.

EDITORS PRESS:—A correspondent of the RURAL PRESS wants to know how to raise blackberries. I will give my method, not because I think it the best, as I do not, but to show that a very imperfect, easy-go-lucky method will be rewarded with fair success: I have about two acres of pretty steep, rather rich hillside, facing north, so it keeps moist rather late in the season. On this two acres I have 200 apple trees set, three to five years, upon which are now perhaps 30 bushels of apples. They are set 20 ft. apart, and between each row is a row of blackberries. Where there are no trees, the rows of blackberries are eight feet apart. Being so steep, of course I can cultivate but one way, which I do with plow and cultivator, and very much with hoe, cutting out the sprouts many times during the season. I also repeatedly, with a corn-cutter, trim the canes to a height of four to five feet. It is remorseless work to keep the canes within bounds, so that I can get in with horse and cultivator in spring, and with baskets and boxes, when the berries ripen. And still I think I let them grow too thick. The canes, thinned out considerably, occupy a space three to four feet wide, the plow and cultivator, the remainder. Perhaps two or three canes grow to a foot in length, of the row. One cane would probably be better, except in the orchard where they have more space, and the rows are much thicker, wider and taller, and, I may also add, more productive and of larger berries. The varieties are Lawton and Kittatinny. The Lawton is a large, round acid berry; the Kittatinny, long; will not average quite so large; sweeter than the Lawton, and, by some, preferred to the Lawton, as the acid of the latter is rather sharp, especially if not quite ripe. Time of ripening of each, about the same. In 1880, I sold the first berries June 26th; last, September 15th. In 1881, sold first berries June 15th; last, September 18th. In 1882, sold first berries June 25th; last, perhaps to-day, September 12th. For our own use, the seasons have been much longer than the above would indicate. We have picked berries in November. In 1880 I sold 3,877 boxes (pounds) of berries for \$250.30. In 1881 I sold 5,474 boxes for \$354.02. This year I sold 3,166 boxes for \$300, or a little over. For the most part, I peddle the berries over town; sometimes sell to the cannery; and often people come with wives and babies for a little picnic among the brambles, get the children's faces well plastered with berry juice, have a jolly good time being pricked with the remorseless bushes, and pay me four and five cents per pound for all the berries they pick.

I do not use stakes or wires. I do not irrigate. I do not know how much my opinion is worth, but it is this: I think irrigation in general will not pay. It will produce larger, finer-looking berries, but they will be too acid, and not sufficiently sweet. It will doubtless also produce more, and keep them in bearing for a longer period, but they require shade to keep them moist, and to prevent their drying on the bushes before maturity. My two acres are only about five rods wide. Above this, and extend far above it, up the hill, I have a forest of eucalyptus and oaks, so in reality there is much of the day when portions of the land are in complete shade.

Blackberries are raised near me, on level land, but, so far as I have seen, they do not flourish so well as mine. Indeed, I would not recommend anyone to raise blackberries except for his own use, unless he had a piece of ground specially adapted to it. This season has been rather dry, which accounts for the lesser quantity that I raise this year. The apple trees are also occupying more and more space each year. I find very little difference in value between the Lawton and the Kittatinny. Neither of them, when fully ripe, as they should be before they are picked, can be shipped any great distance. Berries picked in the morning will often have many moldy ones in the pound-boxes before night of the next day, if not sold. I believe I have answered, so far as I am able, all the questions of your correspondent. I hope some one who knows more about it than I do, will give us the benefit of his knowledge, as I am anxious to learn.—S. P. SNOW, Santa Barbara.

Grape Prices.

EDITORS PRESS:—Will you be kind enough to publish, in your next issue, the prices which are being and to be paid for winter grapes by the wineries in different parts of the State, including the Mission grape?—F. S. BENNETT, Oakland.

We are not fully informed of the rates being paid, but, so far as we know, the range is from \$25 to \$30 per ton for all kinds, with \$32.50 in some cases for Zinfandel, Reisinger and a few other especially fine wine grapes. We may have more specific information by next week.

WORTH MORE THAN IT COSTS.—F. Emerson, of Strawberry Valley, writes as follows: "Although this is not really a farming country, I find your paper a welcome visitor. I can hardly content myself and family without perusing the 'Home Circle' and other departments of your good paper. I hear through its columns of the success of friends in different parts of the State. We have several fine orchards in this vicinity. Our apple crop was very good last year, netting us a good profit. Many are going to plant more trees. I think I shall save more than my paper costs by the lessons in horticulture. Success to your paper."

The State Fair of 1882.

Last week, Sacramento, the beautiful capital city of California, opened her gates to the multitude, and the bustle of "fair week" filled her streets. The fair, although it did not in attendance and receipts reach any higher mark than has been attained by the exhibitions of former years, was still a success, and reflected credit upon the industrial progress of our people by the praiseworthy displays which were made. Reviewing the fair as a whole, the Bee of Monday afternoon observes: Considering the unpromising weather, the attendance at both park and pavilion was good, although less, of course, than it otherwise would have been. A comparison of the receipts of last year and this show that the latter were behind the former \$554.65. The exact figures, as given below, leave the deficiency entirely upon last Saturday:

	1881.	1882.
Monday	\$4,461.75	\$3,874.50
Tuesday	2,488.55	2,577.30
Wednesday	2,642.25	2,587.25
Thursday	3,310.50	4,068.70
Friday	2,882.75	2,653.57
Saturday	1,861.50	1,331.25
Totals	\$17,647.30	\$17,092.65
Deficiency for 1882.		\$554.65

Notwithstanding the above shows a deficiency for the present year, it will not be known which is to be credited with the greatest net proceeds until the expenses of the fair are figured up. The prospect is, however, that this year will show a larger balance in the society's favor than last.

The Pavilion.

The display in the pavilion, judged from an agricultural point of view, was not up to the standard of some former fairs. There was too much merchandise and too little produce. This is due in some measure of course, to the apathy of producers, as the old spirit of emulation in the display of California products has to some extent faded away. However, there were exhibits which were a credit to the growers. We mention the following:

W. H. Jessup, Haywards, showed a fine collection of dried prunes, peaches, figs, etc. A very good display. He exhibited also varieties of plums, pears, nectarines, apples, almonds, chestnuts, etc.

McGregor Bros. displayed in large number and great variety beets, melons, corn, tomatoes, potatoes, garden vegetables, etc.

Morris Bros., Sonoma, made an attractive exhibit of fine grapes. There are sixty odd plates of grapes, such as the white Hamburg, white Chasselas, black Malvoisie, black Spanish, Burger, Johannisburg, Reising, etc.

J. Lyon displayed a fine lot of apples, tomatoes and peaches.

Robert Williamson had a very large exhibit of fruit, and much of it of semi-tropical variety, such as oranges, lemons, limes, etc. He showed a large number of plates of plums, almonds, peaches, pears, apples, etc. It is an exhibit that attracted deserved attention and showed the fruit quality of foothill lands.

David Osborne, Courtland, exhibited a large and good collection of apples, peaches, pears and quinces, etc. Some of his varieties were notable for the large size of the fruit. It was a fine exhibit as a whole.

John and George Artz, Brighton, showed a large tobacco plant, Connecticut seed leaf.

Wood & Curtis, Sacramento, showed Woods, Sr. round barley. It was labeled as producing 125 bushels to the acre.

Mrs. H. Cronkite, Sacramento county, had roll and firkin butter, and James Asken roll and firkin butter.

A very attractive showing was made of California olive oil, as grown and put up by Mrs. L. E. McMahan & Son, of Dixon, Solano county. The display was worthy of thoughtful attention, and is full of useful suggestions as to the capabilities of the soil of California.

Dale & Co., Sacramento, made a very interesting exhibition of silkworms, cocoons, moths, reeled silk, clusters of cocoons, worsted silk, spooled silk, etc.

R. S. Lockett, Sacramento county, exhibited a large, fine collection of grapes and raisins. It includes of table and wine grapes: White Muscat of Alexandria, white Assyrian, Teher Zagos, white DeNiece, Flame Tokay, black Morocco, black Hamburg, black Lombardy, black Malvoisie, black Portugal, black Burgundy, black Prince, black Hungarian, Emperor, Catawba, Isabella, Orleans, Fontanbleau, Frontignan, Mission, Zinfandel; also, white Muscat of Alexandria raisins, Assyrian grape raisins and Fehir Zagos grape raisins. It is a noticeable exhibit, and one that commands attention, and in which Mr. Lockett justly takes pride.

The display by Hon. John Bidwell, of Chico, of the products of the Rancho Chico, was essentially the leading agricultural exhibit. It embraced boxes of wheat as follows: White California, product to the acre, 31 bushels; snowflake, 16½; silver chaff, 37; white club, 36; Sonora, 37; Australian blue stem, 38; Nepal barley, 27; blue smooth barley, 13½; New Brunswick oats, 20; English oats, 28½; Clawson wheat, 23½; Andrus Island wheat, 38; Atlantic Greek, 35; white Chili, No. 1, 42; black two-row barley, 43; Scotch two-row barley, 36; black-bearded centennial, 31; Macaroni wheat, 25½; Defiance wheat, 43; Mission, 32; Carlatton barley, 28½; black-bearded Macaroni wheat, 23;

large white corn, alfalfa seed, Propo wheat, 34½; white California wheat, 31½; Norfolk prize wheat, 30½; Champlain wheat, 36½; winter Gold-dust wheat, 40½; bearded red wheat, 19; brown Egyptian corn, black sweet corn, amber sugar cane, California rye, brown corn, Sweet Lake club wheat, 46; Australian wheat, 43; Mexican barley, 38; Irish barley, 27; white Egyptian corn, California pop-corn, Stowell's evergreen corn, large yellow corn, potato oats, 29; Russian white oats, 23; Tagernog wheat, 20; Tuscan wheat, new prolific wheat, silver chaff wheat, Genesee wheat, white California wheat, Odessa wheat, pride of Butte wheat. Of each of all these wheats some of the straw and heads are shown in bundles. The General also exhibits samples of the Chico mills flour, the new and now well-approved Casaba melon, sugar beets, fine watermelons, large squashes, sweet potatoes, dried plums, peaches, prunes, etc.; also 28 varieties of pears, 5 of plums, 10 of grapes, 10 of peaches, and 31 of apples. He shows also chestnuts on the limb and the Turkish watermelon.

P. H. Murphy, of Brighton, makes a fine display of grapes and peaches, etc., there being these varieties: Table grapes—Flaming Tokay, Muscat of Alexandria, Blue Malvoisie, Black Hamburg, Rose of Peru, Black Prince, Royal Muscatine, Black Ferrar, Emperor, Isabella, White Rein de Muie, White Sweet Water. Raisin grapes—Muscatella Gordo Blanco, Muscat, Alexandria, Royal Muscat Edine, Fiber Zagos, Tokay White, Tokay Red, White Malaga. Wine and Table grapes—Zinfandel, Black Burgundy, White Reising, Catawba, Red Traminer, Orleans, Black Malvoisie, Black Hamburg, Red Mountain, Rose of Barbary, Black Hungarian, Frankingdale, Rose Scheislaas, Verdelho, Mission of Lower California, Muscat Frontignan. Peaches—McIntyre's free, Saiway, Early Crawfords and Late Crawfords. Figs—White Serian, Brown Ichia, Black; four varieties of pears and one of plums.

At the Park.

The stock department at this year's fair contained some very fine and large exhibits, and the parades on some of the mornings were witnessed by a large concourse of people. The Record-Union gives an account of Thursday morning's parade, which is interesting: As each animal passed the judges' stand, Superintendent Hancock, standing on the track, announced the name of the animal and owners to President La Rue, who repeated the same from the judges' stand, thus conveying interesting and important information to the large audience present. The old saying of "age before beauty" was followed in arranging the procession. Blackhawk, a bay gelding, 31 years of age, led the van. When he arrived in front of the judges' stand, it was announced that this horse took the first premium as a roadster at the first State fair, which was held in this city in 1853. Blackhawk was brought to California that year from New Hampshire, and was two years old. He is a fine-looking, well-preserved animal, belongs to the Union Wood and Coal Co., and does heavy work every day. Next in procession followed carriage teams.

Mr. Masset, of Dixon, drove to a light-top buggy a handsome span of well-matched grays.

Mr. Thomas, of Sacramento, a fine span of roadsters.

J. W. Wilson, a span of matched blacks belonging to R. S. Carey.

Mr. Lyall, of Yolo, a span of well-matched carriage horses.

W. R. S. Foye, of Sacramento, a beautiful span of coal-black, spirited horses.

J. M. Robertson, a gray span of carriage horses.

W. J. O'Brien, a single roadster.

S. R. Hatch, of Solano, Admiral, a roadster.

S. R. Caldwell, of Sacramento, a large gray roadster.

Mr. Crossett, of Elk Grove, two horses of all work.

The stallion Elmo as a horse of all work.

J. B. Haggin, of San Francisco, bay stallion Zulu Chief.

Dr. Hicks, large bay stallion Proctor.

E. H. Miller, of San Francisco, thoroughbred Adalia.

J. B. McDonald, of Sacramento, a thoroughbred filly by Fred. Law.

William Ross, of Sacramento, as a roadster, the stallion Victor.

E. Fitzgerald, as a roadster, a large bay gelding.

P. J. Shafter, a single roadster.

Mr. Leonard, of San Joaquin, a fine bay roadster.

Samuel Tuttle, chestnut mare, Susie D.

Mr. Todd, of Sacramento, a St. Clair roadster.

Mr. Webster, of Yolo, Jack Nelson, by old Nelson, a horse of all work.

J. B. Haggin, of San Francisco, Lady Gray, thoroughbred.

J. B. McDonald, Hazel Kirke, by Brigadier.

J. B. Haggin, a standard trotter, Alaska.

J. B. Haggin, Woodbine, by Electioneer, a thoroughbred.

Dr. Hicks, Privateer, a roadster.

Geddings, Jr., Alno, by Alno.

A. D. Miller, of Brighton, Buccaneer.

Mr. Harris, Louis Adams, by Nutwood.

Bay colt by Elko.

Abilina, by General Grant.

George Hearst, Jim Brown, by Foster.

W. L. Pritchard, 2-year-old filly by Bazar.

Wm. Boots, bay stallion, Nathan Coombs.

J. B. Haggin, Irene and Young Blue, by Leinster, and nine yearling thoroughbred colts that he imported this last summer from Kentucky also the thoroughbred stallions Alno and Echo.

S. S. Drake, the stallion Admiral and six of his colts.

J. B. Haggin, an imported French coach horse.

P. H. Murphy, of Brighton, draft stallion Gray Eagle, also young Conqueror.

Mr. Thomason, Sacramento county, stallion, Highland Laddie.

R. J. Merkeley, Sacramento, a Norman stallion, Norman mare, Norman filly and Norman sucking colt; all thoroughbreds.

Draft stallion St. Lawrence.

Mr. Pierce, 2-year-old draft colt.

W. A. Miller, Sacramento, draft horse Charlie.

Mr. Stillman, of Petaluma, draft stallion Tornado; also 2-year-old stallion Monarch by Tornado, and yearling colt Gertrude by same sire.

Mr. Conrod, of Yolo, a Norman stallion.

Mr. Stoneman, a draft mare.

E. Comstock, of Yolo, draft stallion Prince, two draft mares and colt.

Mr. Wick, of Sacramento, mares of all work.

R. J. Currier, a mare and two colts, horses of all work.

Mr. Trefry, of Colusa, saddle horses.

John Conrod, of Yolo, Mammoth, a large Kentucky jack.

Mr. Shippe, of Stockton, a fine jack and two jennies.

W. A. Munion, of Yolo, a large black jack.

Napoleon Miner, of Davisville, a span of 4-year-old mules.

Cattle Parade.

Col. Younger, of Santa Clara, 19 head of short-horn Durhams.

R. J. Merkeley, of Sacramento, six head of short-horn Durhams.

P. H. Murphy, of Brighton, four head of Durhams.

Mr. Wicks, of Butte, 13 head of short-horn Durhams.

R. McEneby, of Butte, eight head of Devonshires.

George Bement, of Redwood City, San Mateo county, 11 head of Ayrshires.

P. Stanton, of Sacramento, 12 head of Jerseys.

James Asken, of El Dorado, six Jerseys.

R. Lyon, of El Dorado, two Jerseys.

K. Noye, of Grass Valley, Nevada county, 12 head of Jerseys.

J. W. Kite, of San Jose, one full-blooded Jersey bull.

Mr. Cook, of Sacramento, two Jersey calves.

Major Beck, of San Francisco, 12 head of Jerseys.

Henry Pierce, of Santa Clara county, 23 head of Guernseys and Jerseys.

E. Comstock, of Yolo county, six head of Durhams and Jerseys.

Mr. Lyon, of El Dorado county, two head of Jerseys.

Sheep.

In the class of coarse wools and cross breeds, Mr. J. B. Hoyt exhibited several pens of thoroughbred Shropshire and two cross between the Shropshire and thoroughbred Spanish Merino. It is claimed that the sheep from this cross are superior and desirable for producing wool and mutton combined. Col. Younger of Jan Jose, made an exhibit of ten pens of thoroughbred Cotswolds which appear to be well up to the standard of this breed of sheep. In class 1, French Merino, the exhibit was small, consisting of a few pens of yearling rams, owned by P. Branton of Nevada. The Bloccow flock ram, owned by Mr. J. B. Haggins, made no exhibit this season. In class 2, Spanish Merino the exhibit was good and well up to the display of former years. Mr. B. F. Ballard of Woodland, Yolo county, showed 50 head ewes and rams. J. H. Stonebridge of Haywards, Alameda county, showed an equal number. These two lots of sheep elicited universal admiration and reflected great credit upon their management and breeding, and we are credibly informed that their flocks in many points of excellence have few superiors in the United States.

Swine.

The entry of swine is large. John Rider, of Sacramento, had 13 pens of the finest specimens of Berkshire. Thos. Waite, of Brighton, also had several pens of the same breed. E. Gallup, of Hanford, Tulare county, had a fine display of his famous Poland Chinas.

Poultry.

The exhibition of poultry is quite large. Nearly every coop was taken. Thos. Waite, of Brighton, was the largest exhibitor, having specimens of Light Brahmas, Leghorns, Black Spanish imported, Silver Spangled Houdans imported, White Leghorns, imported Plymouth Rock, Golden Seabright, imported Partridge, Cochins chickens. He also had Toulouse geese and Pekin ducks.

Arthur L. Tryon, of Sacramento, had Plymouth Rock and White Leghorn chickens.

J. Conrod, of Davisville, had on exhibition two trios of Cochins chickens, one game cock, and a pair of ostriches.

R. G. Head, of Napa, had a fine exhibit, including dark and light Brahmas, Langshans, Leghorns (white and brown), bronze turkeys, Plymouth Rock, Pekin and Rouen ducks.

T. D. Morris, of Sonoma, had 18 coops of imported fowls, including Game Bantams, Golden and Seabright Bantams, Black Hamburgs, buff Cochins, Plymouth Rocks, Houdons, Partridge Cochins, White-Faced Cochins, Spanish, White Leghorn, black Cochins, dark Brahmas, light Brahmas, Silver Spangled Hamburgs, white Guineas, Toulouse geese, China geese, and Brahman geese.

A WASHABLE WHITEWASH.—By mixing three parts powdered silicon (flints) and three parts powdered marble, two parts china-clay and two parts freshly-slaked lime, a paint or whitewash is obtained, which, by frequent wetting with water, forms a silicate, and becomes, after some time, as hard as stone, while remaining porous. The four substances form the body of the paint, to which any other color suitable for mixing with lime may be added. The surfaces are painted somewhat thickly with this, left to dry for a day, and frequently watered the next day, whereby the paint becomes weather-proof. This paint or whitewash may be washed without losing any color, but becomes harder and harder, so that it may even be cleaned with a brush.

THE great iron bridge of the Atlantic and Pacific railroad over the Canyon Diablo, in Arizona, has recently been completed. It is 500 ft. long, the canyon being some 240 ft. deep. The height of the bridge is 240 ft., or 14 ft. higher than Bunker Hill monument.

The State Fair.

Opening Address of Hon. H. M. Larue, President of the California State Agricultural Society.

After a few allusions to his personal relations to the Society, in view of the completion of his third term as President, Mr. Larue spoke as follows:

It is my privilege to congratulate you upon the auspicious opening of this exhibition. The fair inaugurated here to-night surpasses in many of its features most, if not all, of its predecessors. The entire capacity of the park for the accommodation and exhibit of stock has found full demand, and the display of agricultural implements and machinery is extensive, and shows continual improvement in methods of tilling the soil and gathering its products. All the available space of the pavilion has been taken and occupied. Indeed, as to this last department of the fair, the exhibition has for some years been limited and seriously restricted by the meager capacity of this building. In my judgment, we have reached a period in the history of this society when the erection of a new pavilion cannot longer be avoided. A proper exhibit of the industrial products of this great State demands pavilion space far beyond the capacity of this structure. We have reached a time when the inadequacy of the space here provided will not only greatly impair the value of the annual exhibitions of the society, but will endanger their continuance. It is a law of all enterprises and all worthy associations of men to acquire higher motives and broader aims, and this society will maintain a healthful condition and vigorous life so long as its operations are expanding. It will pass the meridian of its growth and enter upon its decline so soon as this natural tendency to expansion is arrested. The limited capacity of this pavilion has fixed metes and bounds to the extent of this department of our annual exhibitions, so that it is now arresting the growth of our society. The value of these annual exhibitions to every industrial interest of the State is such that the impairment of their usefulness should be looked upon with apprehension and alarm. The practical question, therefore, in the affairs of the society to-day is how to obtain a pavilion large enough to meet the constantly growing demands upon its space, and designed to make the exhibitions attractive as well as instructive. For the past three or four years the revenues of the society have been greatly diminished by reason of the circumscribed capacity and imperfect structure of this building. It is the part of wisdom that this obstacle to the prosperity of the society be overcome. In my opinion, a suitable building—one sufficiently commodious to meet all requirements, and affording ample space for the exhibitor—would add from \$2,000 to \$3,000 annually to the receipts of the State fair. Additional revenues would be derived from rentals of space, while the superior attractions of the exhibitions would greatly increase the attendance.

I believe that an increase of at least \$2,500 a year to the treasury of the society might be anticipated from such a source. With this fact in view, it is my judgment that the construction of a new pavilion within a year is practicable. The value of this present building, with the ground upon which it stands, is estimated at \$20,000. To this I believe may be added a like sum from the State. The society itself could with safety incur a reasonable indebtedness for the accomplishment of an object promising returns so valuable to the treasury. It could establish a sinking fund of \$2,500 per annum, without encroaching upon the volume of revenues now coming annually into its accounts; and with the proceeds from the sale of this building and ground, with a small appropriation from the State, which I confidently believe can be obtained, with voluntary donations from the citizens of Sacramento, and with a loan of \$25,000, which could be procured at a low rate of interest, and which the increased revenues consequent upon the improved value and attractiveness of the exhibition would liquidate in 10 years, the means for the erection of a large and suitable building may be had.

Three Weeks' Exhibition Proposed.

Another hindrance to the success of the pavilion exhibition, as heretofore conducted, has been the short duration of the fair. The labor and expense incident to preparation for a display, and also the labor and expense attending the care and returning of the goods exhibited, even though transported by the railroad free, are scarcely compensated by a five or six days' exhibit. I am convinced that a wise administration of the affairs of this society demand that the pavilion exhibition should be projected upon a plan which should extend the period of the annual exhibition to at least three weeks. The ideas upon this subject which have arisen in my mind are not matured or expressed here to-night with that degree of confidence which proceeds from careful examination, but for some time I have deemed it both advisable and practicable to have the pavilion exhibition extended over a period of three weeks, to open the park for the exhibition of stock during the second week, and devote the third week at the park to the speed programme.

(CONTINUED ON PAGE 223.)

ELY-MEEKER SUN DRIER

For Fruits, Vegetables, Etc.

First Premium Sacramento State Fair, 1882.

The Drier revolves easily, so as to constantly face the sun, while reflectors above, below, and at the sides multiply the power of the sun's direct rays.

Simple, Economical, Quick and Effectual.

Sun Heat only used. No Fuel. No Engineer needed.

It dries evenly.

All the Flavor and all of the Sugar preserved.

Inaccessible to Dust and Insects.

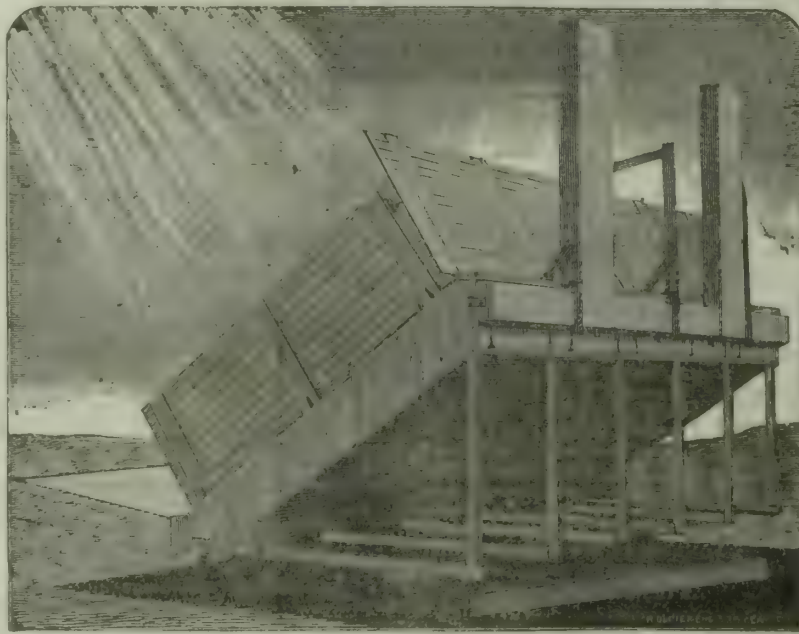
No Chemicals used.

No Flavor of Smoke, Sulphur Acid or Rusty Iron.

Does not burn the Fruit. No Failures. Fruit never spoiled.

The only Drier which makes Raisins of High Quality.

Women and Girls can handle it.



REAR VIEW.



FRONT VIEW.

Simple in Construction; Simple to Manage.

Easily moved from place to place.

It will in an hour do the work of one day's open air sun drying.

The superiority of Fruit preserved by the ELY-MEEKER SUN DRIER is indisputable. All of the sugar of the Fruit is crystallized and preserved. The flavor and all the peculiar qualities of the Fresh Fruit are retained, while by artificial heat all these qualities are greatly changed or entirely destroyed. The chemical influence of the sun's rays in purifying and bleaching is well known, and cannot be imitated by any artificial process. The sun, which has grown and perfected the Fruit, is the natural agency for drying and preserving it.

OFFICE AND FACTORY, EXCELSIOR MILLS,

BRYANT STREET,

Between Fifth and Sixth.

J. Stoddart Porteous and W. A. Meeker,

PROPRIETORS.

SAN FRANCISCO, CAL.

"Abel Stearns RANCHOS."

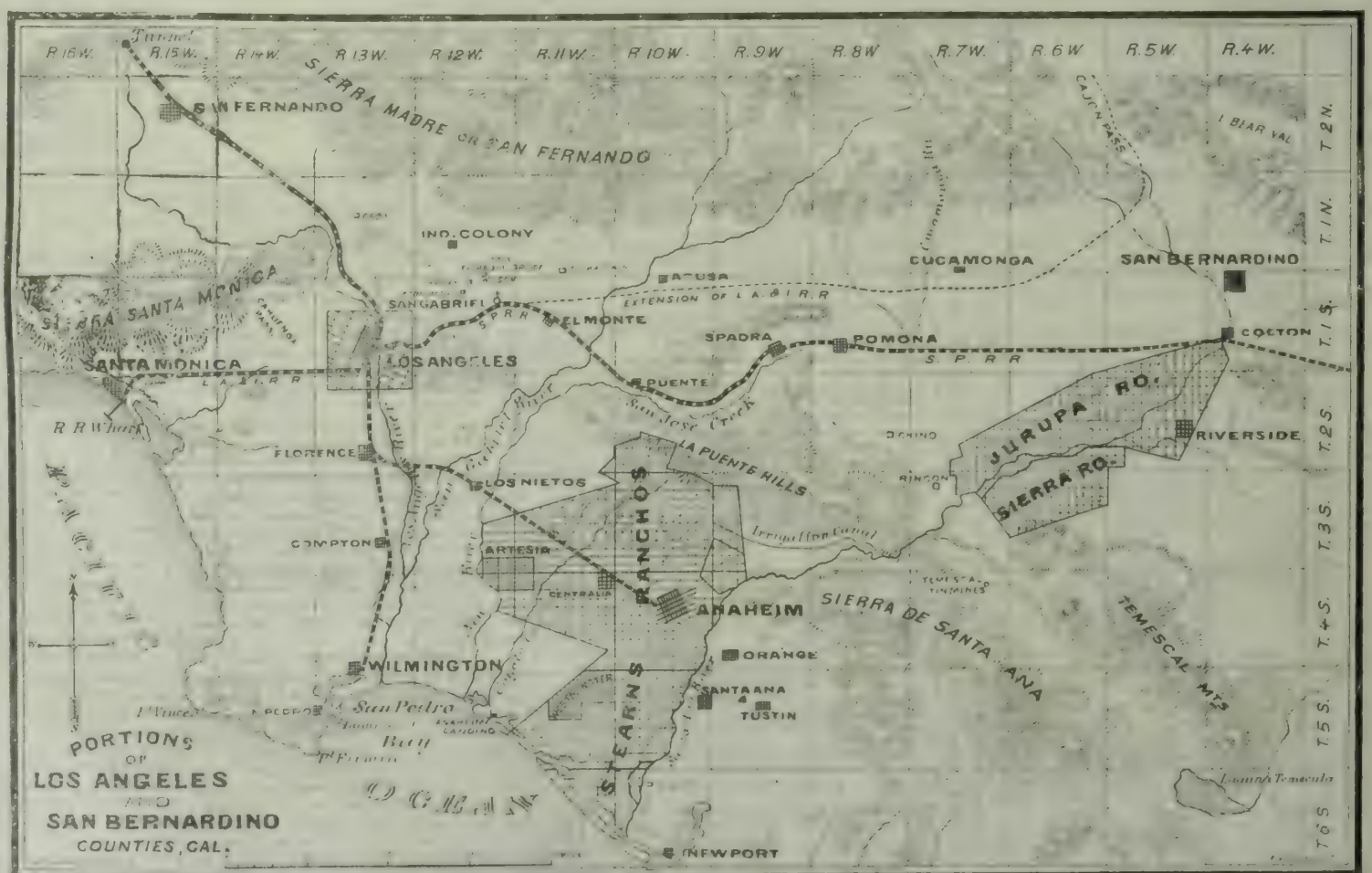
The Center of Los Angeles Valley.

Embracing Anaheim, Westminster, Artesia, Garden City, etc. Thirteen miles southeast of Los Angeles City, within the Artesian Well Belt. Hundreds of flowing pipe wells. Water near the surface. Rivers on two sides; ever-flowing creek runs through the tract. Front on the Ocean. Transportation and passage by Steamships or Railroad. Southern Pacific Railroad through the tract. Twenty-one hours from San Francisco. The unsold land for sale or lease in sections or fractions. Apply to Trustee A. ROBINSON, 318 California St., San Francisco.

Or to ROBERT J. NORTHAM, Anaheim, Cal., or concerning Westminster Colony, to REV. ROBERT STRONG, Westminster, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent. per annum.

Send for Circulars and Maps.



BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 820 California Street, S. F.

(Over Wells Fargo & Co's Bank)
Special Attention Paid to Patent Law.

N.B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

YOSEMITE HOUSE.
MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

M. COOKE E. J. COOKE
PIONEER BOX FACTORY,
Corner of Front and M Streets, Sacramento
ALL KINDS OF
Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.
Communications Promptly Attended to.
COOKE & SONS, Successors to COOKE & GAMBURY

THE DAVIS
IRON WAGON.
E. A. SCOTT & CO.,
Sole Importers and Dealers for the Pacific.
P. O. Box 293, Sacramento, Cal.
THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

President Larue's Address.

[CONTINUED FROM PAGE 221.]

When once the pavilion is placed in order, when the exhibitors have established and arranged their various displays, the increased expense of continuing the exhibition for three weeks, as against one week, will be scarcely appreciable. This proposition also admits of an extended programme of special features, such as the trial of agricultural machinery, military parades and reviews, ladies' equestrian exhibitions, and field sports, athletic contests, shooting, tournament, etc. A whole week, uninterrupted by a speed programme, is not too much time in which to make a proper exhibition of the herds, flocks and stables of the State. This would also afford time for addresses to be delivered during fair time, which, under the proposed conditions, would receive attention. Such an exhibition would have the individual attention of spectators, and would be more instructive to our people, and far more profitable to herdsmen than the divided and unsatisfactory attention now given to this great department of industry. In the third week the speed programme would have full sway, and the field sports and the turf, with their pleasures and instructions, would be far more entertaining and delightful, because unobstructed by the demands of a necessary stock display, and undisturbed in interest by reason of divided attention.

The State fair, conducted on this broader and higher plan, would more nearly fulfill the requirements of an annual display of the industrial products of the State than can ever be compressed into the compass of five or six days. That such a fair would produce a large increase of revenue to the society cannot be doubted. At the very inception of such a plan, however, lies the construction of an adequate and commodious pavilion, and with such a building, the plan here briefly outlined appears to me to be entirely practicable, and certainly such an accomplishment is very desirable.

Gentlemen of the society, the products of the vineyards, orchards, fields, wine presses, mines and workshops belonging to California, when properly brought together in an annual exhibition, will afford a display sufficiently valuable and interesting to claim the attendance of our people for at least the additional length of time which I have intimated. The industrial products of the great empire of wealth deserve and demand a more complete exhibition, both as to space and time for display, than has heretofore been attempted. If these requirements are not met, the very inadequacy of our fairs will urge them on the downward way of decline to their ultimate extinction.

The Harvest.

Again it is my good fortune to congratulate you upon the prosperity of our State, and upon the conditions of peace and plenty which still attend us as a people. The season just closing has not been remarkable for its large aggregate yield of cereals, but taken as a whole, the industries of the State have prospered, and the general results of the year will be very satisfactory. In a former address, I took occasion to point out certain facts, bearing upon the question of defertilization of our soils. In that address, instances were cited where land which had been devoted for many successive seasons to the growth of wheat, had, in later years, been more instead of less productive. The past season is not without its lesson in this regard. In the great Sacramento valley, and particularly in the largest wheat-growing sections, the rainfall for the season did not exceed 11 inches—an amount far below the average precipitation and yet I have personal knowledge of yields exceeding 40 bushels to the acre, and in a few instances reaching 50 bushels. These instances relate to summer-fallowed land, and were the results of careful cultivation. A few years since, like results could not have been obtained with less than a full average rainfall. Improved methods of cultivation are, therefore, insuring us against the reverses of dry seasons.

From the very best obtainable data, I estimate the surplus yield for the year at 500,000 tons. I place this estimate before you with a high degree of confidence in its accuracy. The information I have received leads me to believe that the yield will not exceed one-half that of an average crop. While in a few localities full crops have been obtained, in the large wheat-growing areas of the San Joaquin valley and the west side of the Sacramento valley, the crops have been very short, and in many instances almost failures. It is not necessary in this connection, to present in detail the data upon which these figures are based. Let it suffice that the statement is made upon information and judgment for whatever it may be worth in estimating the volume and supply, so far as the granaries of California are to contribute a supply to the great breadstuff markets of the world.

A Plan for the Collection of Crop Statistics.

At this point, and because I am led to it by the natural association of ideas, I beg to introduce to your notice the suggestion of a plan whereby an accurate ascertainment of the annual yield of wheat may be definitely arrived at. I suggest that the State Board of Agriculture secure from each person engaged in thrashing grain in the State a full statement of the number of bushels of each kind of the cereals thrashed by him. The practicability of this plan will be briefly presented. However great the number of persons engaged in raising wheat

in California, the number of persons engaged in thrashing that wheat is comparatively very few. Each thrasher keeps an accurate account of the number of bushels measured from the machine, because the thrashing is paid for by the sack, or by the bushel, and, therefore, the number of sacks or bushels thrashed for each wheat-grower is an indispensable item to the proper book-keeping of the thrasher. Thus we find in the hands of comparatively a small number of persons not merely the approximate data, not only the comparative estimate through which to reach a conclusion, but the actual data—the authentic accuracy expressing the actual fact, and the last bushel measured and sacked. Many plans have been tried for ascertaining the wheat yield of the State. The number of acres sown to grain has been approximately ascertained, the yield per acre being ascertained in a few instances, and the entire acreage has been multiplied by the number of bushels each acre has been supposed or estimated to yield, giving as a result the supposed or estimated aggregate yield. In this case both the multiplier and multiplicand are very largely guess work. It is multiplying one guess by another, and the best result attained by this process will be a multiplied guess. The only possible failure in the plan which I have briefly presented to night to take the place of this very imperfect method, would reside in the failure to obtain returns from all persons who have been engaged in thrashing. But the value of the statistics to be obtained in this accurate way is sufficient to justify the expenditure of money to make the figures absolutely certain. If each person engaged in thrashing grain is given a pecuniary reward upon the receipt of full returns of his work for the year, none, in my opinion, will fail to respond. But if in addition to the actual number of bushels thrashed, the thrasher will furnish the President of your society with a statement of the number of acres upon which the wheat and other grain thrashed by him was grown, the average yield per acre will be easily ascertainable, and the comparison of the yield, one year with another, will possess a highly instructive value. The export statistics may always be ascertained with reasonable certainty. Now, if an accurate statement of the aggregate yield can be obtained, the tonnage remaining in the State can always be ascertained, at any period of the season, by subtracting the export from the ascertained aggregate. The plan herein briefly outlined is submitted for your consideration.

Diversified Farming.

An address upon agricultural subjects would scarcely be accepted as orthodox without some reference to diversified farming. This subject has received consideration at the hands of the ablest thinkers and writers of our State. Diversity of agricultural products is so highly desirable, and so indispensable in most countries to successful farming, that no lack of thought and attention has been bestowed upon the subject. I desire to meet the question fairly and candidly, and it is not without due reflection that I say that greatly diversified agriculture is not possible or practicable in our State. The cereals are indigenous to our soils and climate. The evidence of this is to be found in the existence of waving fields of wild oats in the primitive condition of our soil. It is true that a variety of crops may be raised in detached portions of the State; that vegetables and wheat, corn, oats and other cereals may be produced upon the fertile bottom lands, where moisture sufficient may be obtained for their growth and maturity; but diversified farming is practicable only by means of natural or artificial irrigation. The great body of the plain lands of California can be cultivated profitably only in large holdings and when sown to a few cereals, such as wheat and barley. This is the simple truth of the situation. It is the stubborn fact that will not give way before our desires, and will not yield its way to the pleasant pictures drawn by imaginative theorists. The only practical diversity to farming in the great wheat-growing areas of the San Joaquin and Sacramento valleys, except when irrigation is resorted to, relates to the growing stock.

The more prudent farmers have found it economical and profitable to save the straw grown in wheat and barley fields for winter feeding of horses and cattle. I venture the opinion here that the time of cheap beef in the United States is past. The facilities for transportation have made it practicable to raise cattle at the foot of the Rocky mountains, and even in California, from which to supply the butchers' stalls of London and Paris with fresh meats. The shipment of dressed meat is indeed more practicable than the shipment of grain, because the former is worth more per pound than the latter. Foreign lands will hereafter afford a market for our surplus beef. The tables of Europe have become competitors with our own for the surplus of our herds and flocks afford. The vast wheat acreage of California produces straw enough, which, if economically used, would produce, in the aggregate, a very large supply of cattle from this State. Each wheat grower will, in my opinion, find it practicable to combine stock raising, in a very large measure, with the standard occupation of wheat growing.

In considering this question of diversified farming, we should not overlook the fact that the most profitable production of a soil and climate is that which is most aided by the natural forces. The profits of any line of agriculture are ascertained only by the standard of the money value of its products. The question, in its latest and best analysis, is how much value,

in dollars, can be raised by devoting a certain number of acres to a given product. If by the growth of wheat upon the plain lands in California, an acre may be made to yield \$10 in profit, and that \$10 will purchase more corn than could be grown upon the acre, the dictates of true economy are unmistakably in favor of sowing the acre in wheat, and purchasing the corn with the cash product of its yield.

The fact that the farmers of California purchase their vegetables from markets has been the subject of much witty criticism, but in most instances, the testimony of the arithmetic vindicates the practice. An acre of land naturally adapted to the growth of wheat without irrigation will produce a sum of money greatly in excess of the value of the vegetables which can be grown upon that acre, in like manner without irrigation. The broad principle of political economy underlying these facts is that the soils, climates and productions of different countries differ, and that the highest profit will be obtained by devoting each particular portion of the earth to those products in the growth of which nature yields the greatest possible aid, and by a free exchange of commodities avoid unnatural and unprofitable cultivation.

The Labor Problem.

The labor problem as relates to the farm, becomes more and more serious with each succeeding year. In its early history, our State was isolated from the great centers of population. For years the overflowing population from older settlements upon the continent found profitable occupation in the Territories lying east of the Rocky mountains. The common laborer was not possessed of sufficient means to pay his expenses to California. The inducements here were not great enough to justify him in using the time necessary to make the trip across the plains, and incur the expense of such a trip, or to pay his passage to California by way of the Isthmus. Only those of moderate means, or in more comfortable circumstances, and financially above the condition of the day laborer, could afford to abandon their old homes and home associations, with the intention of becoming permanent residents of the Pacific slope. Another obstacle to the coming of this class was found in the introduction of the servile labor of a foreign race. To the extent that this race has obtained a foothold upon this continent, it has produced an actual displacement of our civilization to the absolute establishment of the civilization of China. From every standpoint, except that of immediate pecuniary profit to the individuals employing Chinese, this class of labor was extremely undesirable. It could not augment the aggregate of patriotism, of intelligence, of sociability, of morality, or any other attribute of a high civilization. It could not be interwoven with the fabric of society or built into the foundation of government. It was merely a contribution to physical brute labor. The money it absorbed did not become a part of the working capital for enterprise. It possessed intelligence enough to accumulate, but it lacked the patriotism and enterprise so necessary to the upholding of a great commonwealth. Its ultimate result could only tend to the impoverishment of the commonwealth financially, and to the social, moral and political degradation of the State. It did, however, serve a temporary purpose. It supplied a manual labor which could be obtained from no other source. Now that its increase has been arrested we must accept the fact that as a labor element it is in the way of ultimate extinction.

During the past harvest season the procurement of labor necessary to the gathering of the products of our soil was a most difficult problem in the experience of our agriculturists. A full crop this year would have doubled that difficulty. From what source then are we to derive the labor necessary to profitable cultivation of our lands. We have indulged the hope that the subsidence in Chinese immigration would attract to our shores the laboring classes of our own race. Up to this time this tendency has not set up in a marked degree. In the near future we are promised the cheapening of transportation to immigrants. If this should occur, some relief from this source may be anticipated, but there is a source of supply of farm help to which I beg leave briefly to refer. Is there any apology needed if I admonish the farmers of California to rely upon and encourage their sons to become farm laborers? Our forefathers planted here a mighty empire of population and wealth. They hewed down the forests and converted the wilderness into beautiful farms; they built magnificent cities with their own hands. They founded the greatest civilization that has been reared upon the earth without the aid of servile labor or the assistance of antagonistic races. They taught their sons that labor was honorable. They made us a nation of energetic and enterprising men. The question that confronts us to-day is, shall our sons be taught like habits of industry, enterprise and thrift? In the recent past, when men had achieved fortunes in cities, they retired to the country and passed their declining years in the opulence, retirement and elegance of country life. Unhappily this condition has found a complete reversal. Now, those who achieve a competency in the cities remain there, while those who acquire a limited competency in the country abandon their rural habits and pursuits, and flock to the cities. From 75 to 90 per cent. of the American youth spend all the time from the age of 7 to 18 years in school. The discipline of industry and the knowledge of practical and successful farming are not acquired by them. The schools, col-

leges and universities of our land are crowded with students fitting themselves for the professional walks of life. If there is a single instance in the University of California where the student is educating himself for rural pursuits, that instance is as rare as it is remarkable. These tendencies are having a marked effect upon the rural spirit of our people. The social advantages of rural life are constantly declining, and with that there is a corresponding decline in the beauty and attractiveness of rural homes. The physical and moral well-being of our State demands that this tendency should be arrested. There is no occupation pursued by men, wherein intelligence and the higher education may be more profitably applied than to the occupation of farming. Mind is supreme in every calling in life, and no man ever had so much education, or so much mind, or so high a degree of intelligence, that the farm did not afford ample field for the full exercise of all these great qualities.

For the first time in the history of this nation, the experiment of excluding a foreign race has been entered upon. That experiment of exclusion raises the great question of self-dependence, and the simple logic of that question, in the plainest language is, that our boys must be taught to work.

Fruit Growing.

The question has often been raised, "Will fruit growing in California be overdone?" The solicitude upon this question arises out of the fact that the vineyards of the State are rapidly extending. That within a very few years orchards now being planted will come into bearing, from which will be gathered, perhaps, even 20 times greater yield of fruit than is at present obtained. I beg leave to devote a brief space in this address to some considerations bearing upon this question. The cost of transportation is gradually declining. One of the most marked tendencies of modern times is to abandon the cultivation of all products to the localities where they may be most profitably grown. This tendency is the result of intimate communication between different points of the earth. With the increase of fruit supply from California, there will be a corresponding decrease in the planting of orchards in all the regions lying north of the 30th degree of latitude. With the cheapening of supply from this source, there will be a decline in the number of orchards planted in all that vast and populous region. In the United States, alone, there are 35,000,000 of people residing in latitudes where the apricot cannot be profitably cultivated. But the fruits of California are not confined to the United States for a market. Europe, and even Asia, are becoming consumers of our fruits. A like principle is applicable to our vineyards. There is no reason why, in the near future, California may not be the chief source of wine supply for the world. In addition to this, the market for raisins is practically unlimited. The populations of the earth are divided into two general classes, known as the rice-eating and the wheat-eating peoples. The latter class is a large consumer of fruits, because a complex and varied civilization demands a variety of human food. I have taken pains to estimate the populations of the earth who reside within the limits of distance for profitable shipment of fruit, and I find that there are 200,000,000 of people who reside in latitudes where grapes, pears, peaches, plums and apricots cannot be profitably grown. With increased facilities of transportation, with more intimate commercial relations soon to supervene, this vast population will become consumers of these fruits grown in this State. For this and many other reasons I desire to pronounce a deliberate judgment in answer to the question, "Can fruit growing be overdone in this State," and that answer is most decidedly in the negative.

The Seed Farm.

One more suggestion, and I will relieve your attention, and I have reserved this to the last because I believe it is of more importance and more value than anything presented for your consideration in this address. In my judgment, there is a broad field for the establishment of a farm for the production of seeds. The extent to which the germinal energy of the cereals may be augmented appears to be practically unlimited. The same cost of labor bestowed upon land will yield a much larger return if the seed sown possesses proper germinal energy. To improve the quality of seed should be the study and labor of some one or some class of men, who would devote themselves exclusively to that occupation. This, it appears to me, would be the province of the Agricultural College of the State University. I am not now proposing that enough seed should be grown to plant the fields or gardens of the whole State. What I propose is, that by a careful application of the law of selection, seed enough should be supplied to the agriculturists and gardeners of the State, from which seed enough could be raised of the improved varieties to plant their own fields and gardens. Mr. A. F. Blount, Professor of Agriculture in the State College of Colorado, has produced some most astonishing results by experimenting in this direction. By a careful selection from stalks which bore two ears, he succeeded at length in producing whole fields of corn upon which two perfect ears could be found upon each stalk. Upon this kind would also be stalks producing three ears. By careful planting from these, the tendency to more prolific bearing was finally set up and established as the germinal condition, resulting in the variety of corn known as Prof. Blount's Prolific corn. This variety of corn, with the

(CONTINUED ON PAGE 227.)

The Old Home and the New One.

EDITORS PRESS:—Some time ago, while your Mr. Dewey and family were visiting us, I was showing him my plans for remodeling and enlarging our house to meet the requirements of a growing family. They seemed to impress him so favorably that he requested me to furnish him with copies thereof for publication, thinking thereby to suggest some ideas that would be valuable to others about to improve their homes. I, therefore, send herewith the plans alluded to, and will endeavor to render them more intelligible by appending some explanations that will assist some of your many readers who may feel interested in such matters.

It is the general opinion, and I might almost say a generally conceded fact, that, to enlarge, alter or improve an old house, to any great extent, is equivalent to building anew, and oftentimes more expensive. I admit the correctness of this proposition, generally speaking, but claim that my plans furnish an exception, and exceptions always have a tendency to prove the rule.

Circumstances sometimes occur that render it impossible to remove an old building to make room for a new one when the same site is desirable, and to demolish the old structure would seem a great waste of time, labor and material, as but a small fraction of the old material could be utilized in the construction of the new one. Then, again, where the situation is isolated, the use of the old structure becomes a necessity as a residence during the process of building, and I claim that this advantage alone sometimes more than pays for the simple expense of raising. Furthermore, the operation of raising does not rack a building near as bad as when we have to add to it the necessity of moving. My plans overcome most of these difficulties, as can be seen by following closely the following explanation:

Fig. 1 is the general plan of the cellar, foundation, walls, etc., upon which the structure is to be raised, and covering an area of about 38 ft. square. The cellar and cistern, as shown thereon are already constructed, but the milk-room, hall and store-room remain to be built when the work is commenced. The walls are to be built of stone, of which I have an abundant supply (as well as sand) very handy, thus saving some expense for the material with which to do this part of the work; and as the walls are to be two feet above the surface of the ground, I am enabled, by placing windows under the bay-windows and piazzas (which are to be enclosed with lattice-work), to secure a thorough ventilation for my cistern and underground apartments.

Fig. 2 is the front elevation of the present house, showing it to be simply a very plain, one-story house, with ordinary sloping roof. The rear portion is very low, having been added to the main house, and the roof thereof very flat. No further explanation is needed of this figure.

Fig. 3 shows the ground plan and arrangement of rooms, etc., as they at present exist, except that, where it shows a bath-

in case of leakage or accident of any kind, and thus preventing damage to walls or ceilings, another advantage is gained by having the water arrangement closely adjacent to the kitchen range or heating apparatus.

Before proceeding further with the explanation, and in order to render my remarks more intelligible, I will state that my plan is to raise the old house high enough to admit of placing a new story under it, with 12 ft. clear between the floor and ceiling, thus making the present house, as shown in Figs. 2 and 3, the second story in the new house, as shown in Fig. 6. By this method I preserve the present house in its entirety, simply converting all the rooms into

upper piazza, with a door opening out on either side. This room can be profitably used as a conservatory, or, in connection with the hall, as a sewing-room. I shall carry it up past the next story, thus giving additional space to one of the upper rooms, which would otherwise be small, and finishing off as a tower, thus adding materially to the appearance of the front, as shown in Fig. 6.

Fig. 4 shows the plan of the first floor, or the arrangement of the rooms in the new portion, the sitting-room, hall and parlor being readily thrown into one large room by simply running the sliding doors back, with a large, open bay-window at either end. The outside front door

up through what is now used as headroom for the cellar stairs—the cellar stairs will pop beneath the others in the same manner and place as at present. The recess formed in the dining-room by the stairway, and at the side of the exit door to the Kitchen, affords a good place for the sideboard, while the two closets, taken off the parlor on either side of the chimney, afford ample space for China, etc., leaving the space in the room entire and unbroken by corners or projections for the table.

In the bay-window will be placed a small sink, with hot and cold water, to be used in washing silver, choice China, etc. This figure also shows the location of the kitchen, which is of concrete, with a cistern of 10,000 gallons capacity under it (therefore immovable), situated about seven feet from the main building, which space I intend to enclose with glass for a wash-room, it being more convenient than the bath-room, which is situated in the second story—adjoining the kitchen—and to the westward of it (the house has a southern frontage) is the laundry, and still west of this is the wood and coal shed, with a room over it for the kitchen help.

Fig. 5 shows what I gain by removing the present roof (which sadly needs heavy repairs) and substituting the French or Mansard roof. By examining this plan it will be seen that I have five good-sized sleeping rooms, each with a commodious closet, the ceiling being eight feet, whereas, at

present, I have only three spaces, which cannot be dignified with the name of room, as a man can only stand up in the center of them, the roof being so close to his head (and if quite tall) touch his head even where it is the highest.

The upper stairway is lighted by a skylight in the roof, through which one can pass out onto the top of the house, the space being enclosed with a fancy, light railing, as shown in Fig. 6, which gives the front elevation after being remodeled.

The estimated cost of doing the work is \$5,000.

JOHN F. DEMING.

Glen Cove Rancho, near Vallejo, Cal.

AGRICULTURAL DEVELOPMENT.—Some idea of the rapidity with which the agricultural development of the country is going forward may be obtained from the report of the Commissioner of the General Land Office, which shows that during the fiscal year ended the 30th of June last, 3,910,212 acres of the public domain were sold for cash. Of this total, 3,699,899 acres were agricultural lands, 37,034 mineral lands, 166,055 desert lands, and 7,194 coal lands. During the preceding fiscal year, the cash sales of agricultural lands were 1,587,617 acres, and the increase in this item alone was 2,112,282 acres. Dakota leads in the sales of agricultural lands with 698,091 acres. Michigan comes next, with 408,778 acres, and Louisiana, Minnesota, Wisconsin and Nebraska follow in the order indicated. The homestead entries for the year were 6,347,729 acres, as compared with 5,028,100 acres for the previous year, and more than one-third of the homesteads taken up were in Dakota. Under the timber-culture act, 2,609,797 acres were entered, more than half of which were in Dakota. Altogether, the land sold during the year amounted to more than four and a half million acres, or about one-third of the total amount disposed of. The public lands of all kinds disposed of during the year by sale or under the various land acts, amounted to 15,699,848 acres, as compared with 10,893,397 acres the previous year. The development indicated by these figures is stupendous.

It is proposed to erect an equestrian statue of Gen. Harrison, the hero of Tippecanoe, at one of the gates of Circle park, Indianapolis.



FIG. 2—THE OLD HOUSE.



FIG. 6—THE REMODELED HOME.

been added to the main house and having no available space above the ceiling under the roof, it being very flat. Thus, it will be seen that I have studied to avoid the tearing down of anything and to preserve the house entire, and herein I claim is where I make the saving. I simply build to the old premises. The only tearing away that I do (and that is indispensable) is the chimneys. They only reach to the ceiling at present, and will, therefore, have to be taken down to make room for the new ones. After raising, I shall enclose the old front door by forming a small room outside of it on the

in the sitting-room, as a kind of a "catch-all," for the reception of papers, periodicals, etc., in constant use, and always lying around on the tables, chairs, etc. Both of the inner doors in the main hall are designed to have ground glass panels.

At the rear of the hall is a passage-way somewhat narrower than the main hall, and communicating with the sitting-room, dining-room and library, and leading to the stairway and back door, which opens onto a back piazza; the stairway is placed here to avoid cutting a new hatchway in the old house, the stairs passing

ARBORICULTURE.

Questions and Suggestions.

EDITORS PRESS:—We live, like a number of others in these Southern counties, on a farm containing both hill and valley lands. We keep bees, and propose to have an orchard and vineyard, and make a beautiful home in this land of unsurpassed climate. We find a good soil that will grow the different fruits and grains, so that we will have no trouble to dispose of our low lands, but the hills around us look dry and barren, covered as they are, with sage and dry grasses. We should like to ask what trees will grow upon our low hills? If we could cover the bareness of our hills with useful trees, it would do much to beautify our homes,

Does the black butt (*E. pilularis*) grow as well as the blue gum (*E. globulus*)? Which is the eucalyptus planted for the railroad sleepers? How long is it before the *Eucalyptus obliqua* (or stringy bark) is large enough for the bark to be stripped off for roofing? I read in the RURAL PRESS, for 1877, that in Australia the bark is cut in lengths of 8 or 10 ft., stripped from the tree, laid on the ground, well weighted with logs, to make it flat, and left for a week or so, until it is ready for use as a roofing for various buildings. Where folks want large barns without having much money to spend upon them, I would suggest for them to grow a eucalyptus barn. Plant some of the iron-bark eucalyptus 8 or 10 ft. apart, outlining the shape of their barn, with a row through the middle, where the highest part of the rafters will be.

In a few years they can cut off the tops at the requisite height, leaving those in the center,

a month. Let each one select the questions he can answer, and set his or her pen at work at once.—EDS. PRESS.]

The Forestry Congress.

The American Forestry Congress assembled at Montreal last month, with an attendance of 100. Vice-President Hon. H. G. Joly presided. J. A. Warder, First Vice-President of the Association, said that the American Association had come here prepared to co-operate with this Congress. The association had done a great deal of good during the last seven years, but they were even prepared to abandon their organization, if necessary, in the interests of American forestry. The Congress then adjourned and met afterward in sections. Prof. Hough, of Washington, presided over Section A. A paper on forest

States, who came in a cause which was of interest not only to the city, but to the country generally. Hon. Mr. Joly then delivered an address on "The Maintenance and Protection of Forests." Dr. Hough, of New York, followed, and the meeting was prolonged to a late hour.

At the reassembling of the Congress on Tuesday, the Hon. Geo. B. Loring, U. S. Commissioner of Agriculture, occupied the chair. Prof. Hough read a paper on the growth of black walnut timber in Ontario. In the course of his remarks, he placed the termination of public forest domain in Canada at the end of the present century. Black walnut, he said, has already disappeared. G. W. Beadle, of Ontario, contributed a paper on "How Farmers May Grow Forest Trees from Seeds." A maple seedling, eight inches high, was exhibited, sown only two months since. "Timber Trees of the Black Hills," by Robert Douglass, Waukegan,



FIG. 3—SECOND FLOOR.

and if largely planted in the county, might have the effect of changing the atmosphere, so that we would not have such failures in the honey crop, for I believe the failures come not so much for lack of blossoms as for want of honey in the blossoms.

Has anyone planted the honey locust for hedges? It is said to be a protection against man

six feet, the highest, and they will have a cheap support for the rafters and roof of their barn. You could grow the rafters by planting some of the trees close together to make them tall and slim. After the rafters were up, the bark of the *E. obliqua* could be nailed in place for roof and sides. It is true you would have to wait three or four years, but how many farmers wait

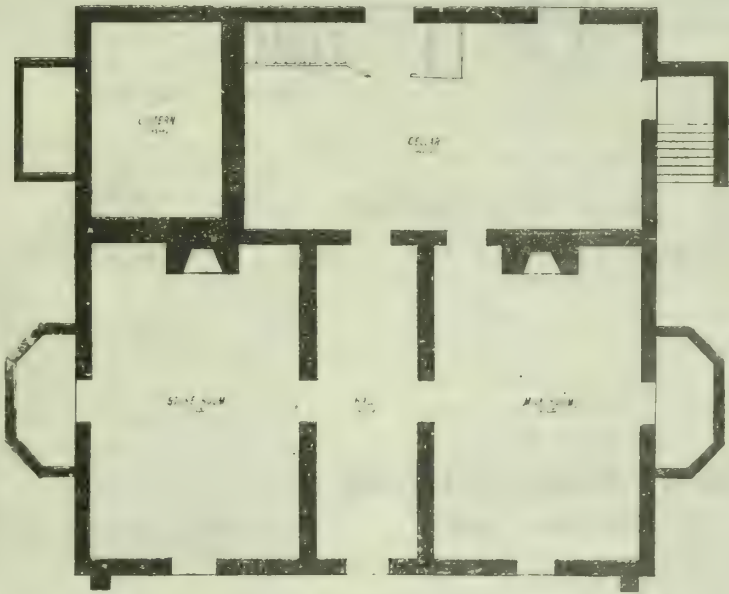


FIG. 1—BASEMENT PLAN.

fires was read, and Joseph S. Fay, of Woods Hall, Mass., suggested that new plantations should be made in blocks of 10, 20, 40, or even 100 acres, divided from each other by at least

Ill., was read, as also was the paper, "Oaks of Hardin County, O.," by W. T. English, Mt. Victory, O. Dr. John A. Warder made some remarks on the timber of the Black Hills. "The

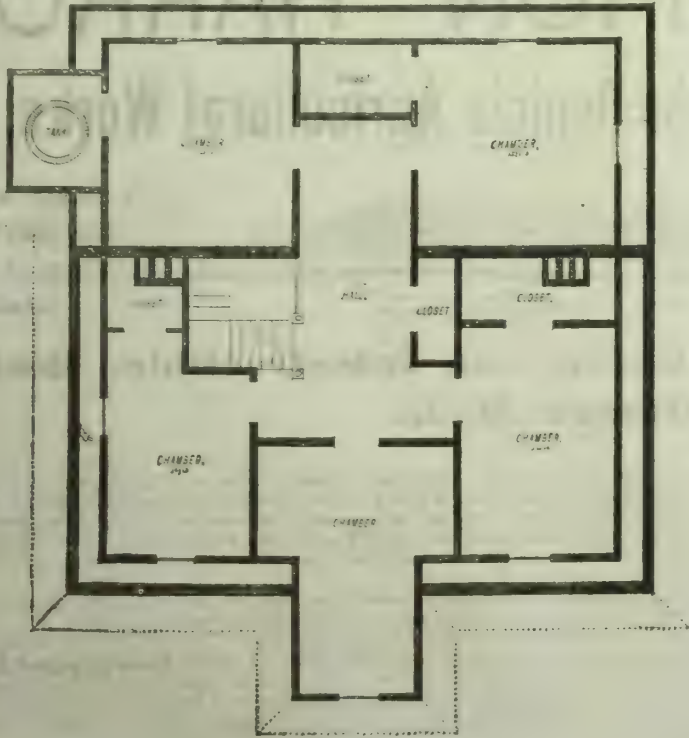


FIG. 5—THIRD FLOOR.

and beast. Bliss, of New York, offers the seed for 60 cents a pound, and 16 cents postage. The black locust does well in this county, and if the honey locust will do for fences and feeding the bees, it will be a very useful addition for our farms. When does the honey locust blossom? and how long does it take it to grow strong enough to turn cattle and horses? How close should it be planted? Would two rows planted so that every three trees would form a triangle (thus . . .), be sufficient? The pomegranate would make a good hedge near the house, for it is always pleasant to look at. I wish to ask some questions about the different eucalypti and their growth without irrigation. Which of the iron woods, *E. leucocylon* or *E. paniculata* (white iron bark) does best here?

twice that time before they get money to build a barn? If the barn looked rough to view, some of the tall-growing ornamental trees might be planted so as to hide it from the principal view.

Will Mr. Gillet be kind enough to explain how the walnut should be ring-budded? We have a number of the wild walnut on our place, and would like to change them to the English nut as soon as possible. Before closing, I must say how much we like the PACIFIC RURAL PRESS. We think it unequalled.

Santa Paula, Ventura Co. M. W. S.

[This letter is very interesting, but we cannot begin to answer the questions. There is enough to keep our correspondents writing for



FIG. 4—FIRST FLOOR.

100 ft. On Cape Cod it is found easier to check fires in woods intersected by wide roads. Prof. Mohr then read part of a long paper on the hard woods of the Gulf region of America, after which Prof. Hough read a paper on tree planting by railroad companies. N. H. Eggleston, of Williamstown, Mass., read a paper on a rational method of tree pruning. Section B was organized with Dr. John A. Warder, of North Bend, O., Chairman. Section C opened with Prof. William Saunders in the chair. John S. Hicker, of Roslyn, N. S., communicated a paper on the commercial value of pruning. In the evening a largely attended public meeting was held. The Mayor addressed the assemblage, saying that it was a pleasing duty to offer the freedom of the city to the gentlemen from the United

Coniferous Trees of the United States and Canada," by Dr. George Vasey, of Washington, was read. Arthur Bryant, Princeton, Ill., read a paper on "The Ash." Mr. Thompson's paper on "Extensive Planting by Shelter Belts in Dakota" was read, and Dr. Hough read the next paper on "Roadside Tree Planting." In the evening, the President, Hon. Mr. Loring, delivered his inaugural address, which was a masterly review of the whole question of forestry, and the benefits to be derived from the congress.

LET THE CHILDREN CRY.—Certain physicians say that crying should not be repressed in children, as the consequences may be Saint Vitus dance or epileptic fits.

HAWLEY BROS.' HARDWARE CO.

Successors to

Marcus C. Hawley & Co.

"Challenge" Feed Mill.

THE FASTEST GRINDING, THE EASIEST RUNNING

The Cheapest Portable Mill Manufactured.

We guarantee that this mill if
Adjusted to 1 horse power will grind... bushels per hour
..... 10
..... 20

We have purchased the sole right to manufacture these celebrated
Feed Mills for the Pacific Coast. They are the only mills yet invented
that give perfect satisfaction. They will grind all kinds of grain into
Feed; Barley, Corn, Oats, etc., however green, wet or dry, or what-
ever may be their condition, with ease and speed, without heating the
Feed or doing other damage. Will also grind Salt and Soft Rock.

PRICE, \$85.00.



Kalamazoo Improved Spring Tooth Harrows.

The above cut represents our Improved Adjustable
Spring-Tooth Harrow. The latest and best in the market.
It has all the good points and none of the defects of other Har-
rows. We claim as follows: THE SHAPE OF THE TOOTH is
the best form possible to pass over a stone or root easily.
IT IS VERY EASY TO ADJUST. Loosen the bolts that hold
the Teeth, then lift up or set down the teeth as desired, from 1
to 8 inches. IT DOES NOT TRAIL. If a tooth rests in a wood
en chair or seat it will soon pass and work time. It cannot be
stuck in place very long. This Tooth rests in an even hole, and can
be pulled out with ease. IT DOES NOT CLOG. There is
no place for rubbish to rest. The shape of the Tooth prevents
clogging.

The Teeth are made of the Best of Spring
Steel and Tempered in Oil.

And tested severely before sending out. THE DRAFT IS
LIGHTER than any other Spring Tooth Harrow.

24 Teeth, 8 ft. \$45 00
30 " 10 " 50 00

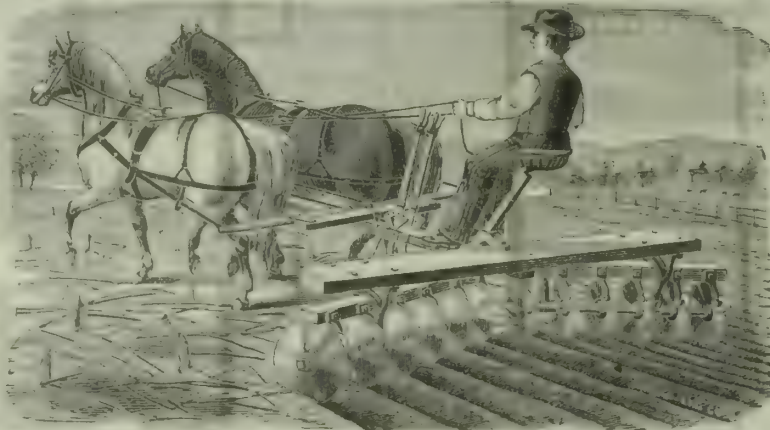


Kalamazoo Patent Improved Spring
Tooth Harrow.

Sole Agents for the Corbin Steel Disc Harrow, WHAT IT WILL DO.

It will thoroughly pulverize the soil by lifting and turn-
ing it.
It will pulverize, cover and mix manure with the soil.
It will cover all kinds of grain as no other Harrow will.
It works equally well in the hollows and on the knoll
tops.
Its use with a little grass seed will thoroughly renovate
worn out meadows and pastures.
It will actually save plowing in many instances.

Full Crops Can be
SOWN BROADCAST
On Stubble Land,
And Every Kernel of Grain Covered
by It.



THE CORBIN STEEL DISC HARROW.

It cuts and pulls out the weeds.
It is valuable for summer-fallowing the land.
It crushes, cuts and pulverizes clod or clay lumps.
It takes the soil from below and rolls it upward to the
fertilizing effects of sun and rain.

It Will Produce
A BETTER CROP
By Reason of Its Thorough Work.

It will save its cost in seed grain alone, as it covers every
seed.
Seed can be covered by it to any desired depth for proper
germination.
It will work on wet or stony land where no other imple-
ment will.
It will more than save its cost in one season.

PRICES:

6 feet, 13-inch discs \$60.00
6 feet, 16-inch discs 60.00
8 feet, 16-inch discs 75.00

HOG RINGING A FAILURE! OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take
from the Hog its power to root, by re-
moving a section or piece of the tendon or mus-
cle which operates the shovel at the end of the
nose, thereby forever after preventing them from
rooting.

THIS IS NO SNOOTER,
and we will convince the most skeptical that this
little instrument will do its work effectually.
Any number of testimonials furnished on ap-
plication.

Retail price "Conqueror," \$1 each.
"Tendon Cutter," \$3.00 each.
Sold by the trade generally, or address

G. G. WICKSON,
General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

BEAUREGARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to
Break off,
or Nuts to get Loose.



Is the Boss of the Field.
It combines Strength,
Lightness of Draft and
Durability.

**Light, Strong, Durable, Cheap, and Indestructible, Best Iron
Harrow Made.**

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality,
combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and, like the
frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus
enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually
made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the
soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its
work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with
other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent
Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful
Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It
is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in
a moment.

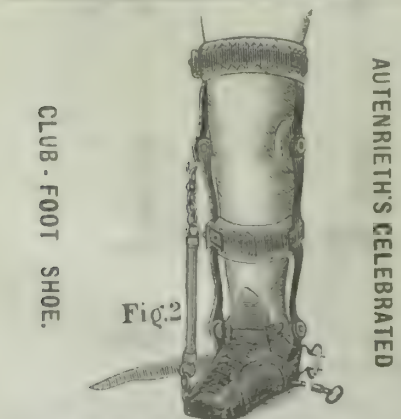
OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast.
Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW is the Best,
Cheapest and Lightest Draft.**

PRICES:

1 Section, with 24 Teeth \$14 00 | 3 Sections, with 72 Teeth and Draft Bar \$42 00
2 Sections, with 48 Teeth and Draft Bar 28 00 | 4 Sections, with 96 Teeth and Draft Bar 56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide
For further particulars, Address

ICIA AGRICULTURAL WORKS, Benicia Cal.,
Or BAKER & HAMILTON, Agents, S. F. and Sacramento.



APPARATUS FOR

Curvature of the Spine, Wry-Neck, An-
chylosis, Club Feet and Bow Legs.

Tresses and Crutches, Elastic Stockings for Varicose
Veins, Supporters and Bandages of every description.
Also, inventor of the Celebrated Autenrieth's Club-Foot
Shoe. Send for circulars. WM. AUTENRIETH,
71 West Sixth Street, Cincinnati, Ohio.

This paper is printed with Ink furnished by
Chas. Eneu Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph E. Dorety, 527
Commercial St., S. F.

President Larue's Address.

[CONTINUED FROM PAGE 223.]

Same labor in cultivation as bestowed upon the old varieties, is known to produce readily 200 bushels to the acre, whereas the old variety was considered as having given a satisfactory yield at 25 to 50 bushels to the acre. Thus the producing capacity of a single acre was multiplied three or fourfold without a greater expenditure of labor or money in its cultivation. In like manner this intelligent experimenter has produced varieties of wheat which have doubled and trebled the yield per acre, and, as in the former case, without extra expense of labor or money. These experiments establish, in my judgment, the great profit to the agriculturist of California, a well-directed seed-farm would confer. I believe the bare suggestion of this question will justify it to your judgment. I have not time for its more complete elaboration here.

Conclusion.

Members of the Board of Agriculture and Fel-low Citizens:—One of the highest pleasures of the mind is found in recalling labor successfully accomplished, and reviewing the results of the skill of the hands or the genius of the mind. Men love to impress their thoughts on material things. The sculptor carves from the marble forms instinct with life and emotion, but far beyond the highest achievements of his chisel he holds ideals of beauty which are the inspirations of his genius, and which demand expression in creative forms. The painter immortalizes on canvas only the few fugitive glimpses of the pictures seen in his imagination his pencil may imperfectly portray. And still each finds joy in the skill which in marble or on canvas materializes the ideals of the mind. But this highest pleasure of the intellect is not confined to the high priests in the temple of the muses. Labor may look upon the results of toil with reverential pride. Mechanical skill may claim the highest nobility when the inestimable blessings due to the triumphs of inventive genius are remembered. The herdsman feels the quick awakening of pride as he views the symmetrical forms and witnesses the proud spirit of the animals his intelligence and cultivation has bred to higher planes of life and nobler qualities of beauty, strength, usefulness and endurance. The horticulturist is a painter from whose palette the blush of the peach and the rich purple of the grape are transferred. All worthy endeavor in every department of thought and activity works in the realm of high art. Viewed from the stand-point of the blessings conferred, the good to be achieved, all labor is sanctified. Here we have collected for the pleasure and instruction of comparison the results of the labor, skill and genius of our people, and indulging the high hope that in this temple of art and industry our hearts may feel a higher aspiration toward the earnest purposes, duties and responsibilities of life, and a devout gratitude toward the bountiful giver of all good, I now declare the Twenty-ninth Annual Exhibition of the State Agricultural Society of California duly open.

ARTESIAN WELLS.—The success attending the sinking of artesian wells has been very great in California up to the present time. This has been the case in San Francisco as well as in other portions of the State, but the profits arising from such enterprises have been more marked, perhaps, in the San Joaquin valley, where, in particular localities, water was the prerequisite to open up productive farms. The value added to lands in California by means of artesian wells has already entered into millions, but it is comparatively a small affair in comparison to what it is soon destined to become. Scarcely a week transpires in which we do not publish accounts of water being secured by such means in portions of the State where it is most needed, but they have become so common an occurrence that they have almost ceased to attract attention. Of such description is the following: A flowing well of water was tapped on E. M. Dewey's ranch, in the Tulare artesian belt, at a depth of 307 ft. The flow measured, after a few days' run, three and a half inches, and continued to increase slowly. While boring the well, pieces of bark of coniferous trees were thrown up, beautifully spangled with brilliant flakes of what closely resembled abalone shell.—*Morning Call.*

SKINNING ANIMALS.—The value of a skin for leather depends considerably upon the care and manner in which it is taken off. The following penal statute, passed by our ancestors in 1642, shows that they well appreciated the great loss consequent on bad and careless skinning: "No butcher, by himself or any person, shall gash, slaughter or cut any hide of ox, bull, steer or cow, in slaying thereof, or otherwise, whereby the same shall be impaired or hurt, on pain of forfeiture for every such gash or cut in any hide or skin, 12 pence." An experienced tanner gives the following directions in regard to the cutting or opening of the hide before the operation of flaying: This is always best performed when the most of the skin is thrown between the fore and hind legs, leaving the hide square in its form. Tanners of upper leather know the value of this mode of skinning, by its increase of measure over the one practiced by many persons in sticking or bleeding the animal, by cutting its throat from ear to ear, and in opening the hide, not running the knife far enough up on the brisket before they cut down the skin on the fore legs; or not down far enough on the flank towards the tail before they cut through the hind leg.—*Ohio Farmer.*

State Fair Premiums.

Awards to Exhibitors.

[We have been disappointed in not receiving the officially corrected list of premiums awarded last week in time for this week's PRESS. We present herewith the uncorrected list, and will republish it with corrections hereafter, or note any changes which may be necessary.—EDS. PRESS.]

Horses.

Class 1—Thoroughbred horses, stallions four years old and over—First premium, George Hearst's ch. Jim Brown, by Foster, dam Flush, \$40; second premium, W. Boots' Nathan Combs, by Lodi, dam Miami, \$20. Two-year-olds—First premium, L. Pritchard's Berrian, \$20. Mares, four years old and over, with colt—W. Boots' Mollie H., \$30. Two-year-olds—First premium, J. B. Haggin's Irene, \$15; second premium, J. B. Haggin's Young Flush, \$7.50. One-year-olds—J. B. Haggin's School Girl, \$10; second premium, J. B. Haggin's Hirondele, \$5. Horses not thoroughbred—Stallion and five colts, S. S. Drake's Admiral and five colts, \$50. Dam and two colts, Wm. Bauden's Dollie and two colts.

Class 2—Horses of all work, stallions, four years old and over—First premium, J. B. Haggin's Admiral, \$40; second premium, A. Belina's General Grant, Jr., \$20. Three-year-olds—First premium, J. Rassitt's John, \$30; second premium, W. McClellan's Prince, \$15. Two-year-olds—First premium, J. Rassitt's Prince, \$20; second premium, P. J. Shafter's Black Prince. Yearlings—First premium, G. W. Korn's Major Nelson, \$15; second premium, A. Belina's Frank, \$7.50. Mares four years old and over—First premium, E. Comstock's Colie, \$40; second premium, S. S. Drake's Eve, \$20. Two-year-olds—S. S. Drake's Mary, \$15. Yearlings—First premium, B. E. Harris' Abbottine, \$10; second premium, R. Brown's Fannie, \$5. Suckling Colt—E. Comstock, Lena, \$10. Roadsters—Stallions, four years old and over—First premium, J. McM. Shafter's Killarney; second premium, J. B. Haggin's Victor. Three-year-olds—First premium, W. Hicks' Starling; second premium, W. Murray's Fresno Boy. Two-year-olds—First premium, W. Hicks' Privateer; second premium, W. Ingram's Harmony. Yearlings—First premium, J. C. Harty's California Chief; second premium, A. L. Frost's Aleck. Colt Stallions—First premium, B. H. Newton's Amateur; second premium, B. F. True's Ben F. Mares—First premium, W. J. O'Brien's Nell; second premium, J. M. Learned's Ollie Ray. Three-year-olds—First premium, J. B. McDonald's Hazel Kirke; second premium, S. Tutt's Susie E. Two-year-olds—First premium, J. B. Haggin's Evelyn; second premium, J. B. McDonald's Yuba Maid. Yearlings—First premium, W. Hicks' Clara; second premium, W. Hicks' Cora. Suckling Colts—First premium, G. W. Hancock's Daisy; second premium, G. W. Hancock's Theta.

Class 3—Draft horses, stallions, four years old and over—First premium, T. Skillman's Tornado, \$40; second premium, J. B. Haggin's Black Prince, \$20. Three-year-olds—First premium, R. J. Merkley's Normandy 2d, \$30; second premium, A. J. Price's Charlemagne, \$15. Two-year-olds—First premium, T. Skillman's Monarch, \$20; second premium, E. Comstock's Billie, \$10. Yearlings—R. J. Currey's Gray Chief, \$10; second premium, E. Comstock's Majs, \$5. Mares, four years old and over, with colt—First premium, R. J. Merkley's Nellie and colt; second premium, R. J. Currey's Mag and colt. Four-year-old mares—First premium, C. Thodt's Gray Fannie; second premium, E. Comstock's Maud. Three-year-old—C. Thodt's Lucy. Two-year-old—R. J. Merkley's D. K. Fanchon. Yearlings—First premium, T. Skillman's Gertrude; second premium, Lady St. Patrick. Suckling—R. J. Merkley's Juanita.

Sweepstakes—Stallions, first premium, J. B. Haggin's Algona, \$100 or silver pitcher. Best mare—J. B. Haggin's Woodbine, \$100 or silver pitcher.

Roadsters—Stallions, three-year old, M. W. Hicks' Starling, \$30; two-year-old, first premium, M. W. Hicks' Privateer, \$20; second premium, William Ingram's Atmore. Over one year old—First premium, P. J. Shafter's Rustic, \$40; second premium, J. B. Haggin's Zulu Chief, \$20. Yearlings—First premium, S. C. Hasty's California Chief, \$15; second premium, A. L. Frost's Roscoe. Sucklings—First premium, R. H. Newton's Del Sur, Jr., \$10; second premium, B. F. True's Ben S. Mares—Four years old and over, first premium, W. J. O'Brien's Maggie A., \$40; second premium, J. M. Learned's Allie Ray. Three-year-olds—First premium, S. B. McDonald's Hazel Kirke, \$30; second premium, S. Tutt's Tartilete. Two-year-olds—First premium, J. B. Haggin's Lady Gray, \$20; second premium, J. B. McDonald's Yuba Maid. Yearlings—First premium, M. W. Hicks' Clara, \$10; second premium, M. W. Hicks' Cora. Sucklings—First premium, George W. Hancock's Daisy, \$10; second premium, George W. Hancock's Theta. Mares, four years old and over, with colt—First premium, R. J. Merkley's Nellie and colt, \$40; second premium, R. J. Currey's May and colt, \$20. Three-year-olds, first premium, C. Thodt's Fannie, \$30; second premium, E. Comstock's Maud, \$15. Two-year-olds—First premium, C. Thodt's Lucy, \$30; second premium, R. J. Merkley's Fanchon, \$15. Yearling—T. Skillman's Petaluma, \$10. Sucklings—First premium, R. J. Merkley's Juanita,

\$10; second premium, A. H. Thomassen's Jennie.

Class 4—Families of horses. First premium S. S. Drake, for Admiral, Volunteer, Lady Pierson and ten colts. Mare—First premium, W. Bauden's Dollie and six colts.

Class 5—Best matched span carriage horses owned and used as such by one person, Frank and Charlie, owned by W. R. S. Foye; silver goblet or \$40. Second best ditto, Peanut and Popcorn, owned by B. Madden; silver goblet or \$20.

Class 6—Best double-team roadsters owned and used as such by one person, Ralph sisters, owned by H. Stegall; silver goblet or \$40. Second best, Jane and Lena T., owned by A. A. Thomassen; silver goblet or \$20.

Class 7—Standard trotters, stallions, 4-year-olds and over—Alaska, owned by J. B. Haggin, \$40. 1-year-olds, Mount Vernon, owned by J. A. McCloud, Stockton, \$15. Mares—4 year-olds and over—Woodbine, owned by J. B. Haggin, \$40; Adalia, owned by E. H. Miller, Jr., \$20.

Class 8—Saddle horses—Vanity, owned by Benjamin E. Harris, \$20; Mike Price, owned by Benjamin E. Harris \$10.

Class 9—Jacks, 4 year-olds and over—John Henry, owned by W. A. Munnion, \$40; Black Jack by J. Conrad, \$20. 3 year-olds—Castilion, owned by L. U. Shippee, \$30. Jennets—4 year-olds and over—Beauty, owned by L. U. Shippee, \$30; Duchess, owned by L. U. Shippee, \$15. Mules—Best span—Coalie and Jennie, owned by S. Miner, \$25.

Cattle.

Devons—Bulls, best three-year-old and over, Ben Butler, premium, owned by R. McEespy. Cows, best three-year-old and over, Queen, owned by C. W. Bryant, first premium; Mayflower, owned by R. McEespy, second premium; best two-year-old, Maud, second premium, same owner; best one-year old, Spry, same owner, premium; best heifer calf, Trixie, same owner.

Ayrshires—Bulls, best three-year-old and over, Archie, premium, owned by Geo. Bement; best two-year-old, same owner, Lindo, premium; best one-year-old, Macbeth, same owner, premium; best bull calf, Malcomb, premium, same owner. Cows, best three year-old and over, Selita, first premium, same owner; E. hel Brown, second premium, same owner; best one-year-old, Sultana, premium, same owner; best heifer calf, premium, same owner.

Herds—Durhams, best herd of Durham thoroughbreds over two years old, consisting of one male and four females, owned by one person, first premium, Col. Younger, of Santa Clara; M. Wick, second premium. Best herd of Durhams under two years of age, one male and four females, Col. Younger, first premium; M. Wick, second premium. Jerseys, best herd over two years old, consisting of one male and four females, first premium, Henry Pierce; second, R. Noell; best herd under two years, Henry Pierce, first premium. Guernsey cattle, best herd of any age, Henry Pierce, first premium. Ayr shires, best herd, George Bement, first premium. Devons, best herd of any age, R. McEespy, first premium.

Alderneys, Jerseys and Guernseys in one class—Best three-year-old and over, bull Buffalo Bill, owned by Robert Beck, first premium; second premium, General Grant, owned by J. Askew, of El Dorado; best two-year-old, Commodore, owned by R. Noell, first premium; Garfield, owned by J. Lyon, second premium; best one-year-old, William, of Scituate, first premium, owned by Henry Pierce; Fred Baker, owned by William Hook, of Sacramento, second premium; best bull calf, Shotover, owned by H. Pierce, first premium; Buffalo Bill, owned by Robert Beck, second premium. Cows, best three-year-old and over, Daisy, owned by Henry Pierce, first premium; Katie, owned by R. Noell, second premium; best two-year-old, Miss Murdock, first premium, owned by Robert Beck; Nellie, second premium, owned by R. Noell. Best yearlings, Carrie, first premium, owned by H. Pierce; First Duchess of El Dorado, owned by J. Askew, second premium; best heifer calf, Paragon, owned by R. Noell, first premium; second premium, Oleta, owned by P. Stanton, Sacramento. Cows, best three-year-old and over, Rose, first premium, owned by R. J. Merkley, of Sacramento; best two year-old, Chut, premium, owned by E. Comstock, of Yolo; best one-year-old, Blossom, owned by P. J. Murphy, of Sacramento; best heifer calf, Pink, premium, owned by J. Lyon.

Sweepstakes—Best bull of any age or breed, the S cond Duke of Alameda, owned by C. Younger, of Santa Clara, first premium; best cow of any age or breed, Gam, owned by M. Wick; best bull and three of his calves under one year old, Second Duke of Alameda, first premium.

Sheep.

Class 1—French Merinos, best ram, one year and under two, Excelstor, owned by J. R. Brompton, of Reno, Nev., first premium, \$20.

Class 2—Spanish Merinos, best ram two years and over, Sprightly, owned by J. H. Strowbridge, Haywards, \$30; second best, Longwood, owned by F. Bullard, of Woodland, \$15; best ram, one year and under two, owned by J. H. Strowbridge, Comet, first prize, \$22.50; second prize, Snowflake, owned by G. F. Bullard, of Yolo, \$11.25; best three ram lambs, F. Bullard, of Woodland, \$22.50; second best, three lambs, J. H. Strowbridge, \$11.25; best pen of ewes, two years and over, J. H. Strowbridge, of Haywards, \$22.50; second best, F. Bullard, of Woodland, \$11.25; best pen of ewes, one year

and under, F. Bullard, of Woodland, \$22.50 second best, J. H. Strowbridge, of Haywards, \$11.25; best pen of five ewe lambs, F. Bullard, of Woodland, \$22.50; second best, J. H. Strowbridge, \$11.25; best ram and five lambs, J. H. Strowbridge, of Haywards, \$22.50; second best, F. Bullard, of Woodland, \$11.25.

Class 3—Cotswold, Shropshire, etc.—Best ram, two years and over, J. B. Hoyt, Suisun, Salopion, \$30; second best, C. Younger, Hancock, \$15. Best ram, one year and under two, Duke, J. B. Hoyt, Suisun, \$22.50; second best, C. Younger, Forest Home, \$11.25; best three ram lambs, C. Younger, \$18.75. Best ewes, two years and over, J. B. Hoyt, Suisun, \$22.50; second best, C. Younger, \$11.25. Best pen of ewes, one year and under two, C. Younger, \$22.50; second best, J. B. Hoyt, \$11.25. Best pen of five lambs, C. Younger, \$18.75. Best ram and five of his lambs, C. Younger, \$30. Crossed sheep—Best pen of five ewes, two years and over, J. B. Hoyt, \$11.25.

Sweepstake—Best ram and five lambs, J. H. Strowbridge, Sprightly and lambs, \$50.

Swine.

Best boar, two years or over, Prince, owned by J. Kennedy, first prize, \$20; second prize, \$10, Polly, owned by John Rider, of Sacramento; Berkshires, best breeding sow, Maud Hamilton, owned by John Rider, first premium; second prize, Pacific Queen, owned by Thomas Waite; best pair of pigs under 10 months, first prize, Nunbur and Laguna, owned by John Rider, of Sacramento; Poland China boars, first premium, King of Bonnevieu, owned by E. Gallup; best six months old and under one year, first premium, John, entered by J. M. Davis; second prize, Black Boy, owned by E. Gallup; Poland China breeding sows, first prize, Cantilina, owned by E. Gallup; second prize, Daisy, owned by J. M. Davis. Sweepstake, best boar, the first prize was taken by John Rider, of Sacramento. He also took the first prize for best sow. M. Sprague took the first premium for a pen of six pigs.

Poultry.

Light Brahmas, T. D. Morris; Dark Brahmas, T. D. Morris; Cochins, T. Waite; Black Cochins, T. D. Morris; Buff Cochins, T. D. Morris; Silver-spangled Hamburgs, T. Waite; Black Hamburgs, T. D. Morris; White Leghorns, T. Waite; Brown Leghorns, T. Waite; Black Spanish, T. Waite; Dorkings, E. Gallup; Plymouth Rocks, R. G. Head; French Houdans, T. Waite; Seabright bantams, T. Waite; Game bantams, T. D. Morris; Peking ducks, R. G. Head; Rouen ducks, R. G. Head; Toulouse geese, T. D. Morris; China geese, T. D. Morris; Langshans, R. G. Head.

The committee recommend that special premiums be awarded to T. D. Morris for White Guineas, and R. G. Head for Brahmas, Leghorns and Langshan chickens.

AGRICULTURAL PRODUCTS.

Silk, Cotton and Tobacco.

R. Dale & Co., best exhibition of the silk business, from the mulberry tree to the silk cocoon, including the feeding of the worms, their eggs etc., \$25.

Seal Rock Tobacco Company, display of California manufactured tobacco, \$10 and diploma.

Flour and Grain.

John Bidwell, best Australia wheat, \$10; best white Chile wheat, \$10; best white Club wheat, \$10; best Proper wheat, \$10; best Sonora wheat, \$10; best Odessa wheat, \$10; best rye, \$5; best oats, \$5; best barley, \$5. C. McCreary & Co., best flour, not less than 100 lbs., \$20. John Bidwell, best and greatest variety of wheat, in ear or head, \$10; best orchard grass seed, \$5; best bushel of alfalfa seed, \$5; best bushel of yellow corn, \$5; best bushel of white corn, \$5; best bushel of early corn, \$5; best exhibit of Egyptian corn, \$5.

Vegetables, Roots, etc.

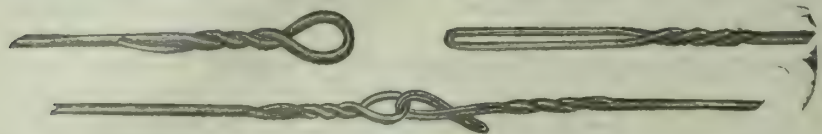
McGregor Bros., best red potatoes, \$5; best of any other variety, \$5. John Bidwell, best half bushel of sweet potatoes, \$5. McGregor Bros., best 12 parsnips, \$3; best 12 carrots, \$3. Mrs. Thos. Hague, best 6 long blood beets, \$3. McGregor Bros., best six turnip beets, \$3. Mrs. Thos. Hague, best 6 sugar beets, \$3. McGregor Bros., best peck of tomatoes, \$3; best 6 drumhead cabbages, \$3; best 6 heads of red Dutch cabbage, \$3; best 6 heads of any other variety, \$3; best three heads of cauliflower, \$3; best three heads of broccoli, \$3; best 6 heads of lettuce, \$2; best half peck of red onions, \$3; best half peck of yellow onions, \$3; best half peck of peppers for pickling, \$3; best 12 roots of salisfy, \$3; best 6 stalks celery, \$3. John Bidwell, best 6 marrow squashes, \$3; best 6 Hubbard squashes, \$3; best 6 crookneck squashes, \$3; Robert Brown, best and largest pumpkin, \$3. McGregor Bros., best dozen of sweet corn, green, \$3; best 3 mountain sweet watermelons, \$2. John Bidwell, best 3 green-fleshed muskmelons, \$3; best three yellow-fleshed muskmelons, \$3; McGregor Bros., best 6 cucumbers, \$3; best half peck of Lima beans, in pod, \$3; best purple egg plants, \$3.

Flowers.

Frank Kunz, best and largest collection of flowering plants in bloom, \$20. F. A. Ebel, best collection of ornamental foliage plants, \$20; best collection of new and rare plants, \$10. Frank Kunz, best collection of roses in bloom, \$10; best collection of fuchsias in bloom, \$10. Mrs. O'Brien, best display of cut flowers, \$10. Frank Kunz, best display of bouquets, \$10. F. A. Ebel, best collection of plants suitable for greenhouse, conservatory and window culture, \$15. Frank Kunz, best display of hanging baskets containing plants, \$5.

[CONTINUED ON PAGE 232.]

PATENT STEEL WIRE BALE TIES.



Why do you waste Time making Ties in the field when you can buy them Ready Made Almost as Cheap as the Wire in the Coil?

We have on hand a large quantity of steel wire bale ties ready for immediate delivery which we will sell at the prices named in the following table:

No. 15 wire, 8 ft. 6 inches long	\$18.00 per 1,000
No. 11 wire, 8 ft. 6 inches long	22.40 per 1,000
No. 14 wire, 9 ft. long	23.50 per 1,000

For Dederick Presses: 17x22 bales, 11 ft. long, No. 14 for heavy work, No. 15 for light. For Dederick Presses, 14x18 bales, use No. 15 wire, 8 ft. 6 inches long.
For the California Chief and Economy Presses use No. 14 wire, 9 ft. long.
For the Price or Petaluma Press use No. 15 wire, 9 ft. long. For all other upright presses use No. 15 wire of such length as may be required by the size of the bale.

Advantages of Adjustable Steel Ties.

1. They are adjustable, hence sure, and no delay.
2. When secured, they stay, and never come loose.
3. They hold the bale close, and more hay in a car.
4. They require no needle to pass them through.
5. They require no stretcher.
6. Yet are the only tie adapted to the use of the stretcher.
7. They may be removed from the bale and used over again.
8. Hence will all be returned at low prices.
9. They may be worked with heavy gloves without inconvenience.

Comparative Cost of Coil Wire and Prepared Bale Ties

Experience will teach that the same number of tons of hay can be more safely secured, and at less cost by our prepared ties, than by the use of coil wire. In the use of coil wire one or two tons larger is required, and then, the wire is not reliable at the coming wire to thus the better and loss of time to secure the loss of wire, cost of repressing and loss of hay in transit and in the market by reason of broken bales, and we are certain coil wire cannot be economically used.

JACKSON & TRUMAN,

Cor. Sixth & Bluxome Sts., S. F.

JACOB PRICE,
San Leandro, Cal.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have used it.

INFALLIBLE SQUIRREL AND GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store.

San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS



TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

BAGS, TENTS, HOSE, TWINES.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

TRIPLE-ACTING IRRIGATING PUMP.

WORKED BY HORSE-POWER.

We make two kinds of these Pumps. No. 1 is a suction and force pump. No. 2 is a suction and lift pump. These pumps run very easy and steady, and require no fly-wheel. The valves can be very easily taken out, without moving the Pump or taking it apart, and it is the best adapted Pump for irrigation in the market. It will pump more water in a given time and cost less than any other irrigator.

Send for Descriptive Catalogue and Prices.

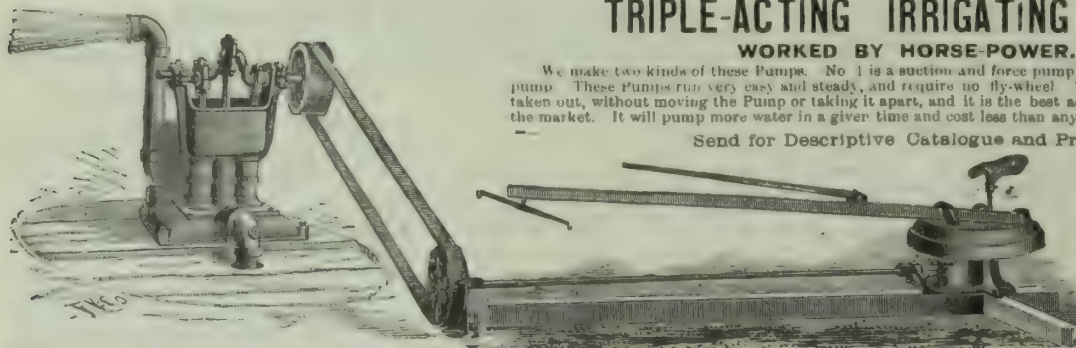
F. W. KROGH & CO.,

Manufacturers

And Sole Proprietors,

No. 51 Beale Street,

SAN FRANCISCO.



CHEAP CASH GROCERIES

AT

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —

1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any rail-road, steamer or vessel, free of charge.

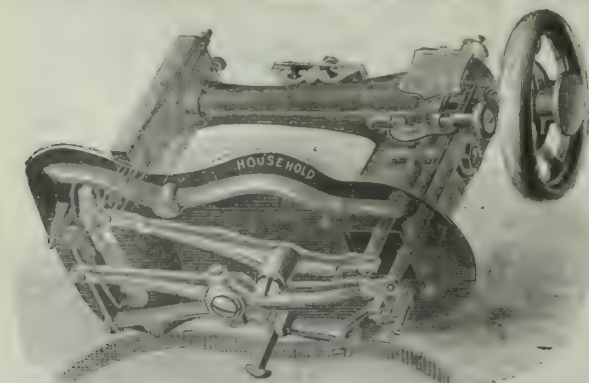
Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

THE
Easy Running, Simple and Beautiful

"HOUSEHOLD."

This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm, giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



THE SHUTTLE

Is very simple, of cylinder shape and open at one end. The

BOBBIN

Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

It has a loosely wheel for winding Bobbin without running the Machine. The

TREADLE

Sets on anti-friction bearings and never requires oiling. It is the Finest Engineered Machine ever offered to the public.

STYLES AND CASH PRICES

No. 1—Plain table, 1 drawer. \$45

No. 2—1 drawer, cover and drop. 50

No. 3—As illustrated in above cut. 55

No. 4—2 drawers on each side. 58

24" Wide cuttings for shipping. Includes complete list of attachments free.

HOUSEHOLD HEAD.

MARK SHELDON,

Wholesale Agent,
9, 11 & 13 First St., S. F.

Agents Wanted.

AGENTS WANTED EVERYWHERE for the best Family Knitting Machine. It is a complete machine, and will knit any style of fabric. It is a complete machine, and will knit any style of fabric. It is a complete machine, and will knit any style of fabric.

Dewey & Co., 252 Market St. Patent Agt's

Los Reservoirs, Head Gates.

ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

COOKE & SON, Pioneer Box Factory, SACRAMENTO, CAL.



Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors

Office—318 California Street, Room 2.

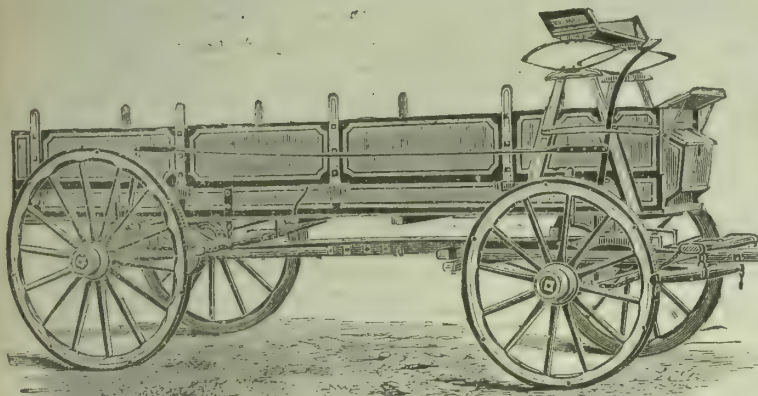
JOHN ELLIS.

Landscape Engineer and Garden Architect, Practical Nurseryman and General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically. Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

PACIFIC COAST BRANCH.

If you want **THE BEST WAGON ON WHEELS** you Should buy only
THE STUDEBAKER WAGON



THE STUDEBAKER WAGON WITH STAKE RACK BED.

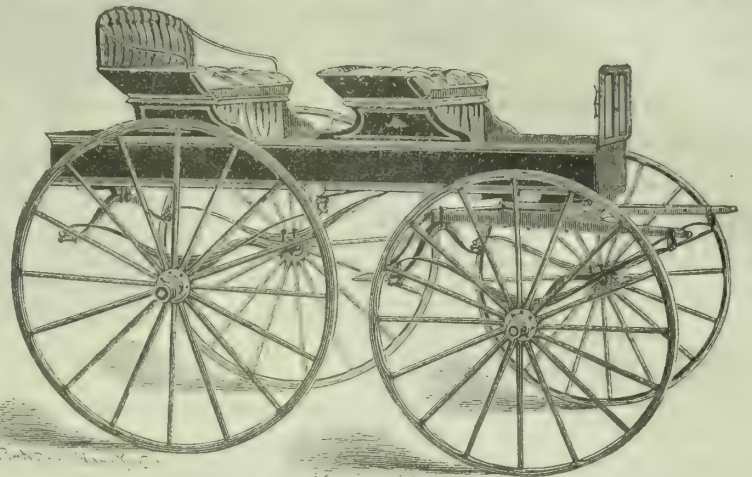
Made from the best selected INDIANA TIMBER thoroughly seasoned and prepared for the hot, dry climate of California.

We are now using, and shall continue to use exclusively hereafter in our Iron Axled Wagons, the celebrated

Goncord Axles,

which are well known to be the lightest running and most durable axles made.

Our Thimble Skin Wagons have our patent Truss-Axles which greatly strengthen the axles.



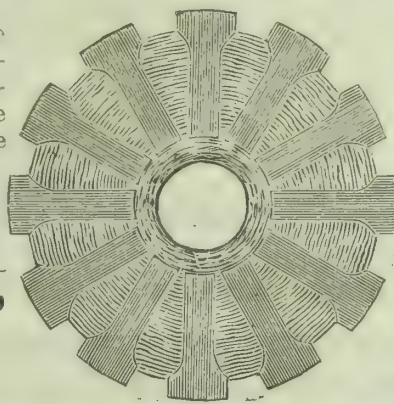
STUDEBAKER PLATFORM SPRING WAGON.

THE STUDEBAKER is the only Wagon in which the **Slope Shouldered Spoke** is Used.

The many advantages over the square-shouldered spoke commonly used can be seen in the annexed cut. It compresses the hub, making the most solid and substantial wheel possible. Saves refilling, and is strong where the square tenon is weak. We have a full and complete stock of

Four-spring Wagons,

With and Without Tops.



Platform Spring and other Spring Wagons,

As Well as a large line of

Top and No-Top Buggies and Carriages.

We are now permanently located in Our New Warerooms, and will be pleased to show our stock to any, whether wishing to purchase or not

Studebaker Bros.' MANUFACTURING CO.,

201 & 203 Market St., Cor. Main, SAN FRANCISCO.

U.S.★ WINDMILL.

First Premium at the State Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out.

It does its work with less loss of power from friction than any other mill.

It is easily regulated to do as little or as much work as may be required of it.

It is self-governing, and very sensitive to the least change in the wind.

It will run with less wind than any other mill of the same size, doing the same amount of work.

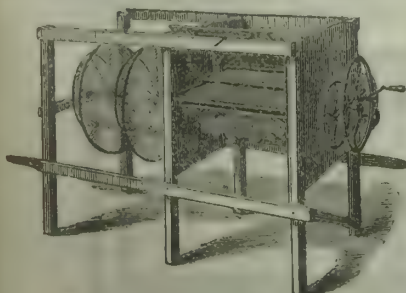
It is simpler and more compact in construction than any other first-class mill.

It is the most durable windmill known.

It is offered at as low a price as any other first-class mill.

D. C. PAUL, General Agent, Livermore, Cal.

NEW INVENTION!



Patented July 25, 1882.

"California Chief" GRAIN CLEANER.

Office, 409 California St., San Francisco



A Rapid and Permanent cure for
DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.

N. B.—Correspondence solicited from Wholesale Drug-gists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,

Sole Proprietors and Manufacturers,
295 Cutter Street., CINCINNATI, OHIO.

McLEOD'S XXX

Squirrel Poison,

Reasons of its Superiority:

1. Squirrels will eat it any time in the Year.
2. It does not Lose its Strength by Exposure to the Air.
3. It is Cheaper than the Farmer can manufacture it.

Address,

A. J. McLEOD,

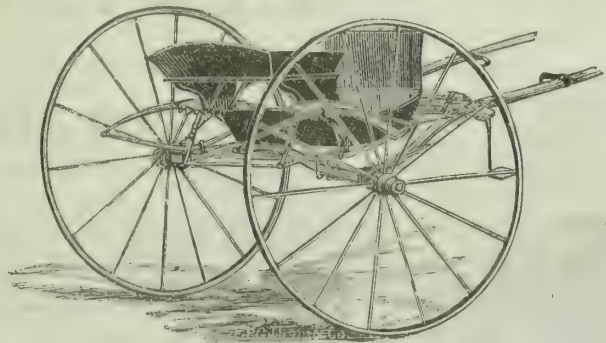
Livermore, Alameda Co., CALIFORNIA.

Hortop's Eureka Cart, OR TWO-WHEELED PHAETON.

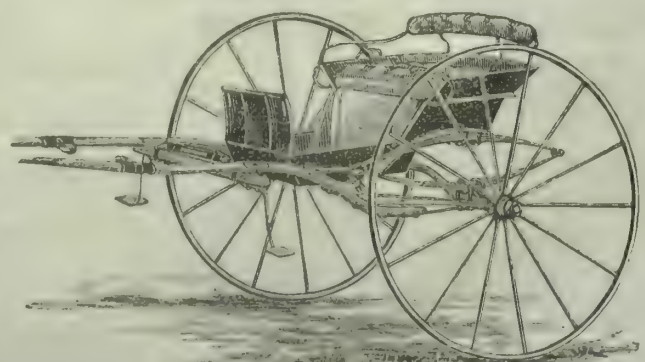
POINTS OF SUPERIORITY:

EASY RIDING, EASY DRAFT, SIMPLICITY, NEATNESS, STRENGTH AND STYLE OF CONSTRUCTION
There being no multiplicity of spring or other complicated parts to get out of order

With Pole and Shafts or Canopy Top; as Easy Changed as a Buggy Pole;
Six Different Styles; Only Needs a Trial



NO. 1 CART \$30.00.



NO. 3-PLAIN LEATHER OR CLOTH TRIMMINGS-PRICE, \$1.00

MANUFACTURED AT THE

RUTHERFORD AGRICULTURAL WORKS,

Rutherford,

By H. HORTOP, Patentee.

Napa Co., Cal.

DAVID N. HAWLEY, Agent,

117 Market Street,

San Francisco, Cal.

Lands for Sale and to Let.
Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal

CREDIT SALE
Of 3,000 Acres
—OF THE—
BEST FRUIT LAND IN THE STATE,
To be Sub-divided in Lots to Suit Purchasers.

In part—well improved grain land; some rich bottom land, and a large tract of timber and pasture land, from \$5 per acre upwards.

These lands are situated from 5 to 10 miles from the town of WATSONVILLE, in the celebrated Pajaro valley, Santa Cruz county, Cal.

TERMS—One-fourth CASH; one-fourth in one, two and three years.

PRODUCE AND WOOD
Taken at Market Rates in Payment for this Land. Apply to
"Pacific Coast Land Bureau,"
22 Montgomery St., San Francisco.
Or to **W. E. KING,**
Hazel Dell, Watsonville, Cal.

Good Crops Every Season
Without Irrigation.
Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of
SANTA CRUZ COUNTY.
Address "Exchange & Mart," Santa Cruz, Cal.

Stock Range.
Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,
EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

CAMPTON'S
Self-Opening Automatic Gate,
(Patented May 2, 1881)



For Farm Use and Fancy Residences.
It is the Boss Gate where ladies have to do their own driving. For simplicity and durability, the only reliable automatic gate in use. No complex machinery. By a single lever it is thrown off the center of gravity and opens and closes itself by its own weight. A child six years old can open it. We manufacture different styles gates from \$25 to \$100, from cheap iron gate made of Wood and Iron, \$25 for Iron. Tabular and Wire we charge from \$35 to \$100, according to the style wanted. For reference as to the merit of this gate we refer you to a few of the following gentlemen who have used the gate:

H. M. Larue, President of the State Agricultural Society, Davisville, Yolo Co., Cal.; J. D. Carr, Salinas, Monterey Co., Cal.; Judge Weller, Modesto, Santa Clara Co., Cal.; Juan Gallegos, Mission San Jose, Alameda Co., Cal. For further particulars and Illustrated Price List, address **JOHN AYER, P. O. Box 55, Livermore, Alameda Co., Cal.** or **JAMES STANLEY, Mission San Jose, Alameda Co., Cal.**

YOUR NAME
On 50 large size CARDS. Remembrance, sentiment, Hand Book, etc. No 2400, 10c, 11 pks. \$1. Please send 20c for album of 100 samples and list of 200 elegant premiums and 1000 of 20 fine 6-11 Brev. Edge Cards, turned corner, 10c. Your Name in this interesting Agents make 50 per cent. We offer the largest line of cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTH OGDEN CARD WORKS, Northford, Conn.

Agricultural Books.
Orders for Agricultural and Scientific Books in general will be supplied through DUNN & CO., at published rates.

F. A. HILL, Superintendent. E. P. PALMER, Secretary.
BENICIA AGRICULTURAL WORKS,
Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.
Manufacturers of

AGRICULTURAL IMPLEMENTS,
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons
OF ALL KINDS.
Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,000 ft. in length, and have a floor surface of 105,492 square feet, or nearly 2 1/2 acres. The works are connected with the works by rail, and have a floor surface of more than 40,000 square ft., including warehouses. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to receive rapid work and prompt shipments, either by rail or water, thus making a good leaving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the celebrated Patent Iron Wheel, also the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Also, victors in all plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE
Hill's Eureka Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Hill's Improved Horse Powers, Cultivators, Corn Seed Sowers, Hill's Improved Headers, Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from Sacramento, will be enabled to ship Goods direct to the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can devise. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

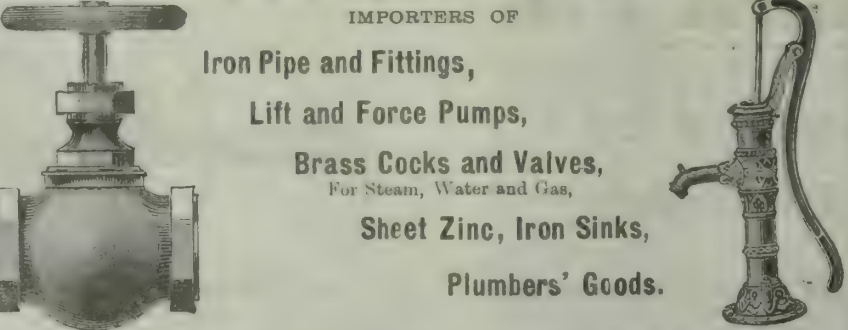
BENICIA AGRICULTURAL WORKS,
Or Agents, **BAKER & HAMILTON, San Francisco and Sacramento.**



Berry & Place Machine Company,
PARKE & LACY Proprietors.
No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,
Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS, Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.
Our Catalogues and Price Lists furnished on application.

W. R. ALLEN & CO.,
IMPORTERS OF



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

HARNESS, SADDLES,
LEATHER & SADDLERY Goods, WHOLESALE AND RETAIL.
Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Breeches, Ropes, Blankets, etc., etc.
W. DAVIS, 410 Market Street.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call.
Address L. P. McCarty, 602 Taylor St. Price, \$4.
AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIBBOY & Co., 10 Barclay St., N. Y.

Educational.
The Harmon Seminary.
BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR YOUNG LADIES.
Will be Conducted by REV. S. S. HARMON and MRS. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well-known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.
For Prospectus and other information, address
S. S. HARMON, Berkeley, Cal.,
Or **E. J. WICKSON, 414 Clay St., S. F.**

SACRAMENTO
The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, **Z. C. ATKINSON, Sacramento, Cal.**

STOCKTON
Business College.
Telegraph Institute and Normal School. Corner Hunter Street and Miner Avenue, Stockton, Cal. Largest School of its kind on this coast. Open day and evening. Tuition and expenses less than one-half the usual rate. Excellent board, \$10 per month. Courses of study: Full Business Course, Full Normal Course, Review Course, Special Course: Teachers Course, Preparatory Course, Telegraphy, Languages. The College Journal, containing full information, will be sent post paid to any address. **F. E. CLARK, Principal.**

THE DAVIS GUN.
The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker 4-11. Every breech-loader has a record of its shooting 12-gauge, \$32, 10 gauge, \$35. Muzzle Loaders, \$15. Send for Circular and mention this paper. **E. T. ALLEN, Sole Agent, Importer of Firearms and Sporting Goods, 416 Market Street, San Francisco, Cal.**

DO Not Fail to send for our FALL Price-List for 1882.
Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address
MONTGOMERY WARD & CO.,
327 and 329 Wabash Avenue, Chicago, Ill.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.
Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.
FOR SALE BY **JOHN H. WHEELER,**
111 Leidesdorff St., S. F.
P. S. A sample can be seen at this office.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAGE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks. Eggs \$3 per dozen.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. E. R. Game Bantams. Eggs and fowls for sale.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

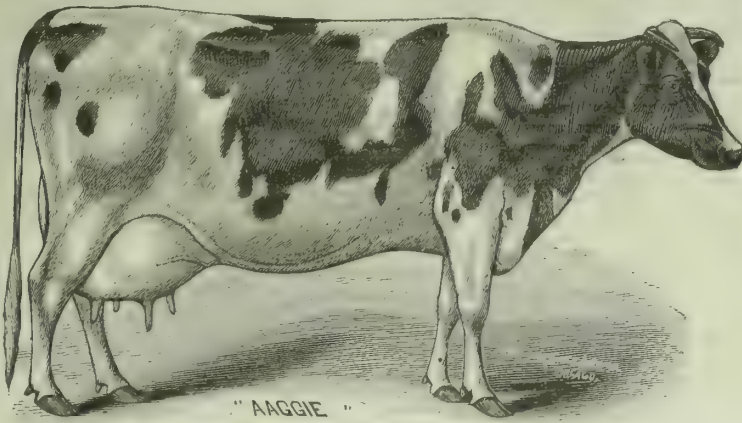
The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address
G. G. WICKSON, 319 Market St., S. F.

HOLSTEIN CATTLE.

THEY COMBINE MILK, CHEESE, BUTTER AND BEEF
Far More Successfully than any other Breed.



"AAGGIE"
MILK RECORD 18004 LBS. 15 OZ. IN ONE YEAR.

THE LARGEST HERD IN THE WORLD.

Every Animal Recorded in the Holstein Herd Book of America.

425 pure-bred, selected animals, nearly all imported, and selected personally by us from the best herds in Holland, regardless of price, and all from the deepest milking families. An unusually large and fine lot of Bull and Heifer Calves and yearling Heifers in calf. Prices very low, for the quality and breeding of these animals.

CLYDESDALE HORSES.

A large and elegant stud of Stallions and Mares on hand, and new importations constantly being added. Unusual inducements offered.

HAMBLETONIAN HORSES.

A magnificent stud, from the best trotting families. A large number of superior Young Stallions, Mares and Driving Horses for sale at low figures.

Catalogues of each class of stock sent free on application. Correspondence solicited. Call and satisfy yourselves before buying. To breed from the best is always the cheapest.

SMITHS & POWELL,

Lakeside Stock Farm, Syracuse, N. Y.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAGE & SON.

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.
No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. L. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

LANGSHANS.



My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported Eggs for hatching.

MRS. J. RAYNOR,
1416 Folsom St., S. F.



Calvert's Carbolic
SHEEP WASH.
\$2 per Gallon

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON
S. F., Sole Agent for Pacific Coast

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address
J. A. POPPE, Sonoma, Cal.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal.

Breeder of pure bred Poland China pigs of the Black Beauty, Black Bass, Bismark, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino

SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTEPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER
Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois.

25 miles west of Chicago, on C. & N. W. R. Y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogues.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO, Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS Office, San Francisco. January, 1882.

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL

DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

State Fair Premiums.

(Continued from Page 227.)

Honey, Preserves, Pickles, etc.

Mrs. Wm. Bassett, best display of fruit, in glass, \$10; best red current jelly, in glass, \$5. Mrs. H. Cronkite, best black current jelly, in glass, \$5; best blackberry jelly, in glass, \$5; best strawberry jelly, in glass, \$5; best quince jelly, in glass, \$5; best blackberry jam, in glass, \$5; best raspberry jam, in glass, \$5; best apple jelly, premium of \$5 recommended.

Sugar and Syrup.

B. W. Wilder, best 100 lbs. made from cane, \$20.

Green Fruits.

John Bidwell, best display of apples, \$30; best six varieties of apples, \$20. W. H. Jessup, best three varieties of apples, \$10; Robert Williamson, best display of pears, \$30; W. H. Jessup, best six varieties of pears, \$20; Robert Williamson, best three varieties of pears, \$10; best display of peaches, \$25; best six varieties of peaches, \$10; J. Lyon, best one variety of peaches, \$5; Robert Williamson, best display of plums, \$20; best five varieties of plums, \$10; John Bidwell, best one variety of plums, \$5; P. N. Murphy, best green figs, \$5; Robert Williamson, best display of tropical fruits (raised in California), \$40; greatest number of oranges, \$10; greatest number of lemons, \$10; best display of fruit by the producer, \$30.

Dried and Preserved Fruits, Nuts, Etc.

Jos. Purrington, best dried apples, \$5; best dried pears, \$5; best dried peaches, \$5; best dried plums, \$5. W. H. Jessup, best dried prunes, \$5; best dried apricots, \$5; best dried neotarnes, \$5. T. J. Isbell, best general display dried fruits, \$20.

Gold Medal Awards.

Second Department—Benicia Agricultural Works, Solano county.

Third Department—Capital Woolen Mills, Sacramento.

Fourth Department—Billingsley & Co., Sacramento.

Fifth Department—John Bidwell, Butte county.

Sixth Department—Robert Williamson, Placer county.

Machinery and Farming Implements.

Portable steam engine, premium, J. Ennigert; saw-gumner, Huntington, Hopkins & Co., premium; steam engine, California manufacture, F. M. McKeever, premium; cylinder and concave tooth for separator, premium, A. F. Lashelle; American cider-mills, Holman, Stanton & Co., diploma; sweep horse-power, Seymour, Sabin & Co., premium; also for double-shovel plow; best general display, one house, Baker, Hamilton & Co., premium; also diploma for hay and straw cutter, and for hand corn-sheller; post-hole auger, sulky horse-rake, premium to W. P. Prall; lawn sprinkler, diploma, Huntington, Hopkins & Co.; automatic harrow, premium, A. La Jeunesse; derrick for stacking grain, premium, T. Winters; wheat drill, premium, Davis & Co., also for following articles—self-raker, reapers, mowers and harrow, all self-operating, and cultivators; best double-shovel plow, Seymour, Sabin & Co., premium; two-horse wheat drill, Baker & Hamilton, diploma; also premium on combined reaper and mower, and on combined planter, horse-power, hand corn-planter, potato planter and horse cultivator, and premium and diploma for horse hoe; headers, premium, Benicia Agricultural Works; lawn mowers, premium, B. F. Williamson; windmill, D. G. Paul, premium; feed-mill, M. L. Merry, premium; grain cleaner attachment, premium, Seymour, Sabin & Co., combination beam scales, premium, W. E. Brown; farming mill, premium, John Klees & Co.; Compton's gate, premium, J. Stanley; butter cooler, diploma, B. N. Bagly; tools and household implements, best cabbage cutter, premium, Holmes, Stanton & Co.; also for champion farm road scraper; best general display of haying and harvesting tools, premium, Baker & Hamilton; also for garden seed drill; best apparatus for raising water for irrigating or mining purposes, William Gutenberger, premium; sausage cutter, Huntington, Hopkins & Co.; plows, steel plow and one-horse plow, Holmes, Stanton & Co., \$5 for each; also for best dynamometer stubble plow, George A. Davis & Co., \$5; cast-iron plow, Baker & Hamilton, \$5; chilled-iron plow, Baker & Hamilton, \$5; gang plow, Benicia Agricultural Works, \$25; also \$10 dollars for sulky plow, \$5 for subsoil plow, \$5 for side-hill plow, \$5 for open ditching plow, and for best plow for all purposes, \$5.

Miscellaneous—Buckthorn fence, \$5 and silver medal, to John A. Rhoebling & Sons; Ely Meeker, sun drier, \$10. In the exhibit of vineyard plow, gang and cultivator, by P. R. Stockton, premium highly recommended, as also for punching press, by D. A. Faulkner. Portable forge, Baker & Hamilton, honorably mentioned; also for derrick fork and barley fork; automatic harrow, by A. La Jeunesse, premium recommended.

Table or Collection of Vegetables.

McGregor Bros., for the best table of vegetables, \$20.

Dairy and Domestic Products—Cheese.

J. R. Jewell, best cheese, one year old and over, \$10; best cheese, under one year old, \$10; best and largest display of cheese, diploma and \$15. Joseph Askew, best display of butter in rolls, not less than 10 lbs., \$15. Mrs. H. Cronkite, best tub of firkin, not less than 25 lbs., at least three months old, \$15. W. F. Peterson,

best four loaves bakers' bread, not less than 48 hours old, \$3. Miss Jennie L. Powers, best biscuit, \$2. Henry Fisher, best soda biscuit, \$2; best crackers, butter, \$2; best crackers, sweet, \$2; best crackers, Boston, \$2. Miss Jennie L. Powers, best domestic bread, \$5; best domestic rye bread, \$5. Mrs. E. F. Aiken, best domestic brown bread, \$5. Mrs. W. H. Wright, best domestic corn, \$5; best display of domestic bread, \$10; best display of Graham bread, \$10.

Clothing.

Best exhibit men's clothing, Capital Woolen Mills, \$10. Best exhibit boy's clothing, Weinstein & Lubin, \$5. Best exhibit men's hats and caps, D. H. Quinn, silver medal. Best exhibit silk goods, R. Dale & Co., \$25. Best display woolen goods, Capital Woolen Mills, \$50. Best Turkish rug, Ben Cohen, \$5. Best Mackinaw blankets, Capital Woolen Mills, \$5. Best stocking yarn, Capital Woolen Mills, \$3. Best silk hat, D. H. Quinn, \$5. Best soft hat, Weinstein & Lubin, \$5. Best gents' shirts, Fred. Mason, silver medal. Best display of dry goods, S. Lipman & Co., \$50. Best display of fancy goods, naval and military goods, shoulder braces, cotton sheetings, linen, oil cloth and table covers, Weinstein & Lubin, \$58 and silver medal. Best llama and wolfskins, L. C. Moore, special premium recommended. Best knitted shawl, Miss H. M. Smith, \$5. Best 10 yards kersey, Capital Woolen Mills, \$5. Best display of neckties and bows, Fred. Mason, silver medal.

Needle, Shell and Wax Work.

Weinstein & Lubin, best display of clothing, California made, \$15; Miss Dora Woodburn, best ottoman cover, \$5; Miss Belle Felter, best embroidered table cover, \$5; Miss Phebe Brown, best embroidered chair seat, \$3; Miss Ida Allen, best crochet shawl, \$5; Miss W. M. Lyon, best applique work, \$5; Miss Carrie Phillips, best display of Kensington work, \$5; Mrs. E. R. Hamilton, best embroidered fire screen, \$5; Mrs. W. M. Lyon, best table scarf, \$3; Miss Dora Woodburn, best silk embroidery, \$5; Miss Carrie York, best embroidered sofa cushion, \$5; Miss Nettie Hamilton, best lady's embroidered dress, \$5; Miss Dora Woodburn, best embroidered handkerchief, \$3; Miss Carrie York, best chenille work, \$5; Miss Belle Felter, best display of bead work, \$5; Weinstein & Lubin, best made and handsomest dress for lady, \$10; Mrs. W. M. Lyon, best embroidered wall panel, \$3; Miss Belle Felter, best display of Turkish embroidery, \$5; Mrs. W. M. Lyon, best display love-lace embroidery, \$5; Weinstein & Lubin, best velvet bodnets, \$5; best velvet hat, \$5. Mrs. W. M. Lyon, best specimen of braid work, \$5; best arraseno embroidery, \$3; handsomest display of fancy articles, \$20. Miss Belle Felter, best lambrquin, \$5; best and handsomest toilet set, \$10; Mrs. W. M. Lyon, best display in porcelain painting, \$5.

Juvenile Department.

Miss Bertha Conrad, best pair knit wool stockings, napkin ring; Miss Nettie Bilsen, best shuttle-stitch cushions and child's tidy, special premium recommended; Miss Lillie B. Cutter, best netting, napkin ring; Miss Phebe C. Brown, best worsted embroidery, butter knife; Miss Bertha Conrad, best patchwork quilt, napkin ring; Miss A. B. Lewis, best leaf and moss work, napkin ring; Miss Lillie B. Cutter, best outline embroidery, special premium recommended.

Printing, Lithographing, Etc.

Day & Joy, best specimens of printing (book), silver medal; W. H. Eckhart, best specimen of engraving on steel, silver medal; W. A. C. S. Houghton, best general display of stationery, silver medal; Frank Foster, best specimen of fine book binding, silver medal; best specimen of plain book binding, silver medal; best specimen of blank book ruling and binding, silver medal; H. Lowery, best collection of maps, globes, etc., silver medal; George Schmitt, best mechanical and free-hand drawings, diploma; Sacramento Business College, specimens of penmanship and pen drawings, premium recommended.

Stoves, Castings, etc.

L. L. Lewis & Co., best cooking stove, for wood, \$5; best cooking stove, for coal, \$5; best parlor stove, \$5; best warming furnace, \$5; best cooking range, \$10. Aitken & Fish, best parlor grate, \$3. L. L. Lewis & Co., best display of hollow ironware, \$5; best ornamental fruit and flower stand, \$5; best portable range, \$5; best laundry stove, \$5.

Chemicals (California Manufacture).

W. T. Coleman & Co., best baking powder, the "Royal," diploma. Davis & Cooper, best display of blacking and harness oil, \$2. M. A. Reaves, best hair restorer, diploma, Huntington, Hopkins & Co., best stove polish, diploma.

Manufactures

F. Foster, Sacramento, bound account book, silver medal and \$5. Weinstein & Lubin, Sacramento, leather gloves and mittens, silver medal; dress boots, \$5; heavy boots, \$5; gents' dress shoes, \$5; Congress gaiters, \$5; ladies' gaiters, \$3; ladies' slippers, \$3; display of men's and boys' boots and shoes, silver medal; display of ladies' and misses' shoes, silver medal. A. Longhorn, Sacramento, trunks, valises, etc., silver medal, diploma and \$10. Huntington, Hopkins & Co., Sacramento, rubber hose and belting, silver medal; leather belting, silver medal. Tubbs & Co., San Francisco, cordage, silver medal. C. H. Krebs & Co., Sacramento, paper hangings and borders, honorable mention. F. Foster, Sacramento, mar-

ble paper, home manufacture, honorable mention and \$5. A. A. Van Voorhies & Co., Sacramento, double buggy harness, silver medal and \$10; single harness, \$10. Mexican saddles, \$5; leather and saddles and bridles, silver medals; saddle trees, diploma; shoe-lasts, etc., \$5. Locke & Lavenson, Sacramento, carpets and rugs, \$20. Mrs. A. C. Dutton, Sacramento, rag carpet, \$5. F. R. Girard, San Francisco, best display musical instruments, silver medal and \$20; L. K. Hammer, Sacramento, brass, silver, reed-stringed and wind instruments, silver medal; A. M. Goodnough, San Francisco, Bradbury piano, \$20; Smith/organ, \$20; M. Pearson, Sacramento, five organs, special premium recommended.

John Breuner, Sacramento, dressing bureau, \$10; sofa, \$10; lounge, \$5; extension table, \$5; office chair, \$5; set parlor chairs, \$10; center table, \$5; set parlor furniture, \$20; general display of furniture, \$20; mattresses, \$5; book case, \$5; wardrobe, \$5; silk chair and couch, \$5; spring bed, \$5; upholstery, \$10; office desk, \$5; W. H. Mead, Sacramento, pair side tables, \$5; J. S. Bennett, San Francisco, set bedroom furniture, \$10; P. Lisenfeld, San Francisco, billiard table, \$10; T. S. Clark & Son, San Francisco, wire mattresses and bed spreads, special premium recommended; W. Taylor & Co., Sacramento, scroll sawing, \$5; Billingsley & Co., best wooden and willow ware display, demijohns, etc.—total premiums, \$83, and diploma; J. D. Winters, Solano county, Golden Gate washing machine, diploma recommended; R. W. W. Brehm, San Francisco turning-lathework, \$5. A. A. McLean, San Francisco, trusses, California invention, gold medal recommended; Weinstein & Lubin, Sacramento, thermometers, clocks, telescopes, diplomas and honorable mention; C. N. West, San Francisco, electro-medical belt, silver medal recommended; R. A. Fisk, Sacramento, electro-magnetic apparatus, electro telegraph, electric machine, galvanic battery, diplomas; Henry Eckhart, Sacramento, sporting rifle, breechloading shotgun, game bag, display of firearms, double shotgun, \$18 and silver medal; Robt. Reed, Oakland, artificial limbs, \$10 and diploma; John Carlan, Sacramento, dressed stone, \$5; W. F. Peterson, Sacramento, display of confectionery, \$10; Hobby & Ellsworth, Sacramento, stoneware, drain tile, terra cotta, fire-bricks, pottery, flooring tile, etc., total premiums, \$23, silver medal and two diplomas; H. P. Martin, Yolo, general display of artificial stone, special premium recommended; I. L. Dias, Petaluma, incubator and artificial brooder, silver medal and diploma recommended; John Carlan, Sacramento, 6 pieces of polished granite, \$30; Aitken & Fish, Sacramento, polished marblework, \$30; marbleized slate mantels, silver medal; Jas. Seadler, Sacramento, residence and farm-house designs, silver medals.

Needlework.

Miss Edna Phelps, Sacramento, hearth rug, \$5; Mrs. Joseph Hunter, Yolo, knit bed spread, \$5; Misses Brothers, Sacramento, display of millinery, \$20; feathers, \$10; artificial flowers, \$10; silk bonnet, \$5; Mrs. Wm. C. Tibbitt, Sacramento, pillow and knit shams, \$5; Charles E. Passmore, Santa Cruz, sea mosses and shell flowers, \$6; Mrs. F. A. Ebel, Sacramento, cone work, \$3; Mrs. S. Conrad, Sacramento, crochet bed spread, \$5; linen embroidery, \$5; Mrs. Wm. Kirk, Oakland, worked quilt, \$5; Miss Abbie Sawtelle, Sacramento, silk quilt, \$5; lace work, \$3; Mrs. W. L. Scott, Red Bluff, patchwork quilt, \$5; Mrs. F. F. Thomson, Sacramento, child's afghan, \$3; Mrs. N. D. Goodell, Sacramento, carriage afghan, \$5; Miss H. M. Smith, Sacramento, ornamental needlework, \$5; Miss M. E. McCormick, San Francisco, pillow shams (painted on satin), handsome premium recommended; Miss P. Edwards, San Francisco, elegant piece of embroidery, premium recommended.

Worked Metals.

George T. Bush, best display of copper work, \$10; L. L. Lewis & Co., best display of brass work, \$10; Huntington, Hopkins & Co., best display of tinware, silver medal; best display of modern building hardware, \$20; A. A. Van Voorhies & Co., best display of saddlers' hardware, \$10; George T. Bush, best display of plumbers' goods and wares, silver medal; Scott & Muir, best display of gas chandeliers and burners, \$10; best display of lamps, diploma; Huntington, Hopkins & Co., best display of general hardware, \$20; best display of iron and steel, \$10; best display of mechanics' tools, \$20; best display of table cutlery, silver medal; best display of pocket cutlery, \$5; Weinstein & Lubin, best display of silverware, \$25; L. L. Lewis & Co., best display of kitchen utensils of tin, \$5; Huntington, Hopkins & Co., best circular saws, \$5; best display of files, \$5; B. F. Wellington, best pruning shears, \$5; Huntington, Hopkins & Co., best exhibition of wire fencing, diploma; T. S. Clark & Co., best exhibition of wire goods, diploma; Huntington, Hopkins & Co., best exhibition and anti-friction metal, diploma; best exhibition shot, diploma. Best display of wire cloth, first premium to S. Trustman.

Fine Arts.

Mrs. E. B. Crocker, Sacramento, oil paintings, statuary, bronzes, mosaics, etc., thanks of society recommended; Ella N. Bartholomew, El Dorado, four oil paintings, \$30; Theo. Woore, San Francisco, oil painting, "Juliet," \$20; Thomas Hill, San Francisco, three oil paintings, \$60; A. D. Cooper, San Francisco, two oil paintings, \$30; Mr. Catlin, San Francisco, 29 Indian heads, \$15; Mrs. William

Ireland, San Francisco, oil and water-color paintings, \$40; G. J. Dehny, San Francisco, oil painting, \$25; Jules Tavernier, San Francisco, oil painting, \$10; Nellie Hoops, San Francisco, four oil paintings, \$14; J. A. Stanton, San Francisco, four oil paintings, \$18; S. M. Brookes, San Francisco, four oil paintings, \$14; L. P. Latimer, San Francisco, four oil paintings, \$20; Norton Bush, Sacramento, thirteen oil paintings, \$60; H. Raschen, San Francisco, three oil paintings, \$20; Wm. Keith, San Francisco, eight oil paintings, \$80; A. Silva, New York, one oil painting, \$10; Miss C. E. Usher, Alameda, two oil paintings, \$15; Mrs. E. Keith, San Francisco, eight oil paintings, \$8; Mrs. C. W. Reed, Yolo, oil painting, \$8; May I. Briggs, Davisville, oil painting, \$5; W. F. Jackson, Sacramento, five oil paintings and one crayon, \$43; Mrs. Wm. Beckman, Sacramento, oil painting, \$5; Miss Polly Parker, Sacramento, oil painting, \$5; Ellie B. Cutter, Sacramento, three crayons, \$5; Miss Addie L. Hughes, Sacramento, four crayon drawings, \$10; Miss Amelia Kippel, Sacramento, four crayon drawings, \$10; Mr. Lussier, Sacramento, two oil paintings, \$20.

Committee recommendation—That a gold medal be awarded to Wm. Keith, of San Francisco, for display of oil paintings. Also, that a special premium be awarded to the Sacramento Business College for pen drawings, etc.

Miscellaneous Department.

R. W. Wheeler, Sacramento, fruit and meat cannery and preserver, medal recommended; Capital Packing Company, Sacramento, canned fruits and meats, medal recommended; McGregor Bros., Sacramento, cantelopes and watermelons, favorable mention; Wilmerding & Co., San Francisco, Peruvian bitters, favorable mention; John M. Hooper, San Francisco, Robinson's self-adjusting hammock chair, diploma recommended; Bidwell & Cook, Sacramento, teas and groceries, special premium recommended; George Uhl, Sacramento, brush dam and levee protector, special premium recommended; Henry Fisher, Sacramento, crackers, favorable mention; Mrs. G. W. Lorenz, Sacramento; jelly cake, breakfast muffins and graham gems, favorable mention; Sprunoe, Hanley & Co., San Francisco, African stomach bitters, favorable mention; C. W. Hoyt, Sacramento, grafting machine, diploma recommended; D. N. Bugbey, Sacramento, drawbridge model, special mention; vehicle axle, favorable mention. Buell & Roberts, Sacramento, bed springs, favorable mention. Mrs. L. E. McMahon and Geo. W. Yount, Solano, olive oil, silver medal; Mrs. Robert Chalmers, El Dorado, Catawba wine bitters and blackberry cordial, favorable mention; blackberry brandy, diploma. T. S. Clark & Son, San Francisco, iron bedstead and wire mattress, diploma. G. W. Chesley & Co., Sacramento, maple rum, rock and rye, Oundurango bitters, diplomas and favorable mention. B. F. Wellington, San Francisco, improved egg food, special mention. James H. Lawrence, fancy tinware, favorable mention. C. F. Tranley, San Francisco, wall paper signs, silver medal. T. W. Schwamb, Sacramento, Royal St. John Sewing machine, diploma recommended. A. A. Van Voorhies & Co., Sacramento, 1 collar and harness, silver medal. H. P. Martin, Yolo, sun-shade, silver medal. Miss A. Easton, Sacramento, metallic scientific dress-cutter, favorable mention. Mrs. F. A. Pratt, Sacramento, collection of curios, honorable mention.

Photographs.

J. A. Todd, Sacramento, \$17.50; J. R. Hodson, Sacramento, \$17.50; J. W. Leftwich, Sacramento, \$10; J. Boysen, Colusa, \$5.

ARTIFICIAL LIMB

Manufacturing Co.

(Incorporated by the State of Pennsylvania.)

Every Member of which Wears an Artificial Leg.

MANUFACTURE

Adjustable Lacing Socket Limbs.



The most comfortable and durable limb, and the nearest approach to the natural member of any invention of the age.

Write for Catalogue, which gives a full description of these Legs, with numerous certificates from persons using them.

When patrons can't visit our establishment we forward blanks to take measures.

ARTIFICIAL LIMB MANUF'G CO.,
279 Penn Street, Pittsburg, Pa.
J. W. THOMPSON,
Secretary & Business Manager.

WANTED.

A responsible firm to manufacture Patent Wood and Brass Butter Molds. The work can be seen at 425 Front Street, San Francisco, Cal.

OVER 180,000 Howe Scales sold—Hawley Bros. Hardware Co., General Agents, San Francisco.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

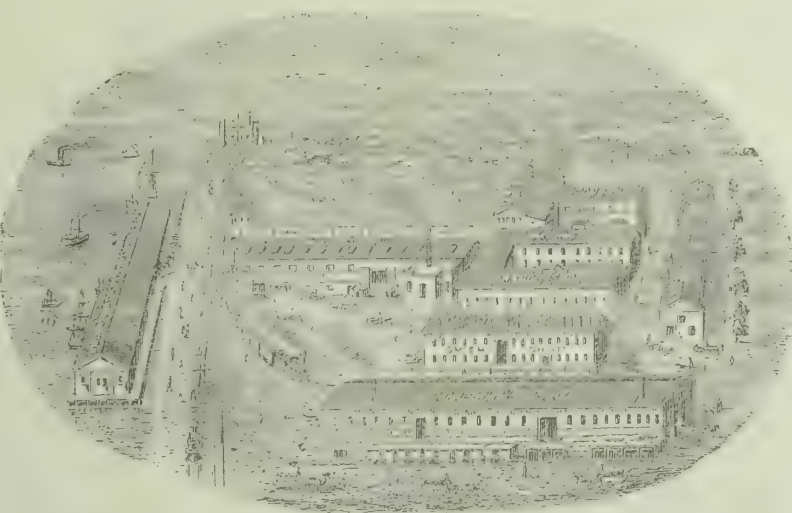
MANUFACTURERS OF AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

SPRING & THOROUGHBRACE WAGONS, OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly $2\frac{1}{2}$ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square feet, including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the



interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium of \$100.

The Largest and Most Complete Agricultural Works on the Coast.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.	Hill's Sweepstake Road and Breaking	Gillis' Improved Horse Powers.
" " " Tule Plow.	Plows.	Cultivators.
" Improved Granger Gang.	" Side Hill Gang.	Gem Seed Sowers.
" Im'd Single Sod and Tule Plow.	" Double Deep Tiller.	Hill's Improved Headers.
" Single Plows.	Fresno Ditching and Grading Plow.	Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited, that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento, Cal.

Seeds, Plants, Etc.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.
Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.

TO FRUIT GROWERS,

Tree Planters, Etc.

A part of the stock of the NAPA VALLEY NURSERIES, being on rented land, must be cleared off early. Stock includes yearling FRUIT TREES, deciduous SHADE and FOREST TREES, Etc.

All stock grown Without Irrigation, and absolutely FREE FROM DISEASE OR INSECTS.

Address for special price list,

LEONARD COATES, Napa City, Cal.

P. O. Box 2.

HOLLAND BULBS



ROSES AND PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO.
SEEDSMEN,
Rochester, N. Y. & Chicago, Ill.

For FALL PLANTING

Fruit and Ornamental TREES, SHRUBS, ROSES, ETC.

The largest and most complete general stock in the U. S., including many Choice Novelties. Abridged Catalogue mailed FREE to all applicants. Address, ELLWANGER & BARRY, Mt. Hope Nurseries, Rochester, N. Y.

FOR SALE.

Moor Park Apricot & French Prune Trees.

One year's growth in the graft, thrifty, and of good size. Free from pests and will be dug by hand. Address

STODDART & SANDERS,
Saratoga, Santa Clara Co., Cal.

GRAPE CUTTINGS

Season 1882-3.

A SPECIALTY AT THE

Napa Valley Nurseries.

Zinfandel, Burger, Chasselas, Rieslings, Malvoisie, etc., \$3.50 per 1,000. All from vineyards where no phylloxera has been discovered. Also, ROOTED VINES and Phylloxera-proof stock, Riparia, Rupestris, etc. Address,

LEONARD COATES,

P. O. Box 2.

Napa City, Cal.

TREES AND SEEDS TRUE TO NAME.

APPLES—4 to 15 to 20; Asterichia, Harvest, Laverne, Pearmain, Nickajack, Pie, Red, Red-Dwarf, etc. PEACHES—3 to 4 to 10; Alexander, Big Boy, Peter, Crawford, Chrysomel, etc. LAR, Lemon, etc. APRICOTS—3 to 4 to 10; Moorpark, Breda, etc. Early Golden, etc. PLUMS—2 to 3 to 4; best varieties of earliest and latest. NECTARINE—Large Red, resistant tree only, etc. KAKI—2 to 3 to 4; also, etc. from 1 to 10; each. Chestnut, Walnut, Butternut, Madara, Hickory, Pecan, Carolina Pecan, Catalpa, Paw-paw, Ash, Maple, Box Elder, Tulip tree, Sycamore, Magnolia, Rose, etc. Hawthorn, Elm, Cherry, etc. and many many besides all kinds of berries and shrubs, Quince, etc. and other cuttings.

Send me 1 kind each of Broome, Sugar Cone, Dorra, and well-timed Potatoes as an Antidote, Hop roots, Cotton seed, DAMBOON, Peanuts, Bird Barley, the most valuable forage plants, and many other useful and profitable seeds for the farm. Also a pair of Cattle, \$2.50 to \$5.00 each. CATALOGUES FREE.

W. A. SANDERS, SANDERS, FRANK CO., CAL.

BLOOMINGTON (PHENIX)

NURSERY, Established in 1852

13 GREENHOUSES! PRICED CATALOGUE FOR FALL, 1882, MAILED FREE. SEND FOR IT.

SIDNEY TUTTLE, Agt. Bloomington, Illinois

NEEDHAM'S RED CLOVER

Blossoms and extracts of blossoms, the greatest blood purifier known. A sure cure for Cancer, Salt Rheum, and all blood diseases if taken in time. Many also have been cured of Catarrh, Rheumatism, Poison Oak and other diseases. For full particulars, circulars and testimonials address, W. C. NEEDHAM, sole agent for Pacific Coast, P. O. Box 422, San Jose, Cal.

Dewey & Co. 252 Market Street, Patent Agts

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, etc.

POP CORN.

WAREHOUSES:

115, 117 & 119 Kinzie St.

104, 106, 108 & 110 Michigan St.

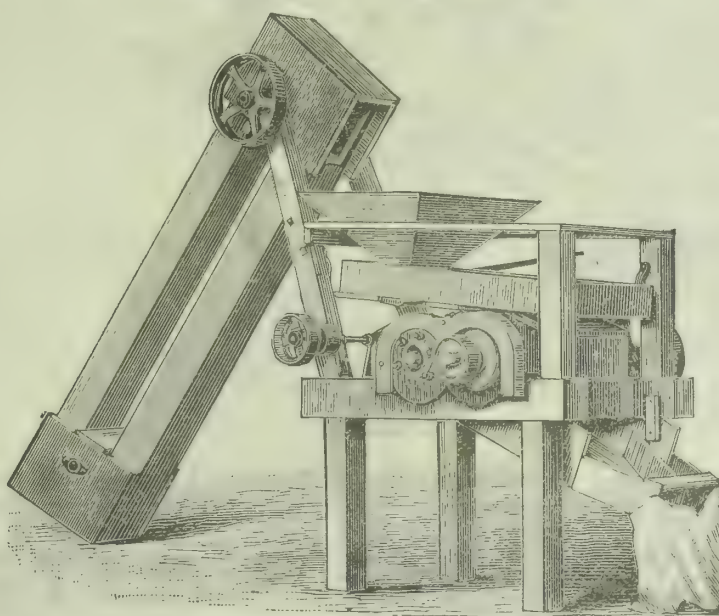
Office, 115 Kinzie St.,

CHICAGO, ILL.

SEEDS

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

PRESCOTT HOUSE.



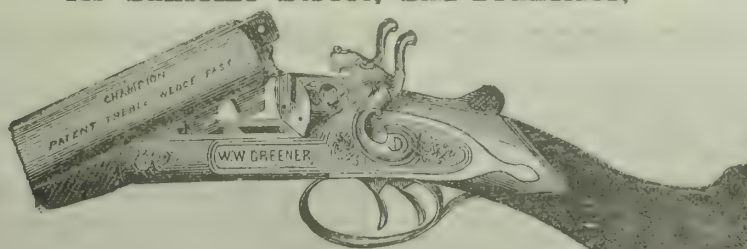
S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

Nathaniel Curry & Bro..

113 Sansome Street, San Francisco,



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A FULL STOCK OF COLTS PARKER AND REMINGTON GUNS, SHARPS, BALLARD, WING HESTER, KENNEDY, MARLIN, and REMINGTON SPORTING RIFLES; PISTOLS OF ALL KINDS.

Ammunition in quantities to suit.

A liberal discount to the trade.

Price List on application.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)

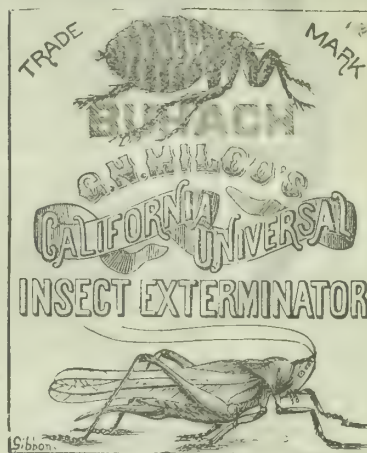
LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency, LINFORTH, RICE

& CO., 323 & 325 Market St., S. F.

New Crop Insect Powder.

BUHACH! BUHACH!



None genuine without this trad mark.

SURE DEATH TO ALL INSECTS.

An imported powder of a bright yellow color is sometimes sold as Buhach. Buy only that which bears our trade mark. All druggists and grocers not keeping it send for price list. BUHACH PRODUCING & MANUFACTURING CO., 154 Levee street, Stockton, Cal.

Five Music Books

Of a very superior character, for use during the ensuing Fall and Winter.

The Peerless SINGING SCHOOLS.

(Price 75 cts.) A new, fresh and every way desirable book, with abundant material for the instruction of singing classes, and for social singing. By W. O. Perkins.

Song Bells. FOR COMMON SCHOOLS.

Has had a year's trial, with universal approval, in a multitude of schools. Large variety of wide-awake songs. By L. O. Emerson.

Light and Life. FOR SUNDAY SCHOOLS.

(Price 35 cts.) Great success has attended this exceptionally fine collection, which has been before the public but a few months. Enthusiastic commendations wherever used. By R. M. McIntosh.

The Choral Choir. For Choirs

and Conventions. (Price \$1.00) It is the companion book to THE PEERLESS, is larger, and has a much greater number of pieces for choirs. The singing class course is the same as that in the smaller book. By W. O. Perkins.

The Welcome Chorus.

FOR HIGH SCHOOLS. (Price \$1.00) This book, although of recent issue, has come to be regarded as a standard book for use in the higher schools. By W. S. Tilden.

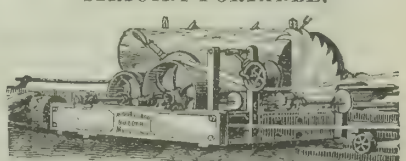
Any book mailed, post-free, for the retail price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & CO., 843 Broadway, New York.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO., Agents for the Pacific Coast.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

Frank Bros.' Agricultural Warehouse.

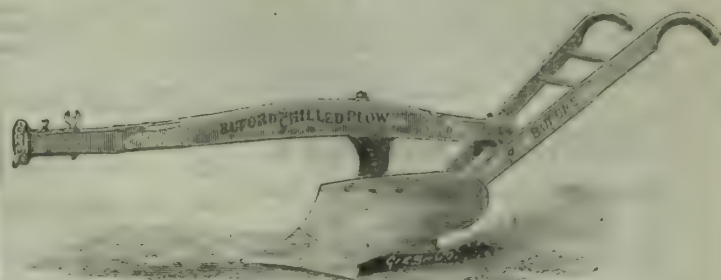


BUFORD CLIPPER WALKING PLOWS.

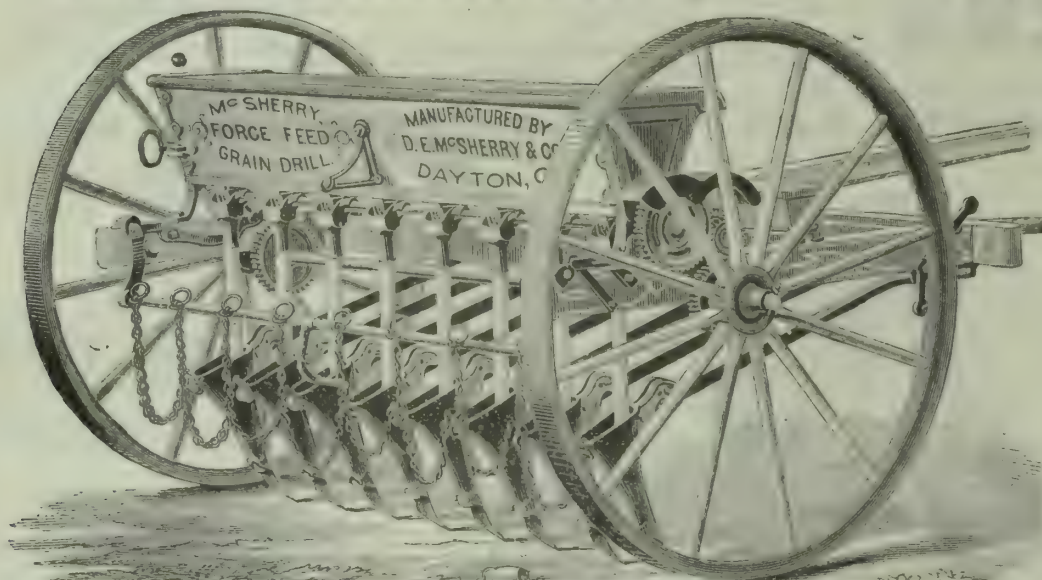
319 & 321

MARKET STREET,

SAN FRANCISCO.



ROCK ISLAND CHILLED IRON PLOWS.



McSHERRY FORCE FEED GRAIN DRILLS.



BROWNE GANGS AND SULKIES.

A Full Assortment of Latest Improved Farm Machinery, Wagons, Etc.

TRIUMPH GRAIN DRILL.

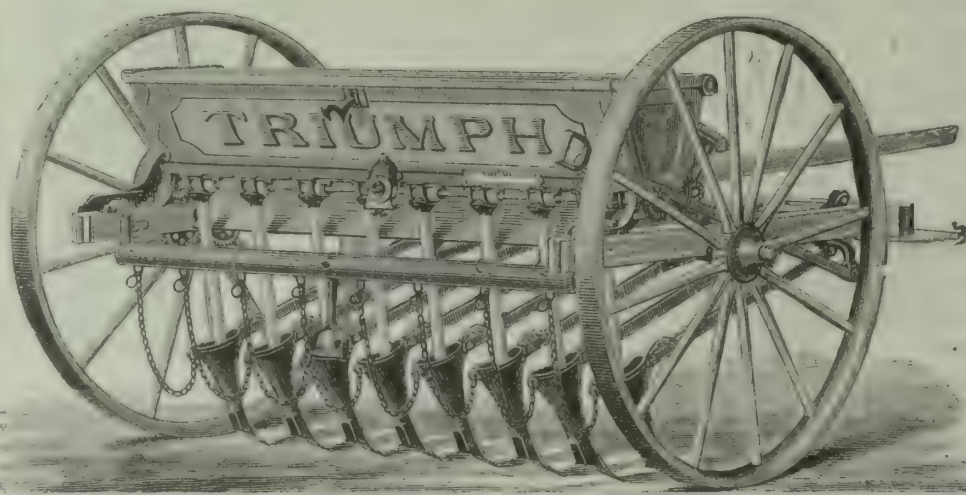
The Best Force Feed Grain Drill in the World.

Drills from One Peck to any Quantity per Acre. Does not Crack the Grain.

THE TRIUMPH GRAIN DRILL

Possesses many features of merit peculiar to it alone, to which we invite the careful attention and consideration of every farmer contemplating the purchase of a Grain Drill.

It has been rightly named the TRIUMPH, for, wherever introduced, it has triumphed over all competitors, and taken the lead as the most regular grain sower, and the most reliable drill in the market; and in those sections where most generally introduced, and therefore best known, have its sales most rapidly increased. This increase cannot but continue, for the perfect satisfaction which the TRIUMPH has in all cases given makes every farmer owning one an advertiser of its merits. We can, with confidence and pride, refer to thousands who are using it, knowing that they who have practically tested it, and are most thoroughly



The Triumph Grain Drill. Improved over the Buckeye and all others.

acquainted with it, are its warmest friends and admirers.

By comparison, the TRIUMPH will be found to be:—

Interior in no Respects.

Equal in all Respects.

Superior in many respects to any Drill made.

In the TRIUMPH we accomplish all that can be done by any other Drill, with all their combinations of gear wheels; and that, too, without any change of gearing whatever. There is no need of changing to pecks or half-pecks at a time in the TRIUMPH; it can be regulated to quarts or pints, and will sow any kind and any quantity of seed per acre—from one-half bushel of flax seed to three bushels of oats—and will sow beans and corn in any desired quantity.

THE TRIUMPH. A PERFECT FORCE FEED GRAIN DRILL AND GRASS SEEDER.

Sows all kind of grain and grass seeds without change of gear wheels, and has but three gear wheels, all fastened permanently on the drill and outside frame. It has the most perfect Hoe Shifter in use. Can be operated while the Drill is in motion. It has a perfect Spring Hoe and Fertilizer Attachment and a reliable Land Measure. It has no loose parts, and is entirely free from springs, and is always ready for use. It is the only Drill made that does not move or change the speed of its feed wheel. It is the most regular Grain Sower in the market. It is unequalled for simplicity, strength, durability and style of finish. For further information send for pamphlet.

PRICE, WEIGHT, ETC., OF TRIUMPH DRILL.

9	Hoe, 5 inch, Weight, 625 pounds.	\$105.00	13	Hoe, 7 inch, Weight, 725 pounds.	\$130.00
10	" 6 " " 650 "	110.00	15	" " " 800 "	150.00
11	" 6 " " 675 "	115.00	17	" " " 900 "	175.00
11	" 7 " " 700 "	120.00	19	" " " 1000 "	195.00
12	" 8 " " 750 "	125.00	21	" " " 1100 "	205.00

San Francisco.

BAKER & HAMILTON,

Sacramento.



TWENTY PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, SEPTEMBER 30, 1882.

Number 14

Dutch Friesian Bull.

We recently published a communication claiming that the term "Holstein" is a misnomer as applied to the cattle brought to this country from Holland. We then stated that the name was a subject of heated controversy, and that rival herd books were in existence at the East. According to all accounts, the weight of evidence seems clearly to point to Holstein as an improper term, and yet breeders who choose the name desire to retain it, as it serves their purpose well, etc.

As the other name, Dutch Friesian, has come into our columns, we are pleased to give a portrait of a bull imported by the Unadilla Valley Stock Breeders' Association (West Edmeston, New York). He is styled Mooie, and is a magnificent animal, excellent in the herd, and a great success at the fairs. Last year the cattle of the Unadilla Association were quite successful at the fairs, and this year they are achieving similar triumphs, having just taken the herd premium at the Ohio State fair. Last year the bull Mooie won, individually, \$375, and at the head of his herd, \$1,225. Total amount of premiums awarded the Unadilla Valley herd in 1881, at four Western State exhibitions, was \$2,645.

The cows of the Unadilla Association have made fine records. According to the published herd notes, the cow Sjoerd made 20½ lbs. of butter in seven days. Maid of Twisk has given 15,960 lbs. of milk in 336 days; largest yield in one day, 90½ lbs. S. J. Bleeker gave 14,508 lbs. of milk in 365 days. C. J. Bleeker gave 41,220 lbs. of milk in 365 days, at four years of age. Jacoba Hartog gave 1,185 lbs. of milk in 16 days—average per day, 74½ lbs.; largest yield in one day, 87½ lbs. Her weight at time was 1,120 lbs.

DON'T FORGET IT.—We wish to impress the farmers of the State with the necessity on their part of signing the call, and attendance at the county conventions, the time of meeting of which is fixed between the hours of one and four of Sept. 30th. Even though there are but few collected together for the purpose, don't fail to hold your county convention, and elect a full set of Delegates to the Farmers' Convention, which will meet on October 7th, next ensuing. Remember that every delegation to said Convention will be an important factor; consequently, the delegations from the several counties should be full. The credentials of the delegates from each county should be signed by the chairman of their county conventions.—*California Patron.*

The forests of the Adirondacks are doomed to destruction, a company having been formed for the purpose of constructing a line of saw-mills through them, and converting the growing timber into merchantable lumber.

THE RED SPIDER ON SHADE TREES.—When pests show a universal appetite the conflict with these seems more hopeless. Mr. John Perrott of Woodbridge, tells a local paper that locust trees in his vicinity are covered by myriads of small red spiders. They are not plainly seen by the naked eye but by the aid of the microscope they may be easily discerned. Nearly all the locust trees are filled with the spider's web, and the leaves wither up. Mr. Perrott says that the locust is not the only one infested by the spiders, but it is the only one that they seem to harm. He has found them all over his ranch, on fences, on all the trees and even on the ground.

THE BEEF SUPPLY.—Beef prices hold up well both here and in the county. The Butte Rec.

THE GRAPE GROWERS' CONVENTION.—We give an unusual amount of space to the "Vineyard" this week, in order to present a sketch of the Grape Growers' Convention, which was held at this city last week. Readers who may see the paper for the first time, may think that other departments of farm work are neglected; but this is not so with the issues for a month or a year. We aim to keep all lines of progress well about and each takes the prominence in a single issue according as its news all the time presses for publication. Next week we shall doubtless cross over into the orchard and then into the dairy, stock yard, etc. etc.

GETTING READY FOR NEXT YEAR.—The Colusa Sun says: "There is a greater amount of summer-fallow land in this county, we think,

The Nicaragua Canal.

The report made in the House of Representatives upon the Nicaragua canal project is before us. The Committee on Foreign Affairs, after considering various petitions and memorials, in the main, from citizens on this coast, have reported the bill back to the House for adoption. Accompanying the report is a comprehensive plan and profile of the canal made by the various U. S. surveying expeditions. The conclusions drawn by the Committee, favoring the project, are briefly as follows: If the canal is not built under the protection of this govern-

ment, other governments will attempt its accomplishment. Prompt action on the part of Congress is urged, and by its delay, objecting to the opening of the inter-oceanic canal, under other national auspices, and refusing to secure it under its own, this government is subjecting itself to criticism.

If the United States will not provide for the work, we cannot, in justice, object to action on the part of those who are ready. Our domestic condition is now unusually favorable to American enterprise in this direction; the public are interested in the scheme; money is plenty, and at low interest; labor is not high; improved machinery will greatly diminish the necessary expenditure, and private capital is ready, as never before, for investment in the enterprise. The benefits to be derived, the committee think, were never so patent as now, and they express the hope that Congress will give its prompt and favorable attention to the report. The document is an interesting one, and should be generally circulated among those interested in the great improvement.

WINTER'S INVENTIONS.—J. D. Winters, the well-known inventor of Davisville, Yolo county, had an interesting exhibit at the State fair of his portable derrick, his nets for unloading header wagons, his grab-fork for unloading hay or grain and his Golden Gate Washer. These inventions have been highly spoken of by those who have used them, and Mr. Winters will be pleased to receive correspondence concerning them.

The fire at Susanville destroyed 57 dwellings, barns, shops and places of business. Numbers escaped with nothing but their night clothes, everything they had being destroyed. The loss will reach \$200,000.

The Board of Supervisors of Shasta county has ordered an election to decide as to the removal of the county seat from Shasta at the general election in November.

The heaviest and most damaging rain-storm for many years prevailed during the past few days in New York, New Jersey, Massachusetts and North Carolina.

IMPORTED DUTCH-FRIESIAN BULL MOOIE, OWNED BY UNADILLA ASSOCIATION, N. Y.
ord says: Wholesale butchers have their agents abroad in this part of the country, and throughout Oregon and the neighboring territories, buying up all the beeves for sale. Fred. Ackerman, our butcher, who recently predicted that beefsteak, would sell for 25 cents per pound during the holidays, went to Oregon a few weeks ago and purchased a large band of cattle. In a few weeks, however, we think the stock men will be returning from the mountains with their herds to Winter them in the valleys, and this will, to a great extent, supply the demand.

THE RESULT OF THOROUGH CULTIVATION.—Wm. Ennis, of Lockeford, San Joaquin county, plowed in stubble deeply last March, kept the surface mellow by frequent harrowing until May 19th, when he planted corn. There was no rain after March, and the wise ones thought it would be waste of labor to plant the corn. But the result proved otherwise, for he has just harvested a crop of 30 to 35 bushels of corn per acre from the 75 acres which he treated in the manner described. This showed the advantage of thorough cultivation and pulverizing the soil in retaining moisture so that a very moderate rainfall may give a good crop.

than there has been before. We noticed going up on the railroad that there seemed to be about half the land plowed, and most of it sowed. On inquiring, we heard that it extended clear across the county that way. If we have a tolerably good season, Colusa will have an immense amount of wheat to sell next year."

LEMONS GOING EAST.—The Los Angeles Mirror of Saturday says that the first large shipment of lemons for the season, from Los Angeles county, went out Friday morning per Wells, Fargo & Co.'s express. It consists of 92 boxes, 30 of which are from the Wolfskill orchards, and 62 boxes are shipped by E. Germain. The Wolfskill lot goes to Armstrong & Stanley, Topeka, Kansas, and the others are consigned to Kansas City.

FINE HORSES.—T. E. B. Rice, of Modesto, showed his famous horses at the Stockton fair. His stallion, "Honest George," is a fine general-purpose animal, standing 17 hands high, and being well knit and well proportioned throughout. He has also a two-year-old, "Tom Printer," which shows excellent points.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents. — EDS.

Shasta County Notes.

EDITH'S PRESS: So long has my pen lain idly rusting, it can, with difficulty, be coaxed to move along. I must, however, send a few items, or it may be supposed Oak Highland is dead or deserted. Myself and little ones found a safe retreat there the past summer from the malaria that overtook us on the river last year. There was uniform good health among the settlers on the Highlands.

Most of the men being still unable to clear and fence any considerable quantity of their land, find work in the valley during the summer. Some progress, however, has been made in developing the country and showing its capacities. The first fruit raised in the neighborhood ripened in the garden of Mr. Fox this year—some fine apricots, peaches and apples, also grapes and blackberries. Another neighbor raised a fine large strawberry patch. Rabbits are very numerous and troublesome, and later in the season, deer that could jump any ordinary fence were constant trespassers.

My next door neighbor, Mrs. Parker (half a mile away), with praiseworthy energy, raised quite a door-yard of flowers; but what shall be said for the husband who cheerfully hauled water two miles to keep them fresh and growing?

Mr. Lowe, a gentleman who came in a year ago, has built a cosy home one and a half miles from our homestead. He has a strong faith in the future of the country, and has purchased several sections of railroad land. This year he brought water from the ditch on his land very late in the season. The result was certainly very encouraging. Without any fertilizer, and with very little cultivation, vegetation made a luxuriant growth; evergreen mullet (*Panicum spectabile*) far above a man's head, as also sorghum, castor beans, etc. Squashes, melons and, indeed, everything tried did well, I believe, showing that water is the one thing wanting. Mr. Lowe is also digging a well on his place, and he is determined to go down to water. A former well, dug 50 ft. deep, having caved in, brick making, for the purpose of walling, is in progress near by. The brick making promises very well, I am told.

Anderson has grown considerably the past four years. Mr. Bedford is now putting up a fine brick store. New buildings are constantly going up. Where we pitched our tent in the outskirts of the village, when we came to Shasta county home hunting, is now occupied by residences.

There are drawbacks in Shasta county, and having experienced some of them, we are disposed to look more kindly on the failures of San Joaquin. Another week will probably find us on our way down the valley, bound for the dry plains of the west side. We shall carry with us fond remembrance of dear friends here, and always rejoice to hear of the advancement of the country.

MRS. J. M. K.

Anderson, Aug. 18th.

THE VINEYARD.

The Grape Growers' Convention.

One of the most interesting agricultural meetings ever held in the State was the convention of grape growers, which was held in this city on Monday, Tuesday and Wednesday, Sept. 18th, 19th and 20th, under the auspices of the State Viticultural Commission. The meetings were held in Dashaway hall, on Post street, and were well attended, delegates being present from the leading grape districts of the State. About all the delegates brought with them large baskets of grapes fresh from the vineyards, with the delicate bloom still upon them. Around the hall on the walls were various engravings and lithographs of grapes. On the right hand side of the room, on entering, long tables were placed, extending the length of the hall. On these were different specimens on plates, and ranged over them on long cords were 300 lithographs of different choice grapes. There are some 350 of them, most of them being from "Le Vignoble," a leading French work on viticultural subjects. Bosqui's beautiful plates were also there, and several photographs of the leading vineyards of the State. A number of well-selected works, in several languages, were on the Secretary's desk, to enable the experts to identify the several classes of vines.

Varieties of Grapes Shown.

It will be hard to make a complete list of the grapes shown, but the following will include most of them:

On the first day the following were noted: Blanc d'Espagne, Poudre, Melon Blanc, Matano, Folle Blanche, Folle Noire, Colombar, Petit Pinot, Chausse Gris, Frontignan, both white and black, White Muscat of Alexandria, White Muscadine, Gray Muscadine, Muscadine, Riesling, Sauvignon, Roussette, White Muscat, White Tokay, Prolific white, Black Zinfandel, Black Pinot, Black Morocco, Purple Damascus, Black Furrana, Lammey, Zinfandel, Tronconnet, Black Chardonnay, Black Muscat, Hamberg, Black Zinfandel, White Sultan, White Cornish, Spanish grape, Blau, Opette, Black Longmud, Chasse, St. Rose and others.

At the same time, on the second day, the following were noted: Black Zinfandel, Black Pinot, Black Morocco, Purple Damascus, Black Furrana, Lammey, Zinfandel, Tronconnet, Black Chardonnay, Black Muscat, Hamberg, Black Zinfandel, White Sultan, White Cornish, Spanish grape, Blau, Opette, Black Longmud, Chasse, St. Rose and others.

ties, including grapes grown upon phylloxera-resistant vines of native American stock, including the Cynthiana, Herbe de Lait, Laiton, Godello, Elvira, Malvasia Seedling, Yellow Orleans, Black Oliveta, Rose of Peru, Napoleon, White Cornish, Blau, Petit Verdot and Muscat Rose.

J. B. Drummond, of Sonoma county, shows samples of French grapes raised in his vineyard, including such brands as the Gutedel, Black Burgundy, Berzer, Petite Sirrah, Cabernet, Sauvignon, Samal Nicolas, Semillon, Blanc, Kadarka Noir, Black Malvoise, Elvira, Pinot Gris, Pinot Noir, Morillon Blanc, and Monmouth.

R. G. Klee, of Berkeley, gives evidence of the successful grafting performed by him upon the University grounds at Berkeley.

The display of raisin and other grapes by R. B. Blowers, of Yolo county, comprises such varieties as the Emperor, Tokay, Muscat, Black July and Black Morocco.

Exhibits were also made by Charles Wheeler, St. Helena; J. Dressel, Sonoma; George Huseman, Napa; Charles Le Franc, San Jose; George West, Stockton; M. Pital and A. Rucker, Santa Cruz; C. Mottier, Lake county; and Henry Meil, Greenwood, and others.

The Opening Address.

In calling the convention to order, President Haraszthy stated that the subject for the day's discussion would be, "The Grape Products of Other Countries, and the Varieties of Vines, Climatic Conditions and Soils Necessary to produce Them." The members in attendance were cordially welcomed, and invited to enter freely into a discussion of all subjects brought before the convention.

On motion of C. A. Wetmore, R. P. Pierce was elected Assistant Secretary.

The opening address was made by C. A. Wetmore. Among other things, he said: The topic for to-day is the grape products of other countries. The reason for this is that we do not assume to understand all the effects of experiments yet made. Among the collections made, most of them have been made by public-spirited men from botanical gardens, or from districts in France and Germany where the physical characteristics of climate and culture are similar to our own. There have not been a sufficient number from Spain, Portugal or Greece. If we are to plant this State into

One Grand Vineyard.

As it will eventually become, we must correct this, and ascertain, indeed, what peculiarities of climate the grapes which are to succeed here must be brought. We have so many different climates that several counties must be called upon. Coast fogs, north winds, hot valleys, all must be considered. The ablest men in the world have solved all these problems in a library which we have at our disposal, although probably not in a language understood by all. He had taught, from reading instructions, an old sailor to make an excellent graft. The trouble here was that men acted on their personal experience instead of that of others of 1,000 years. This is an industry divided up into various specialties, and therefore we must go to older countries for experience. There was not sufficient information among wine growers as to the capabilities of their vines. More experiments are needed, but yet, the first thing is to ascertain what experience has done in like circumstances in foreign countries. For instance, hooks are not made in sherry countries, or sherries in Riesling countries. He illustrated a number of instances in support of this idea, and quoted the various European districts in which

The Special Wines Were Made.

And the atmospheric, or climatic effects which controlled them. There is also a trouble which has to be encountered, and that is in local and personal jealousies, generally arising through real-estate antagonism, and the prejudices existing against honest, hard, cold-blooded criticisms. No district can raise all three classes of grapes successfully, although districts can raise one class better than any other country. We must ascertain our faults before we can correct them. We must first find out the defects of our vines before we can make them acceptable. He suggested that this subject should be discussed at full. There were gentlemen experienced in grapes in Germany, Greece and other places, and they should bring forward the results of their experience.

Arranging the Business.

At the afternoon session, President Arpad Haraszthy appointed the following General Committee: San Francisco district, F. Pohndorff; Sonoma county, H. Drummond; Napa county, L. W. Buck; Sacramento county, Dr. I. R. Chalmers; San Joaquin county, Mr. Denicke; Los Angeles district, Hon. J. F. Crank; El Dorado district, Felix Gillet. This General Committee will appoint a sub-committee of three to co-operate in preparing reports upon the following subjects:

1. Viticultural products of other countries suitable as models for approximate reproduction in California, and the varieties of vines necessary to produce them; also, the climatic and other conditions of districts in California, considered with reference to vines suited to them.

2. Varieties of vines grown in California, and their adaptation to certain soils and climates of different districts, especially with reference to excellence in production.

3. The identification of the fruit of jurisdictions of local resident inspectors, and methods for obtaining through such inspectors accurate statistical information concerning viticultural progress and products.

4. Quarantine rules and proposed changes in the same.

5. Viticultural products of California, with reference to their improvement by means of new or rare varieties of vines.

6. The importance of combating the progress of phylloxera with remedies so far as known, and the propagation of resistant stocks and their relative values.

Grapes for California Soil and Climate.

F. Pohndorff read a paper on sweet wines, the mode of raising vines in the Mediterranean provinces and in Spain and Portugal, and their adaptation to the soil and climate of California. The speaker gave an extended written comparison between sweet and sour table wines, and urged that more attention should be paid to the cultivation and propagation of vines for dry

wines, and of currants. He alluded to a number of Mediterranean vines which might be introduced into this State, which, with American care and cultivation, might be improved in both style and flavor. Vine growing in southern Europe is being largely stimulated, and if America hopes to become equal to and compete with southern Europe, our wine makers must pay more attention to quality. He thought the Sultana and Corinthian varieties worthy of consideration. He had noticed that currant grapes introduced into California grew larger here, and while they soon became too large for currants, they would make fine dry wine. The subject of Madeira grapes was discussed at length, and the character of soil best adapted to sherry making was explained. Mr. Pohndorff then proceeded to the discussion of the best quality of grape for the manufacture of port and other sweet wines. The soil best adapted to these grapes is a gravelly, sandy, or a mixture of decomposed rock and loam. The soil and climate of California are as good and equally favorable to the production of a good port wine as that of Oporto, or any other portion of Portugal.

The speaker's most hopeful theory was expressed in the idea that, as the sun that ripens the grapes on the hillsides of Portugal, Italy, Spain and portions of France shines in the same latitudes in the great stretch of California's length; as the ocean, with the west wind, supplies the same saline properties valued by viticulturists of those countries, and as, in short, every natural advantage possessed by those great wine countries are also possessed by California, there is nothing but experience required here for this State to produce wines equal to those of the countries named. As we have especially good facilities for learning the results of their experiences, our success should be quick in coming.

The speaker was very warm in his praise of the Bastardo grape of Portugal, and was asked if he could identify the grape from a sample. Thereupon, a plate bearing a large stem of vine and several bunches of black grapes, known in California as the Trousseau, was exhibited and identified by the speaker, and several others familiar with the grapes of Portugal, as identical with the Bastardo—the same grape, in fact. This created a pleasant sensation, as the Bastardo, or Trousseau, is an especially valuable grape for port wine making.

Julius Dressel, of Sonoma, spoke of the vines of Rhineland. He described at length the mode of planting, cultivating and gathering of grapes used for the light table wines of the Rhine. Of the varieties mentioned as best adapted to the soil and climate of California, he pronounced the Riesling the superior of all. He mentioned the Johannisberg especially, and praised the large Riesling grape of Sonoma as a superior wine grape. The opinion was advanced that the Riesling and other German wines should be grown in Napa and Sonoma counties with a view to reducing the amount of sugar or sweet qualities of the grape, and so obtaining a clearer and more acid quality of wine. The main thing we have to aim at, he said, speaking of the possibilities of the white grapes of Sonoma, is to produce a cheap, agreeable, palatable table wine. One fault is that the wines of this State intended for table use are not sufficiently well clarified. If fermentation is slow and thorough, clarification is much easier. The Gutedel, a great favorite with the wine producers of Sonoma, is no more difficult to clarify than the Zinfandel or Riesling; the fault is that it is put on the market without enough age.

Raisins.

W. B. West, of Stockton, spoke of his recent visit to the famous Malaga raisin district. There the raisin grapes ripen August 1st, a month earlier than here, and have, therefore, a better chance to cure. In picking, they begin with the ripest, and continue to pick from the same vineyard until about August 15th, as the grapes ripen, instead of stripping a vine of all its product at once, as is done here. The grapes are carried to the drying houses, where they are placed on the earth, no platform or drying tables being used. They are allowed to receive the dew for two or three nights, and are thereafter protected nights for the 16 days they are given for curing. During this time, the drying grapes are handled but once, and then for the purpose of picking out any faulty grapes. In this process, the bunches are not turned, as they are here. When a bunch is picked up and handled, it is laid down on the same side. This results in making one side of the raisin better than the other, and the smoothest side, the one that has cured lying next to the ground, is placed up in the packing. The raisins are packed just as they are taken up from the drying floors, and are not subjected to any sweating process. That process is a California invention. It is made necessary by the overdrying most all California raisins are subjected to.

Our raisins are dried until the grape is parched and the stems so brittle that the bunches cannot be packed; thus the bad practice of sweating has been resorted to. It is warmer in Fresno than it is in Malaga, yet the Fresno grapes are cured longer than the others.

Another fault in California is that the vines here are allowed to grow too many grapes. Quality is sacrificed for quantity's sake, and the result is an article of raisin much inferior to what might be produced.

The Muscatel raisin grape, when grown in California, changes its quality and flavor in a few years. The climate of Malaga is superior to California, the nights being warm. The land used for growing the best Malaga raisin is roll-

ing or hilly in character. The average production of each vine is from one to two pounds, or about 2,000 lbs. of raisins to an acre. Labor is very cheap. During the harvest a hand is paid 30 cents a day, and at other times, 15 cents a day. No plows are used in the vineyards, all the work being done by hand, large hoes being used for cultivating the soil. They prune their vines close, and allow one or two canes to each. The best raisin grapes seemed to be growing upon the earth.

J. H. Drummond, of Sonoma county, by invitation, made a brief address upon the subject of French wine grapes. He said he could not make an extended report upon his experiments. He had imported quite a large number of French grapes, but as they were quite young, only two years old—he should not speak in detail upon any one point. He said the Burgundy and Hungary grapes were better in his judgment than other varieties of claret grapes. He cited four varieties of the Pinot grape as superior.

How Port is Made at Oporto

The subject of port wine and its manufacture was briefly discussed by Mr. Tellis, formerly a resident of Portugal. The speaker said that Californians have not yet learned how to make good port wine. They plant the vines in a rich vegetable soil, and while they obtain a larger quantity of grapes from the vines, they lose in the quality of the wine produced. He said that a clayey and gravelly soil is the best for port-wine grapes. In Portugal vines are planted on hillsides in zigzag rows. The grapes grown upon the sides of hills exposed to the southern or eastern sun command the best price. Great care is taken that no green or decomposed berries go to the crusher. If a gatherer fail to pick his or her basket of grapes carefully, and throw out all bad berries, the foreman discharges them at once. No wooden tanks are used for fermentation. Large rock-cemented reservoirs are used, so that an even temperature can be obtained and maintained. The average production of each vine in Portugal is 12 or 15 lbs. of grapes, or about 15,000 lbs. to the acre. The fertilizers used are lime and chemicals, which are mixed and applied to the vine roots during hard rains. The cultivation is done with hoes, and the climate almost identical with that of California.

At the conclusion of the address of Mr. Tellis the convention adjourned until 8 o'clock in the evening, at which session a lecture on sherry making was delivered by Prof. Pohndorff.

Tuesday's Meeting.

Mr. Wetmore presided at the opening of the convention on Tuesday morning.

Varieties in Vines.

The subject of discussion at the morning session was the "Varieties of Vines Grown in California; Their Adaptation to Soils, Climates and Certain Products." J. B. Portal spoke of the merits of the Burgundy grapes, and of their successful culture in Santa Clara. R. B. Blowers, of Yolo county, remarked that Muscat did well in his section, as did the Sultana, a raisin grape.

W. B. West said that the Zinfandel was not a success in the vicinity of Stockton. The White Prolific was, and made excellent brandy. The Trousseau and the Charvonneau were thrifty grapes.

Wine out of Raisins.

An interesting fact was brought out by Mr. R. B. Blowers, of Yolo, who stated that he had received a large order from the East for raisins intended for use in wine making.

Mr. Wetmore, who acted as chairman in the absence of Mr. Haraszthy, stated that this is a very important subject for investigation. It is a matter of much importance to California to demonstrate whether a fine wine can be made from raisins, as in some European countries.

Mr. Dressel said that this is an old idea in some countries. On the Rhine some of the finest wine is made from raisins.

After some further discussion between Messrs. Dressel, Wyckoff and Chandler, the following interesting essay on the "Varieties of the Vines," written by Felix Gillet, of Nevada City, was read by the secretary:

Care in Selection.

"In the first place I would call the attention of the convention to the importance of making a proper selection of varieties when starting a vineyard for wine purposes. It is true that the soil, climate exposure and altitude have a great deal to do with the quality of the wine, in giving it bouquet, strength, etc., still it is a fact that the nature of the variety has more to do with the quality of the wine than soil or climate. The soil, according to the various elements it is composed of, may improve the bouquet or flavor, but it will never give it to the wine. To find, therefore, which among the leading varieties of grapes known will be the best suited to our different soils and localities is for every one of us, respectively, the great problem to solve. Whether raised in Los Angeles, Sonoma or Nevada, the Mission grape carries into the wine that peculiar flavor which would be connoisseurs called 'ground taste,' when it was simply the natural bouquet and flavor of the wine. So you see, that whether raised in the black loam of our valleys or in the yellowish clay of our mountains, the Mission grape carries with it into the wine the very same bouquet, more or less developed.

The Zinfandel Grape.

"Now, as to Zinfandel, is it not a remarkable fact, that in all parts of the State it has proved to be not only one of the most profitable varieties to raise, but indeed the very one that so

far has made the best red wine? Thus we may say that we have already of variety of grape, the Zinfandel, eminently adapted to the soil of California, bearing very large crops and producing a very good table wine which, though being inferior to the renowned brands of Burgundy and Medoc, may still be regarded as greatly superior to the common claret manufactured and generally drunk in France.

"The fault I find with some of the Napa Zinfandel wine is that it has too much *verdeur*, or raw taste, as if the grapes had not been ripe enough when picked. In the mountain grapes come to such perfect maturity that it enables us to let the stems ferment with the skins and juice of the grapes, which gives to the wine that vinous flavor so desirable in table wine, the stems being a great corrective to the too great amount of sugar contained in the grapes when well ripe.

"Another very important operation for producing fine table wine is the blending process. Some of the best wine it has been my good fortune to taste in California was made in Nevada county, with half Zinfandel and half Pineau; and the best table wine I ever produced myself was from a combination of Medoc, Pineau and Zinfandel.

Coloring Wines.

"Next to the selection of varieties and the blending process in the production of fine table wine, comes the no less important question of color. For if we want our clarets to take the place of imported wines in the great cities of the United States, we must give our red wines that deep color which has become a *la mode* since the beginning of this century. Most of our wines, in fact, and more particularly so when several years old, have an onion skin (*pelure d'oignon*) color, too light to suit the general taste. Coloring of some kind has then to be resorted to. This is what I do to give my wine as dark a color as my customers may wish: I blend all my light wines with Teinturier grapes, a variety of the Gamay family, I believe, and which yields a very dark juice. I blend it with other grapes in the proportion of 5 to 15 lbs. of Teinturier against 100 lbs. of other grapes, according to kinds. As Teinturier is by two weeks earlier than other kinds, the wine might be made separate, though I prefer to have it ferment with the grapes it is intended to color. Teinturier, like the leading wine varieties, such as Pineau, Medoc, Gamay, Sirrah, etc., bears small bunches, but in large quantities, of thickly set grains of the size of Pineau; it resists well to long pruning, and is productive enough. Like Flame of Tokay, however, it is liable to be injured by heavy frosts in winter. I would suggest to our vinticulturists to keep enough Teinturier vines for the very purpose of giving color to their light colored wines. But I trust that they will never resort to artificial coloring.

Seedlings.

"There is another point I would like to bring before the convention—that of seedlings, or the obtaining of new varieties from the seed. Of course there is no harm in trying to discover new varieties that may be better adapted yet to our soil and climate than any we have to this day experimented upon. I have tried it, and so far have not obtained very good results. Ten years ago I planted seeds of Pineau and Liverdon, two black varieties of grapes; on 20 plants of Liverdon I obtained only five good bearing plants, or three plants of black grapes, one of white and another of a pink color, like Chasselas Rose, the two latter very good to eat; altogether nothing to boast of. Four years ago some samples of seed of Rhenish varieties of grapes were sent to me from the Governor's office in Sacramento for trial. The vines I obtained from those seed bore for the first time this year. On 20 plants all were white but three, and those three are looking remarkably well, so much so that I intend to plant cuttings and try that new variety for red wine. Last winter I procured seed of the Kashmir grapes, and of the following varieties: Katchebourie, Opiman and Karvoury. Those seeds have grown beautiful plants, and in two or three years I may be able to tell all about their qualities or defects.

Carelessness in Making Wine.

"We hear in California of wine not able to keep from getting sour, etc., and the blame is put upon either the soil, grape or weather, when in fact it is solely due to the carelessness or ignorance of the vinticulturist himself. I cannot impress it too strongly on the minds of vinticulturists, that to preserve their wines in good shape, if properly made, they must have very clean casks, and they have every month, if not twice a month, to fill up every cask clear up to the bung. Then when drawing from a cask they must never let the wine get sour in it, and after drawing the cask empty, they have to wash it clean at once, and let into the empty cask a regular draft of air through the faucet and bungholes, which must never be stopped.

"Lastly, I would call the attention of the convention to a great nuisance to the vintyardist—grape stealing. It may not be so much of a nuisance wherever vineyards are planted on a very large scale, but in small vineyards, as is generally the case outside of Napa, Sonoma and Los Angeles counties, this grape stealing has become intolerable. It seems to me that grape stealing ought to be punished as severely as any other kind of stealing. I believe that it is high time to bring in a reform and have the nuisance abated by having a more stringent law passed to punish more severely

the robbers and plunderers of our vineyards and orchards.

Tuesday Afternoon.

At the afternoon session, Professor Husmann of Napa, was the first speaker. He spoke of the qualities of different varieties of grapes that flourish in his vicinity. For wine purposes, the Black Burgundy is one of the best. It is an upright grower, with close bunches. Mr. Crabb, of Oakville, near St. Helena, is about to plant 50 acres of this variety.

The Groszer Blauer, a Swiss grape, makes a fine claret. The Black Farnous yields a great amount of juice. Black Pinot is good, but there are none better for that district for making claret than the Zinfandel. Among the white wine grapes, the best are unnamed as yet. The only bad point in the Zinfandel is its custom of bearing a second crop, where it had better save its energy for the following season. The Black Malvoise is not a good grape for red wine. The German Muscatel makes a heavy, high-flavored wine, a trifle coarse.

The best red and white wine grapes grown in Napa were thus enumerated: Red wine—Zinfandel, Grosse, Blanc, Black Farnot, Yamay, Black Pinot, Miller's Burgundy, Black Burgundy.

White wine—Sauvignon (best) Semillion, Pedre Himenes, Queen Victoria, Chasselas Rose, Chasselas Fontainebleau, Rulander, Franches, Gray Riesling, or Chanthgris Johannisberg, Riesling, Franken Riesling, Kleinberger.

Many of our best red wines were spoiled, added the Professor, by too long fermentation. It was a common practice with many producers to let the grapes ferment on the husks from 10 to 14 days, whereas, they should ferment only until the must has changed from a sweet to a bitter state, which would require generally, from four to five days in a temperature of 70 degrees.

Names of Vines.

A discussion occurred regarding the names of vines. Many varieties now bearing distinct names are in reality identical.

McPherson Hill, of Sonoma, who 18 years ago planted cuttings of designated Black St. Peter's and Zinfandel in adjoining vineyards, stated that in his judgment the two are identical, and are both Zinfandel. He added his testimony to the belief that that favorite variety is to be the great claret-wine grape of this State.

Continuing, Professor Husmann said that one of the greatest disadvantages in determining the relative values of different varieties of grapes in this State for wine making, lies in the fact that wine makers do not preserve distinct products. It is impossible to get a single cask of wine one year old, made from one variety of grape, in the State.

A discussion occurred concerning the alleged difference between the varieties known as the Rose of Peru and the Black Prince.

Various Topics.

Mr. De Turk, of Santa Rosa, spoke highly of the Mataro, so-called, which is an excellent bearer. The Berger, he advised, should not be planted on level ground; there it is without character, but on stony, dry hills, is very good.

The Secretary read a communication, signed "A friend of the Muscat," urging grape growers not to send the Muscat to the market for table use green, as is the custom. The grape should be allowed to remain on the vine at least one week longer than it generally is.

Mr. Wheeler, of Upper Napa Valley, reported the Riesling of that district as bearing an immense crop; the Zinfandel ran up to 20 tons an acre on good land, and the Berger to an equal amount, without exhausting the land. The Malvoise is now in poor repute in that valley, although it was formerly well thought of. The wine makers care less about it, as its product is irregular.

The afternoon session was concluded by an illustrated lecture on pruning, by Mr. Wetmore.

His remarks were illustrated by frequent reference to diagrams. The lecture was an able one, and was listened to attentively by the audience. It is impossible to present a good idea of the lecture without the diagrams which were used in illustration.

Evening Session.

The evening session was called to order about half past eight o'clock by Mr. Wetmore, who introduced the lecturer of the evening, Arpad Haraszthy, President of the State Viticultural Commission. A fair audience was present.

The subject of the lecture was "Fermentation and Distillation." The speaker stated that this subject was the most difficult encountered in the manufacture of wine. It is only within the last 50 years, indeed, that anything definite has been ascertained concerning the process. The speaker had little to say to the chemist upon the question, and the theoretical portion of his discourse was gleaned from the best of authors, while the practical portion of the address was valuable as being the result of personal observation. Fermentation was explained as the change that takes place in the constituent particles of animal substance under certain conditions of temperature and circumstance. He described at length the science of the formation of the globules of gluten. The question of ferment is of the utmost importance to the wine maker, and ignorance concerning it is the cause of much bad wine. The wine maker of California leaves his crushed grape too much to chance and to nature, unlike the brewer, who works with skill. The ferment was ranged in 12 classes, which the speaker enumerated, enlarging only upon the first four—the saccharine, alcoholic or

vinous, viscous or slimy, and the acetic. In grapes, when not too ripe, there is contained more yeast—the creator of the ferment—than is required, and when in new wine the ferment does not go on, the cask is shaken up to start the ferment globules.

After years of experience, the speaker had found it expedient, and had advised the gathering of saccharine grapes before maturity. Especially with the Mission grapes, he had found that the ferment was not sufficient when gathered beyond maturity, the wine then becoming green, harsh and acid. In the third class of ferment the liquor is turbid, tough and stringy, which ropiness is to be prevented by the addition of as much tannin as will precipitate the mucous matter, also by the addition of a very acid wine.

With reference to his actual observations, Mr. Haraszthy said that wine making is no mystery, and is beset by no secrets. The best wine maker is he who works with the most intelligence, keeps his casks clean, and sees that his cellar doors are closed. The grapes should be closely watched until a certain maturity has been reached. The vats should be of a size that only one day's picking or less will fill them, and on no account should the grapes be gathered in the heat of the day. The temperature in the grape should be as low as possible, so as to counteract the bitterness of the wine. Slow, regular and continued fermentation should be had, and as regards the cellar, the speaker said he would spend \$20,000 for his fermentation-room, where he would begrudge \$1,000 for the construction of the cellar where the wine was to be kept after fermentation. From 4 to 20 days should finish fermentation in red, and from 10 to 20 days in white wine.

The Phylloxera.

On Wednesday morning the phylloxera was quite fully considered. Mr. Wetmore was called upon to present his views on phylloxera and its remedies. He said the work of the Commission has been to ascertain to what extent our vineyards have been affected by this disease, its origin and the remedies. He then detailed the labors of the special Commissioner, Fred M. Morse, in his travels throughout the State.

Mr. Morse has been employed during the past year in visiting vineyards and reporting upon their condition in regard to pests and diseases. He has found the phylloxera insect in 11 counties of the State, as follows: Santa Clara, Sonoma, Napa, Solano, Yolo, Sacramento, San Joaquin, Placer, Amador, Tuolumne and Alameda. South of San Jose none of these insects have yet been found. He recited the results of his travels among different districts of the State in search of the insect. The phylloxera begins its work about April, and commences then to reproduce. The most active work of destruction is done in August. About September they begin to diminish. The first eggs of the hibernating mother are laid between the 1st of April and last of May. From this time until August, larvae are numerous, and the old insects continue steadily at work through the summer. This year there were found insects in four vineyards near Yountville. Zinfandels, three years old, were just beginning to show the ravages of the pest. Malvoises, eight years old, also showed signs of the insect. In the summer the phylloxera is much lighter in color than in the winter. Irrigating does not seem to permanently affect the insect. Mr. Haraszthy asked the speaker as to the manner in which the examination of vineyards was conducted.

Mr. Morse stated that usually the presence of phylloxera can be determined by the general appearance of the vine. It will be bushy; the leaves of a light color. A close examination will show the insects about the roots. They can be seen with the naked eye. For closer inspection a small pocket lens is all that is required.

L. W. Buck, of Solano, interrupted the speaker with questions concerning the presence of the insects in certain vineyards.

A new disease has been discovered by Mr. Morse, to which no name has yet been given. The growth of the vine appears stunted, the leaves do not develop, and the stalks are short and stubby.

A few questions regarding the subject were asked by different members.

Remedies Applied.

At the close of Mr. Morse's remarks, Mr. Wheeler, the Secretary of the Commission, was introduced. He spoke of the various experiments made in the vicinity of Sonoma for the purpose of destroying insects on infected vines. Here, bi-sulphide of carbon was used as an insecticide. The insects are destroyed in most experiments, but great injury is done to the vine. The fact of it is that this remedy destroys the insect, but does not nourish, and rather injures the vine. If bi-sulphide of carbon is used, a fertilizer must be used at the same time. After a vine has been treated in this manner, the next year it is weak and really will not fully recover its former vigor until the third year after the application has been made. In the opinion of the speaker, when a vine is literally covered with insects, no remedy can be applied with any success without greatly injuring the vine, or totally destroying it. The surface of the ground, for the space of several feet about the vine, must also be treated. Soluble remedies, the speaker said, have been proved to be unavailable for use in large vineyards, as such vast quantities of water are required to do the work thoroughly.

Sulpho-carbonate of potassium is also used to destroy the phylloxera. It is much less injurious than the bisulphide of carbon, but the only objection to it is its great cost. It will never be used widely on this account.

The Irrigating Method.

A discussion occurred concerning the efficiency of the irrigating remedy in destroying the pest. McPherson Hill, of Sonoma, maintained that the irrigating remedy had been pronounced successful by French experiments. According to the reports of Mr. Wheeler, it seemed that investigations in this State differed from these reports.

Mr. Wheeler said that it had been fully proved that the irrigating method did not fully eradicate the pest. The number of insects is greatly reduced, but when the water was drawn off, insects would soon appear. It would seem that the larvae were not destroyed. In vineyards that have been thoroughly irrigated, there have afterwards been insects found. This has also been the case in vineyards that have had other remedies applied. Prof. Husmann and Mr. Deinicke wished to know if the opinions of the French pamphlets were not sustained. Mr. Wheeler said that no pamphlets have mentioned any remedy as being wholly efficacious.

French Remedies.

To decide the discussion, Mr. Haraszthy called on Mr. Wetmore to read the latest French authority on the subject under discussion. This pamphlet is issued in the French language by the authority of the Department of Agriculture of France. Mr. Wetmore translated as he read. It states that many experiments have been made in regard to various remedies, and in conclusion, says that the time has not yet come for the award of the prize of 300,000 francs to the discoverer of an efficient method for the destruction of phylloxera, and recommends that the three remedies of submersion—bisulphide of carbon and sulpho-carbonate of potassium—be continued in use the coming year. The French commissioners are doing everything possible to discover remedies. Besides the efforts of the Department, there are hundreds of colleges investigating and experimenting on the subject.

It has been found that one good remedy is to wash the vine with a saturated solution of sulphate of iron during the winter, and to remove all the leaves and burn them. The phylloxera is seldom seen in winter; it seems to almost disappear, or is at least invisible to the eye.

American Vines in France.

The French authorities have recommended that investigations with American vines be pursued. There are a few American vines that will succumb like the imported ones. Among these are the Cynthiana, Herman, the Marion, Pulander, Elvira and Cornucopia. Last year, among 83 American vines planted at an experimental school in France, there were found a few which apparently thrived much better than others, and are regarded as good vines for direct production. These are Micaud's Riparia, or Riparia Fabre, Gork Madela and Black Spanish. In speaking of the Riparia stock, Mr. Wetmore stated that there is really only one Riparia variety. All others are hybrid. Many vines, when first brought to this State, were considered as belonging to the Riparia class.

The speaker added a word of caution for Sonoma vinticulturists. They are getting too fond of the Elvira. They will see that this vine will not grow successfully in the soil of that district.

Mr. Wetmore and Prof. Husmann, of Napa, had a discussion regarding the cultivation of French vines and the quoting of French authorities. Mr. Wetmore said that no vineyard of French stock in this State was far enough advanced to have developed their native characteristics.

Exhibit of Phylloxera.

In addition to the attractive display of vines and luscious grape clusters that have previously been described, there were on exhibition specimens of the great enemy of the vine grower—the phylloxera insect. The specimens attracted much attention, and were in charge of Mr. Morse, of the University. One infected vine was covered with glass. The fatal ravages of the terrible little insect could readily be discerned. The leaves looked unhealthy, and small yellow blotches that denoted the presence of the pest were seen on the trunk and canes. A gall louse of the phylloxera from Arizona was shown on a grape leaf. A number of infested roots, dug from vines in Berkeley, were on the table. In alcohol, in a tall glass jar, was a year old seedling of a native vine. It was raised in a pot, and afterward planted near an infected vine. A few of the insects could be seen on the rootlets and trunk, but it was evident that little injury was done to this class of vines in comparison with others. There were also displayed jars of the phylloxera remedies, sulpho-carbonate of potassium and bisulphide of carbon. A formidable looking instrument was described as a French injector for applying soluble remedies.

At the afternoon session it was announced that various committees would report. Mr. Wetmore, Chairman of the General Committee, explained that the duties of this committee were so many and important that it would be impossible for a report to be presented at this session.

Viticulture and Temperance.

In the evening, C. A. Wetmore lectured on "Viticulture in its Relation to the Temperance Question."

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

State Grange Meeting.

As has been announced, the California State Grange will convene in 10th annual session at the city of Stockton, on Tuesday, October 3, 1882. The hall provided is a large, fine one, and having a personal acquaintance with many of the brothers and sisters of Stockton, and speaking from experience of their good deeds and hospitality on similar occasions, we can truthfully say that visiting members may depend upon nothing being lacking on the part of resident members to make their stay a pleasant one. It is hoped that there will be a large attendance of fourth-degree members, Past Masters and Matrons, and we suggest that extra pains be taken in regard to music—Grange songs, in particular. We cannot have too much music. It is enlivening, ennobling, and promotes social intercourse. We trust, also, that the Master and other officers will pay more than usual attention to their work, and have it well up, that they may be fitting examples to subordinates. Let them so conduct the meeting that it will be a school of profit and instruction, while pleasure and entertainment and social good feeling will be mingled throughout the proceedings. The secret work should be exemplified by the Master and State Lecturer, in an able manner, several times during the session, that members may get it thoroughly in their minds, take it home with them, and make proper use of it there. All representatives, and persons having anything to present, should have it well prepared and condensed in order that no time will be lost.

Matthew Cooke, Chief Horticultural Officer, will deliver, Thursday afternoon, a lecture on "Noxious Insects," etc., illustrating the same with the aid of powerful microscope, which will no doubt prove a highly interesting feature of the programme. Gen. Bidwell will also exhibit his celebrated collection of agricultural produce, including various kinds of grains, etc.

Arrangements have been made by the Committee of Arrangements with the Steam Navigation Company, by which all persons wishing to visit the State Grange during its session at Stockton, commencing on the 3d of October, can do so by way of the company's steamers, running daily (sundays excepted) between the city named and San Francisco. The rate of charges which have been agreed upon for the round trip is one dollar and fifty cents. A steamer leaves this city for Stockton every day, except as above indicated, at 5 o'clock P. M. Those going by this route will, of course, have to take supper and a bed, 50 cents each, on the steamer, for the greater part of the night will be consumed in making the trip. If preferred, passengers can go by rail, second-class, to Stockton for \$1.50, and the same rate on returning; but a supper and bed will have to be paid for in addition to the railroad fare. Hence, we have the following summing up: By steamer, round trip, \$1.50; plus two suppers and two beds, equals \$3.50. By rail—Passage, round trip, \$3; plus supper and bed in Stockton, equals \$4; plus refreshments, if needed, in returning. First-class railroad fare to Stockton is \$3.50 each way. Tickets may be had of J. V. Webster, No. 40 California street, from whom any other information in regard to the subject may be had.

State Grange History.

The State Grange was organized by Deputy N. W. Garretson, of Iowa, at Napa City, July 15, 1873, with representatives from 35 Granges organized to date. J. W. A. Wright was elected M. W., and W. H. Baxter Secretary. The session lasted four days. At this time there were 4,943 Granges in the United States and 8 in Canada.

The first annual session was held the first Tuesday in the following October, 1873, 104 Granges being represented. The session lasted five days, and was held in Masonic hall, San Jose. J. M. Hamilton, of Lake county, was elected W. M., and W. H. Baxter Secretary.

The second annual session was held at Stockton, October 6, 1874, and lasted five days. At this session 231 Granges were represented. There were also seven in Nevada at this time, and the entire membership was 18,800.

The third annual session was held at Daehway hall, in San Francisco, on the first Tuesday in October, 1875, lasting five days, only 102 Granges being represented. At this session J. V. Webster was elected W. M., and Amos Adams Secretary.

The fourth annual session was held in Red Men's hall, San Francisco, in October, 1876, lasting five days, 94 Granges being represented.

The fifth annual session was held at Red Men's hall, San Francisco, October, 1877, at which session 79 Granges were represented, and I. C. Steele was elected W. M.

The sixth annual session was held at Turners' hall, Sacramento, October, 1878.

The seventh was held in Oakland, October,

1879, at which session B. R. Spillman was elected W. M., and Amos Adams Secretary.

The eighth session was held at Odd Fellows' hall, Oakland, October, 1880.

The ninth session was held at Masonic hall, Santa Rosa, 1881. The following officers were elected for 1881-2:

Officers Elected for 1881-2

Master—Daniel Flint, Sacramento.
Overseer—S. T. Coulter, Santa Rosa.
Lecturer—E. W. Davis, Santa Rosa.
Steward—Nelson Carr, Bennett valley (Santa Rosa P. O.).

Assistant Steward—T. T. Hooper, Rio Vista.
Chaplain—G. L. Douglas, Yuba City.

Treasurer—I. C. Steele, Pescadero (official address, San Francisco).

Secretary—J. V. Webster, East Oakland (official address, San Francisco).

Gate Keeper—Wm. H. Johnston, Richland, Sacramento county.

Ceres—Mrs. Hettie Deming, Vallejo.
Pomona—Miss Hattie E. Sprague, Sacramento.

Flora—Mrs. Lilly G. Jasper, Wheatland.
Lady Assistant Steward—Mrs. Nellie G. Babcock, Temescal (via Oakland).

Executive Committee—C. Grattan, Stockton; G. W. Hancock, Sacramento; P. H. McGrew, East Oakland.

The next session of the State Grange will be held at Stockton, October 3, 1882. An important session is looked forward to.

An Exhibit for the State Grange Meeting.

Gen. Bidwell, in answer to the request of members of the Order, has kindly consented that his splendid exhibit of agricultural produce, which attracted so much attention at the State and Stockton fairs, shall be displayed during the coming session of the State Grange at Stockton. It is a very fine collection of interesting products skillfully arranged. In showing grain, a very comprehensive plan was followed. Each grain is shown both in the kernel and in the chaff. A bag of each variety sits on the floor; above that is an open box of the same, and above that is a small heap showing heads and straw.

This display enables one to get a good acquaintance with the characteristics of each variety. There is, also, in connection with each, a statement of the yield per acre this season. To show how comprehensive the display is, we enumerate the kinds:

Wheat.	
White California,	Silver Chaff,
Snowflake,	White Club,
Sonora,	Australian Blue Stem,
Clawson,	Andrus Island,
Atlantic Greek,	White Chile,
Maccaroni,	Defiance,
Mansion,	Black Maccaroni,
Proper,	Norfolk Prize,
Chaplain,	Gold-dust,
Bearded Red,	Sweet Lake Club,
White Australian,	Tagaurog,
Tuscan,	Genesee,
New Prolific,	Pride of Butte.
Odessa,	

Oats.	
New Brunswick,	English.
Russian White,	

Barley	
Nepaul,	Smooth Blue,
Black, two row,	Scotch, two row.
Carlattan,	

Corn.	
Black Sweet Corn,	Large Yellow,
Stowell's Evergreen,	California Pop.

Gen. Bidwell's exhibit also included flour, green and dried fruit and vegetables. We have no doubt that his large grain display will be a subject of much interest at the State Grange meeting.

Farmers Convention.

A convention of no insignificance to the agricultural interests of California will be held at Stockton, on the 17th of October. We hope it may prove one of the most important moves that have been made for years against monopoly, debris, and other evils, to which the farmers have patiently submitted for years. The Sutter County Farmer says:

The Stockton convention has been called, as an individual farmer, (by J. V. Webster), and the invitation to participate is extended to all farmers throughout the State. The object is to revise existing tickets, but more particularly that of the Railroad Commission and State Board of Equalization. This and the Anti-Debris convention, in our opinion, should unite their forces to make common cause for relief. The south half of the State can no more permit the north half to be blotted out than she can surrender a portion of her own territory to the Arizona cowboys. And the north is deeply interested in every feature of the question which agitates the south. Again we say we see no reason why these two conventions should act separately, and many reasons why they should act together. The authority which called the Sacramento convention, we thought at the time, and we think so yet, should have extended its call to the southern counties. It is not too late to invite them. But should no union be effected, the Sacramento valley should be well represented in the Stockton convention. This is an off year in politics; let us all "go" for our homes rather than for the meaty-mouthed politicians, who have not the courage to say their souls are their own.

The Anti-Debris Convention.

A Notable Gathering in Sacramento

The anti-debris convention, which is in progress in Sacramento as we write, is evidently a determined and an intelligent body, whose action will be felt in the coming election. The telegraph brings the reports of the opening meetings, and we shall pursue the proceedings up to the time of our going to press. The list of delegates from Solano has not yet been reported. The following is a complete list of delegates from other counties, nearly all being present, as no proxies are allowed.

Sacramento—I. E. Dwinell, Digory Hobbs, W. S. Mesick, F. R. Dray, W. S. Manlove, Obed Harvey, Wm. Johnston, J. M. Upham, L. H. Fassett, Moses Sprague, G. C. McMullen, John Rooney, A. S. Greelaw, George Cadwalder, C. W. Pierce, R. J. Merkeley, Frank Miller, J. M. Stephenson, H. M. Larue, C. Green, J. Rontier, Dr. Snyder, F. Cox, Daniel Flint, Grove L. Johnson.

San Joaquin—John Baldwin, E. B. Cogswell, George A. Conrad, Thomas Walls, Sr., W. F. Prather, J. G. Russell, D. S. Rosenbaum, J. D. Peters, J. K. Hook, W. C. Miller, L. U. Shippee, H. C. Smith, George Gray, A. Gall, T. K. Preston, W. W. McKaig, J. H. Tone, J. H. Dodge, D. A. Learned, R. C. Sargent, Thomas Clements, W. B. Stamper, B. F. Langford, C. R. Montgomery and J. W. Ferris.

Tehama—J. C. Tyler, John Barry, Jackson Eby, John Brady, C. A. Campbell, T. N. Howell, H. S. Cornell, N. Crocker, B. W. Schroeder, S. D. Clark, J. W. Burger, Jerome Banks, John Finnell, John Harrington, Ed. McGovern, D. B. Lyon, H. H. Toller, E. Fish, G. M. Lowrey, J. W. O'Brien, H. Wentz, E. H. Ward, M. B. French, Bruce B. Lee and John Clements.

Yuba—A. C. Bingham, W. T. Ellis, Dr. C. E. Stone, Dr. S. J. S. Rogers, F. D. Hudson, M. Marcuse, Wm. M. Bell, A. D. Catts, A. J. Wrightman, J. F. Flathman, N. D. Coombs, H. Bruce, E. Teegarden, H. C. Niemeyer, D. A. Ostrom, Samuel Harding, C. E. Sexey, C. K. Dam, D. P. Dorst, Frank Kirschner, G. F. Barrio, Frank T-ratge, T. J. Fidoher, P. L. Hutchinson and James Bryden.

Sutter—B. F. Walton, J. H. Craddock, A. H. Wilbur, L. P. Farmer, T. B. Hull, William Sanders, Otis Clark, J. K. Wood, H. S. Graves, J. S. Metteer, P. E. Drescher, G. M. Aten, J. W. Howlitt, B. R. Spillman, William Trevaathan, G. M. Saye, L. D. Nash, S. E. Wilson, Ira H. Wood, C. P. Berry, J. Meager, Homer Senkey, George W. Carpenter, T. D. Kirk, Will Acton.

Butte—General Bidwell, A. D. Nelson, R. R. Fimple, George M. Lewis, A. W. Campbell, E. Fagin, Sam Fleming, J. I. Lewis, Barney Marshall, Garret Cepple, Marion Biggs, Jr., C. N. Reed, F. A. Sheaffer, Nathan Wood, John C. Young, J. O. Bradford, Jos. N. Brown, Wm. Elliott, Phillip Heffner, Judge Pratt, W. W. Durham, P. M. Harrison, B. D. Gray, J. M. Wilson and Brice McNeil.

Colusa—Wm. Ash, John Boggs, Lee F. Moulton, Will S. Green, M. Davis, M. McDaniel, E. R. Graham, Wm. Ogden, J. W. Brim, L. B. Ayres, James Smart, Hugh Logan, George Hurdmen, James Bosden, C. P. Wilson, J. C. Stovall, Burt Thair, John Browning, N. Rollins, Ed. Peart, W. H. Cross, W. M. Caldwell, Howell Davis, M. Eddy, Sam Gilmore, M. Davis.

Yolo—J. B. Greene, David McGowan, Samuel Maddox, I. N. Hoag, Charles Clay, George Swingle, S. M. Enos, G. G. Chapman, Thomas Martin, W. H. Marden, D. N. Hershey, A. G. McCormick, Robert Roberts, A. W. Morris, J. W. Jacobs, G. W. Hyatt, E. R. Lowe, J. H. Harlan, J. P. Bullock, C. G. Day, D. Q. Adams, W. H. Duncan, C. H. Hoppir, Thomas Hall, T. H. Langenour.

The convention assembled at 2 P. M. on Tuesday, and was called to order by George Cadwalader, of Sacramento, who delivered the opening address. He said that the cause of the convention was broader than the territory immediately affected. With but one exception the Grangers in the State expressed sympathy with the convention, and demanded the stoppage of hydraulic mining. The territory affected is larger than either of the States of Massachusetts or New Jersey, and nearly the size of Vermont. Belgium has not a greater area. Through this area the Sacramento river runs, staggering with loads of debris from the Feather and American rivers. This year 33,000,000 bushels of wheat will be shipped to market by the Sacramento river, and 7,000,000 of it raised on the margins of Feather river. The attention of the convention is called to the necessity of raising the sand blockade on the Sacramento at the mouth of the Feather. This body should say it is better that the Congressional appropriation of \$250,000 be used in improving the channel rather than building brush dams for hydraulic miners. The speaker was informed by Representatives Page and Berry that the appropriation is distinct from miners' dams. If the convention thinks that dams in the American, Bear and Yuba rivers are nuisance, and should be prevented by lawful means; this comes within the duty of the Attorney-General of the United States. He thought it would be improper to make a ticket for county or legislative officers, yet every delegation should have that power conferred on it, to be exercised

by a two-thirds vote; more than a mere majority of the votes of the convention ought to be required to nominate. Affiliations should be sought with all the organizations in harmony with this. We have no quarrel with quartz or drift mining, and propose no lawsuits with them.

Committees.

The Secretary then read the call for the convention requesting Gen. George Cadwalader to act as temporary chairman; also the list of delegates.

After a long debate the following committees were appointed:

Credentials—J. D. Peters, Chris. Green, J. B. Green, William Ash, Dr. Durst, Eli Davis, Nieron Luce.

Platform and Resolutions—W. W. McKaig, I. W. Jacobs, Lee F. Moulton, C. E. Stone, Geo. Ohleyer, H. A. Hale, Dr. I. E. Dwinell, Garret Cepple, Mr. Demming, of Solano.

Permanent Organization—J. W. Ferris, Obed Harvey, T. B. Hull, Will S. Green, Thos. Hall, A. C. Bingham, Gen. Bidwell, Jerome Banks, Nieron Luce.

The convention then adjourned to meet at eight in the evening.

Evening Session.

The convention reassembled at eight o'clock, Mr. Cadwalader presiding. The Committee on Organization made a partial report, and recommended General John Bidwell, of Butte, for permanent President, and as Vice-Presidents, Dr. Obed Harvey, of Sacramento, J. K. Kook, of San Joaquin and Dr. D. P. Dorst, of Yuba. For Secretaries, John McFetish and John H. Miller. They were all elected. General Bidwell on taking the chair was greeted with applause. He thanked the Convention for the honor conferred, but he believed that some older soldier in the cause should have been chosen. He recalled the times of the streams of California in their pristine purity. All his interests, all his hopes, aims and labors were united with the interests of California. [Applause.] When he saw the streams polluted and widespread ruin impending over the lands of the valley, he could not remain silent. He felt that he must come to this council and do what he could to promote its great objects. True, his own farm was as yet untouched, but it was within the possibilities that half of the rich lands of Butte county may be overwhelmed in debris. He urged that the convention stir up no hatreds, involve itself in no ill feelings. It should act with coolness and justice, and doing right itself, demand that others shall also do right. He had no enmity against the miners; to them he would apply the golden rule. [Applause.] It is a law that cannot be repealed any more than the laws of gravitation, that each man shall so use his own as not to endanger his neighbor. It may be that the people do not yet, in all parts of the State, understand this question of mining debris, but they must be made to understand it by constant presentation of the truth and of the justice of the cause the convention is called upon to defend. [Applause.]

The convention, at 8:25 P. M., without transacting any other business, adjourned until 8 A. M. Wednesday.

Wednesday's Meeting.

The convention met at 8 A. M., Gen. Bidwell presiding. Committee on Order of Business reported as follows:

First—Consideration of the report on platform and resolutions.

Second—Decisions as to whether or not a whole or part of the State ticket shall be nominated. They recommended that it would be inexpedient to nominate now.

Third—The appointment of a committee of 20, to constitute a permanent organization, known as the Board of Directors of the association.

Fourth—The appointment of a committee to draft an appeal to the voters of the State, urging them to send members to the Legislature pledged to oppose the dumping of mining debris into the streams.

Fifth—The appointment of a committee to attend the Farmers' Convention in Stockton, October 7th.

The Resolutions.

It was then decided to take up the report seriatim. The first session was adopted, and further reading postponed, and the report received from the Committee on Platform and Resolutions, as follows:

WHEREAS, At least 100,000 acres of the finest lands of the State have been destroyed, and hundreds of thousands of acres of land are now in imminent danger of such destruction by the unrestrained flow of debris from hydraulic mines on the headwaters of the several tributaries of the Sacramento, San Joaquin, Calaveras and Mokelumne rivers; and whereas the said flow of debris has already filled the channel of many miles of navigable rivers of the State, and its continuance must result, in a very short time, in the complete destruction of said rivers and their tributaries, throwing the broad, shallow, muddy streams over some of the finest portions of the State, and annihilating, not only the productiveness of the lands, but the cities, towns and villages; and whereas the navigation of the bay is now imperiled, and the harbor itself must at no distant day succumb to the devastating agency, and ruin overtake the metropolis of the Pacific, thus completing the terrible picture of desolation; and whereas there are but comparatively few individuals or corporations engaged in this species of mining; and whereas this condition of things has already led to an

AGRICULTURAL NOTES.

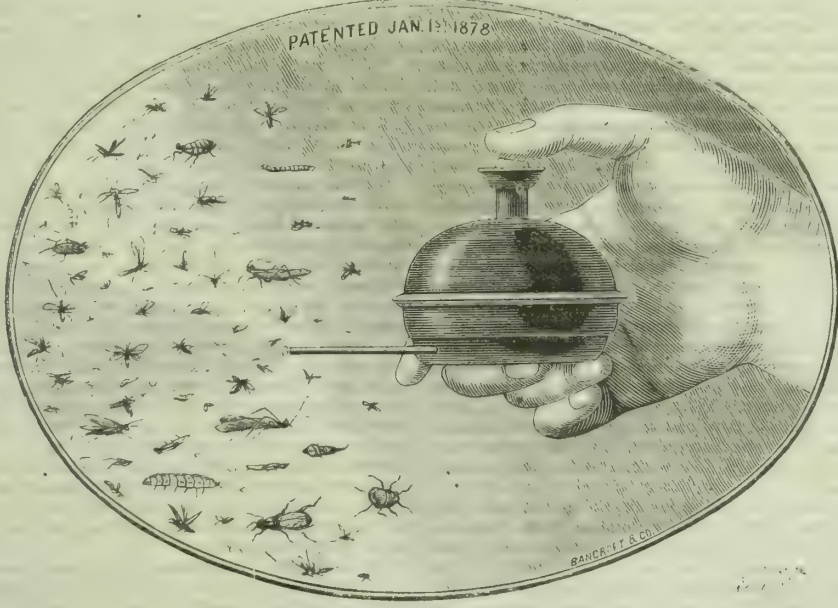
CALIFORNIA.

INYO.

EDITORS PRESS.—We are entering upon a new era in this county, when the slovenly way of farming and stock raising, and doing business must cease, and a more economical and judicious system be adopted. We are to have in the near future, a railroad running through our county that will connect us with the C. P. R. R. on the north, and S. P. R. R. on the south, which will bring about many changes in our financial affairs of both county and individual. In order to not be taken by surprise, we must prepare for the changes. I feel that I have received so much benefit from the PACIFIC RURAL PRESS that I would be at sea without it in all my agricultural and stock-raising pursuits. When I find myself at a loss just now, to manage my business in some of these departments, I have only to refer to the RURAL PRESS to find an article written by some of your many practical contributors that just suits my case, and sends me along without cost or fear. If I can just at this juncture assist in interesting some of our people in this paper, I will be putting into their hands a lever that will bring to them knowledge and prosperity in a great measure. I wish you every success in your good work.—J. L. BOURLAND, Independent MENDOCINO.

EDITORS PRESS.—These few notes come from the now hot and smoky region of Potter valley. We hoped that the storm of about a week ago had quenched the mountain fires for this season, but events prove our mistake. Westward winds have drifted the smoke over us from new fires in the mountains till the atmosphere is more than hazy, and the heat under the smoky pall is like a bake oven. It seems shameful, as well as disagreeable, that such acts of vandalism

long tour through this county, looking for land. Report of cattle men, and even small settlers, are most contradictory, and would puzzle a lawyer. As neither cattle men nor squatters pay taxes on those lands, it is to their interest to keep settlers out, while the latter hope to retain theirs to good advantage, or sell for a higher figure. I have been offered a range of miles, some Government and some railroad land, at \$150, with house etc. Some ask as high as \$1,500 for a squatter title. They have lived years there exempt from taxes, and defy settlers to come in on it. While the Spanish grants are considerably enlarged, as for instance, the Huer Huero (Wara Warro), originally only 15,684 acres, is now over 50,000. Others pay hush money, I am told; and so it goes. When there is a real general survey honestly made, and whenever either the continuation of the San Francisco and Gilroy railroad is made, or connection with a road from Bakersfield, both of which are soon looked for, a large amount of land will be in the market. Those parties I named generally deny that there is any good Government land to be had, and every way that I can learn rather disparage a settler. They talk of frost, the want of a flowing stream or spring of water, trespass of cattle, difficulty of getting or finding section posts and such things; but these are all easily overcome, for in course of casual conversation, I learned much to the contrary of the above statements. Some maintain there are splendid openings here for settlers, especially if a few unite together and settle close by—for this corrects some of the above evils. Properties selling here are either small tracts improved, at very high figures, or large tracts cheap, which parties could divide among themselves, and obtain lots of land in the country on most advantageous terms. I saw splendid fruit grown in a seemingly barren place, and the owner told me, what we all know, it paid considerably more than grain or cattle raising.—N. J. O'BRYNE, San Luis Obispo.



METHOD OF KILLING INSECTS.

should be committed as to deliberately kindle fires which involve whole districts and consume so much valuable timber; but the melancholy facts intrude themselves upon us. Our "men folks" are nearly all gone, either hauling grain to Cloverdale, or engaged in negotiating sales of crops in San Francisco, or elsewhere. The hop crop is quite an important one this year. We have about 33 acres altogether, and they have all produced very well. On September 18th, a portion of the crop, representing 27 acres, and weighing 15 tons, was marketed at Ukiah. They were raised by Messrs. Newhinney, McCloud and Neil. Mr. McCloud's patch consisted of two and a half acres, from which was taken over 1,700 lbs. of young hops. Prices were very good, being 55 cents per pound. They were all classed A 1. Fifty-five Indians and 25 whites picked them, and there was no loss from scarcity of pickers, as in some other sections. Mr. Spottswood proposes to plant 50 acres next spring, and others intend to engage on a smaller scale. The grain crop is generally quite good. Our market is so far off (50 miles), and inconvenient to get to, that it is rather discouraging to this business, and should, if it does not, induce us to engage in more profitable industries. Hay is scarce. Sheep shearing has commenced in earnest. The wool crop is light, owing to cold weather and late shearing last spring. The bad weather also caused a great loss in lambs. Most stockmen estimate this year's crop at from 25% to 50%. Many cattle also perished last winter; but the very high prices now obtained will prevent any real loss to cattle men. Beef animals are in great demand at from seven to seven and a half cents per pound on foot. Hogs readily bring eight cents, and few to be had at that. The schools here are doing finely, and have a good attendance. We have three in the valley, taught by Mr. Weeks, Mr. Hunter and Miss Shaw. The average attendance is over 30. The pink-eye has attacked many horses, but they have mostly recovered.—Vox.

SAN LUIS OBISPO.

EDITORS PRESS.—I have just returned from a

exodus of good citizens from the State, the end of which no man can foresee; therefore be it Resolved, First—That we disclaim any desire to interfere with either drift or quartz mining, or to do anything against any lawful rights of the hydraulic miners.

Second—That it is the duty of the State of California to defend herself against such terrible mutilation, and to protect the people of the valley in the peaceful enjoyment of their homes and of the fruits of their labors, and, as the two leading political parties have ignored this duty, we call upon the people of the State, irrespective of political affiliations, to aid us in the defense of our homes and in our demands for justice, by electing as representatives to the next Legislature only such candidates as are willing to pledge themselves to the promotion of these objects.

Third—That we favor the passage of a law whereby the several parties committing a common nuisance may be joined in one suit.

Fourth—We declare that the system of impounding mining debris by the construction of dams in our rivers and their tributaries is a delusion and a snare, and would prove a constant source of danger, and that we are opposed to remedial measures based on such a system, and pledge ourselves to resist all legislation looking to a compromise of the slickens question on such a basis; that we oppose the expenditure of one dollar of the recent appropriation made by Congress for the improving of navigation of the Sacramento and Feather rivers and their tributaries, in the construction of dams for impounding mining debris, and we demand that it be expended in accordance with the letter and spirit of the law, in improving navigation by deepening their channels.

Fifth—That we heartily approve of the action of the Boards of Supervisors, and all other persons in their efforts to abate this intolerable evil, and secure the present hopeful condition which promises a speedy final abatement of the evil, and extend to them and their successors our united support in the accomplishment of the end sought.

Sixth—That a committee of two from each county, and two at large, be appointed by this convention to attend the Farmers' Convention, at Stockton, on the 7th of October, to secure the active co-operation of the members of that convention.

After a general debate the resolutions were unanimously adopted.

Selection of Candidates Referred to the Stockton Convention.

After discussion a motion of Mr. Cadwalader's was adopted that the selection of proper candidates be referred to the coming Stockton convention. Wm. Johnson offered a resolution indorsing Judge Temple's decision. An amendment was added denying the right of the miners to dump into the rivers or canyons, even with restraining dams. Adopted.

The following were then appointed delegates to the Stockton convention: At large—Dr. Teegarden, B. R. Spillman, Dr. Stowe, W. W. McKaig and George Cadwalader; from Sacramento, C. W. Clarke and Wm. Johnson; from Sutter, B. F. Walton, T. D. Kirk; from Yuba, Dr. Furst, P. C. Slattery; from San Joaquin, Thomas Hook, W. T. Prather; from Butte, G. M. Lewis, Gen. Bidwell; from Colusa, M. R. Graham, L. F. Moulton; from Yolo, I. N. Hoag, Geo. Swingle; from Tehama, John Berry, J. C. Tyller.

Also, the following Executive Committee was appointed: Sacramento—P. R. Deckley, W. S. Mesick. San Joaquin—J. D. Peters, William Inglis. Sutter—George Ohleyer, Otis Clark. Yuba—C. E. Sexey, S. D. Wood. Butte—John S. Hutchins, Andrew Campbell. Colusa—E. R. Graham, L. F. Moulton. Yolo—I. N. Hoag, George Swingle. Also the following committee on address: George Ohleyer, Will S. Green, W. S. Mesick.

The Executive Committee was given power to establish head-quarters in Sacramento. All delegates were invited to sign the roll of membership and pay \$5. A recess was then taken, in which the delegates came to the Secretary's desk and signed. A vote of thanks was returned to the Chair for its services, and at 12.40 the convention adjourned sine die, the Chair making an address of congratulation.

California Insect Powder.

The spirited engraving on this page shows how the insect is vanquished by a slight touch of Buhach, or the California-grown insect powder. This plant has been largely propagated, as our readers are aware, by the Buhach Co., of Stockton, of which J. D. Peters and G. N. Milco are the moving spirits. They have also a well-equipped mill at Stockton for grinding the powder, and are engaged in turning out the powder fresh from the field, and with all its natural strength and efficacy preserved. It has been demonstrated by analyses and experiments, both here and at the East, that the California powder is vastly superior to the imported powder. More than this, the imported powder is largely adulterated, and thus its strength is still further impaired. There is, however, money in bottling up this inferior stuff, and druggists keep pushing it upon the market, and consumers, not knowing the difference, buy it instead of the strong, fresh California product. It should be generally understood that the buhach is the best article, and it will kill more insects than several times its weight of the "Persian" powder put up in this country from imported and adulterated materials.

STANISLAUS.

EDITORS PRESS.—The wheat crop in Stanislaus county is about delivered, and will turn out an average crop; not near so large as that of 1880, but a fair average, taking a number of years together. The failure in some parts of the county was made up by excellent crops in other parts, so that the acreage planted will average 12 bushels per acre.—S. B. McCORMICK, Oakdale.

Mechanics' Fair Premiums.

The following awards have been announced by the Board of Managers:

Machinery.

W. H. Ohmen—Vertical engine and boiler combined, in motion, silver medal.
W. H. Ohmen—Vertical engine in motion, silver medal.
W. H. Ohmen—Hoisting engine and boiler combined, bronze medal.
Hawley Brothers—Rice's straw-burning engine, silver medal.
P. H. Jackson—Device for more complete combustion of coal, silver medal.
W. T. Garratt—Display of steam-engine governors, flanged globe valves and safety valves, silver medal.
Weed & Kingwell—Tallow lubricator for engine cylinders, diploma.
Llewellyn Steam Condenser Manufacturing Company—Llewellyn heater and condenser, diploma.
Central Gaslight Company—Otto gas engine, bronze medal.
Central Gaslight Company—Caloric engine, bronze medal.
Occidental Foundry (Steiger & Kerr)—Grate bar, California make, diploma.

Machinists' Tools.

Pacific Saw Manufacturing Company—Display of edged tools, silver medal.
C. F. Marwedel—Best display machinists' tools, diploma.
Pacific Stove and Iron Works—Combined vise and anvil, diploma.
J. A. Studebaker—Tailor's square combined with sweeps, diploma.
W. T. Garratt—Anderson's approved furnace and forge fan-blower, bronze medal.
Abner Doble—Best general display blacksmiths' and stonecutters' tools, silver medal.
W. A. Williams—Soldering machine, silver medal.
J. B. Jardine—Power shears, punching machines and display of boiler tubes, bronze medal.
John Wright—Improved pick, bronze medal.
San Francisco Tool Company—Shaper and planer combined, bronze medal.
San Francisco Tool Company—Gear cutter and milling machine, bronze medal.
San Francisco Tool Company—Drilling and boring machine, bronze medal.
San Francisco Tool Company—Engine lathes, bronze medal.
San Francisco Tool Company—Best general display of home-made machinists' tools, gold medal.
Pacific Saw Manufacturing Company—Best general display of cutters for wood-working machinery, gold medal.
N. W. Spaulding—Best circular saw with inserted teeth, silver medal.

Manufactured Minerals.

Selby Smelting and Lead Company—Best general display of lead and its manufactures, gold medal.
Abner Doble—Cast-steel bars, diploma.
W. T. Garratt—Tin, copper and antimony in pigs, bronze castings and statuary, diploma.
Occidental Foundry (Steiger & Kerr)—Iron castings, car wheels, etc., silver medal.
Betts Spring Company—Locomotive, car and carriage springs, silver medal.
California Wire Works—Iron, steel, copper, tinned and galvanized wire, gold medal.
California Iron and Steel Company—Pig iron, gold medal.
H. N. Cook—Fire buckets and hose pipe, diploma.
Griswold Bros.—Fire escape, silver medal.
W. T. Garratt—Best hydrant, diploma.
Will & Fink—Best general display of cutlery, gold medal.

Agricultural Machinery.

D. M. Osborne & Co.—Agricultural machinery, gold medal; self-binding grain harvester in operation, silver medal; reaper and mower with self-rake, bronze medal.
M. C. Hawley & Co.—Buckeye gang plow, silver medal; sulky rake and hay and straw cutter, bronze medals; sulky plow and lawn mower, diploma.
Jackson & Truman—Harrow, bronze medal; derrick fork-hoist, silver medal.
Hawley Bros. Hardware Company—Almond huller, bronze medal; Challenge feed mill, diploma.
Judson Manufacturing Company—Victor mower, silver medal.
George Bull & Co.—Riding cultivator, diploma; walking cultivator, diploma; sidehill plow, diploma; plow for general uses, diploma.
D. N. Hawley—Reaper, bronze medal; creamer, churner and butter-worker, diploma.
R. G. Bush—"California Clipper" grain cleaner, bronze medal.
T. A. Mudge—"Wheeler" fruit cleaner, bronze medal.
Batchelor & Wylie—Harrow and cultivator, diploma.
W. F. West—Grain chopper and grist mill, bronze medal.
A. La Jeunesse—Model of harrow, diploma.
Hawley Bros. Hardware Company—Keystone corn sheller, bronze medal; Champion fan mill, bronze medal; Buckeye cider mill, diploma.
J. S. Woolsey—Cheese vat and lawn sprinkler, diploma.
John Wiltz—Pruning shears, diploma.

Mining Machinery.

M. B. Dodge—Ore breaker in operation, silver medal.
W. T. Garratt—Rock drill, silver medal; air compressor, silver medal.
H. R. Redstone—Quartz mill, silver medal.
J. Hendy—Ore feeder, silver medal.
F. A. Huntington—Amalgamating and crushing pan, silver medal.
W. I. Tustin—Dry crushing mill, silver medal.
Triumph Concentrator Company—Concentrator, silver medal.
W. B. Farwell—Dry concentrator, silver medal.

Fruits, Flowers, Etc.

E. Meyer—Foliage, plants and ferns, silver medal.
Woodward's Gardens—Second best display, bronze medal.
John Pouyal—Third best, diploma.
J. T. Murphy—Cut flowers, silver medal.
Thomas Saywell—Second best, bronze medal; dahlias, bronze medal.
Sol. Runyon—Fruit, \$75 cash and silver medal.
Mrs. McLellan—Prolific pear graft, diploma.
G. W. Hunkley—Mountain peaches, diploma.
Munson & Grevis—Tuscan wheat, diploma.
Evelyn & Nash—Fruit, diploma.
J. H. Thomas—Watermelon, diploma.
A. Crawford—Gravenstein apples, diploma.
El Dorado Fruit Company—Mountain peaches, diploma.
W. J. Hunt—Apples and peaches, diploma.
Francis De Long—Cider and cider vinegar, bronze medal.
B. F. Wellington—Seeds, mushroom spawn, etc., diploms.

[CONTINUED ON PAGE 252.]

TUOLUMNE.

EDITORS PRESS.—In a recent letter I mentioned something about the difficulty of sending pared peaches to market. I will qualify my statement. Having made a visit to Sonora and Columbia, we found J. Winchester at the latter place paring peaches by a machine made by an ingenious mechanic of that once-thriving town. One man could pare as fast as a boy could pit, making the labor double, and doubling the value. The only drawback seemed to be that the parer must pare before the peach is fully ripe, thereby losing the rich flavor of the peach. One fact I have learned about peaches this season: The worm is insinuating itself into the freestones. In pitting, every little while a live worm makes its appearance. We have also dried clings; but not one spot or stain appears upon the inside. We can cut out the stone by a knife made for that purpose just as quick, and cleaner, than pitting frees. Cling peaches will soon be the popular peach for all uses. J. Winchester is noted for his fine varieties of fruit; pears a specialty. The Kiefer pear was in full bearing. The foliage is beautiful, and the fruit superior, and in abundance. The Le Comte is a larger pear than the Kiefer, but not so rich in flavor, being of a coarser grain. The foliage is very rich in appearance, and a thrifty grower. Mr. Winchester's vineyard is producing a superior grape for raisins. It is refreshing to witness the enterprise of a 72-year old amateur orchardist outliving those who have made gardening a life occupation. He is ably seconded by his good little lady of a wife. The family of four ranges from 13 to 4—one bright boy and three beautiful girls. Their little cosy house looks like Paradise regained. California has many such homes scattered all over her auriferous hills and gulches, whose enterprise and industry make rich the land of their adoption, but are scarcely ever heard of outside of their immediate surroundings. They are the salt of the earth, the builders of the future of California, when she will be considered the center of civilization and commercial enterprise.—JOHN TAYLOR.



The Story of the Gate.

Across the pathway, myrtle fringed,
Under the maple, it was hinged—
The little wooden gate;
'Twas here, within the quiet gloam,
When I had strolled with Nelly home,
I used to pause and wait.

Before I said to her good-night,
Yet loath to leave the winsome sprite
Within the garden's pale;
And there, the gate between us two,
We'd linger, as all lovers do,
And lean upon the rail.

And face to face, eyes close to eyes,
Hands meeting hands in feigned surprise
After a stealthy quest
So close I'd bend, ere she'd retreat,
That I'd grow drunken from the sweet
Tuberose upon her breast.

We'd talk—in fitful style, I ween—
With many a meaning glance between
The tender words; and low
We'd whisper some dear, sweet conceit,
Some idle gossip we'd repeat;
And then I'd move to go.

"Good night," I'd say; "good night—good by!"
"Good night!"—from her, with half a sigh—
"Good night!" "Good night!" And then
And then I do not go, but stand;
Again lean on the railing, and—
Begin it all again!

Ah! that was many a day ago
That pleasant summer time—although
The gate is standing yet;
A little cranky, it may be,
A little weather-worn—like me—
Who never can forget.

The happy—"End?" My cynic friend,
Pray save your sneers—there was no "end."
Watch yonder chubby thing!
That is our youngest, here and mine;
See how he climbs, his legs to twine
About the gate and swing.

T. H. Robertson.

Only for Fun, and What Came of it.

"How be you this mornin'," Squire Dunning?"

"Oh, middlin', Miss Patty, middlin'." Hain't quite so spry as I was 20 odd years ago; but hold on a bit and I'll help you down." And so saying, aldermanic Si. Dunning reached up a large fat hand, and eased Miss Patty's descent from the one-horse shay that old Doane was tugging at, evidently not wishing to tarry, for she seemed instinctively to conclude that, if Miss Patty stopped, there was no telling when she would resume her journey.

You see, though Miss Patty was a good old soul as ever lived, she was very much given to harmless gossiping, and she generally tarried long at the whine when she began to talk over her own troubles and trials.

Miss Patty was, as she herself expressed it, nigh onto 60, and, in fact, she had admitted the same thing for a number of years, so that most folks put her at 70, or thereabouts. Just now Miss Patty was in a peck of trouble; she had come down from the Roseleaf farm in search of female help.

Mrs. Dunning, the hotel-keeper's wife, came out to greet the new-comer, being always glad to see the tidy old body, especially as Miss Patty Slocum's butter was the best for miles around, and she always made it a point to bring some along with her.

Just now Uncle Si., as most people called him, was grunting over the three gallons of buttercup-yellow creamery.

Mrs. Dunning relieved the butter maker of her basket of eggs, and she herself gathered up a bunch of garden sassa, and brought up in the rear as the trio trudged through the garden and around to the ample hotel kitchen, Miss Patty remarking, as they were passing the side piazza:

"I've got to have some help somehow or other. I've inquired all the way along, but girls seem to be mighty scarce; alters the way these days, when you want 'em to do a bit of work they are nowhere around. If it wasn't for this rheumatism now—" but right here Miss Patty's voice was lost as she turned the corner of the great house. Though lost to view, she was indelibly stamped on the memory of the group of girls that sat on the front piazza, some in low wicker rockers, one in a hammock, swinging lazily, another half sitting on the railing, her saucy face half hid by the luxuriant woodbine that clambered up to the second story.

"I say, girls, come here, every one of you," and the face that had been peeping from the woodbine came into full view, and the dainty muslin-clad body sailed down the steps, and four others, not at all alike, but every one more or less pretty, followed after her around the west side of the house, and within hearing of all that was said in the kitchen.

"Mum is the word now, girls, and don't one of you give an audible smile for your life. I think the party in that immense sunbonnet-shaker I suppose you'd call it—is a case; an original, too; and I want to hear what she is going to do about her help. She makes me

think of old Aunt Hannah, up at the Springs. This old body is just such a go-ahead—sharp as a cricket, and, except for her rheumatism, would be equal to half a dozen such girls as you and me.

When the girls had reached the desired spot, right under a high window that opened out of the buttery, that was Mrs. Dunning's pride, and a marvel of convenience, by the by, they all sat down on a long wooden bench that was under great overhanging lilac bushes, just now laden with immense clusters of the lovely perfumed blossoms.

Rose Stoneleigh, the leader of the group, put one dimpled finger up to her lips, and the others, in "follow your leader" style, each raised a finger, and they were as quiet as mice. Presently through the window came the voice of Mrs. Dunning.

"Indeed you must stop a minute, Miss Slocum. You'll be all done out time you get back home again."

"No! thank 'e all the same. I'll try one more place, and then I'll get back home again."

"It is too bad you can't find anybody. What is the particular rush just now? Surely hay-making has not commenced with you?"

"No, not that exactly, but I've a sight on hand just now; got to do down some pie-plant, and then them 'ere gooseberries are about ripe enough to can, and in about a couple o' weeks the cherries 'll be on hand, and, pester the hired help anyway! I'd sooner grub 'long anyhow than bother with any o' them, if 'twant for this plaguey rheumatism. It kinder catches me wunst in a while, and no use to talk, it takes the spunk clean out of me. I heard as how they had some sort of ile down to the post office that was powerful good for such cases, an' I guess I must git me a quarter's worth, just to try it. Feel sort o' 'fraid to, too."

"Girls, sit still, and I will be back in a trice," and off flew Rose, skimming past stately Helen Parker, who still sat on the piazza, scratching away with her pen, an oval stand before her.

"What are you up to now, Rose Stoneleigh?" "Can't stop to tell any fibs just now," said Rose, as she flew up the broad stairway and into her room. Presently she emerged an altogether different-looking person. In place of a muslin, she had donned a school-girl gingham, a white apron and plain linen collar, her hair all smoothed down to get the contrary crinkles out perfectly natural, you know. Down she went, stole back and seized Mrs. Dunning's blue gingham sunbonnet, and darting out to the wondering girls, had just time to signal them to come to the front, when Miss Patty emerged from the other side and was just about to ascend the step of the comical vehicle, Mrs. Dunning turning after her, saying: "I hope you'll succeed in your efforts, Miss Slocum. If I wasn't so busy myself I'd let Selena come up a day or two and help you out, but you see we have the seminary girls—at least six of them—and it keeps one kinder busy. Why, what on earth!" Here the good old lady had to stop in sheer amazement, for she recognized her own sunbonnet coming toward her with a little body underneath.

Rose did not stop for anything, but sailed up to Miss Patty, made a demure little bow and commenced: "Please, ma'am, I overheard part of your conversation, and I thought I'd offer myself, if you think I could strip pieplant, or help you in any way," and she dropped her white lids as though she was frightened at her own temerity.

"You don't look as you could do much. How much did you expect to get a week, and where did you come from?" queried business-like Miss Patty.

"I came from over yonder some miles, and have a sick aunt, and want to earn some money. Please, try me, and if I don't suit I need not stay."

"Well, seein' as how you came in the nick of time, and look kinder clipper like, I'll take you along. Have you any recommendations along?"

"N-o, I have not, but Mrs. Dunning here, knows me, she did not expect to see me to-day hunting a place," and the smiling eyes were turned upon the landlord's wife, and, hid by the sunbonnet, she made a grimace at the puzzled face that was slowly taking in the fun.

"Oh, yes," explained the good old lady, "I do know her, but I doubt her capabilities regarding housekeeping. But I'd try her if I were you. You might do worse."

"Can you come right along? I'd a heap rather you would, seein' as I'm clean tuckered out now."

"Oh, yes; certainly I can. Mrs. Dunning, I left my bundle, a gingham and a few other things inside. Will you have them sent? One reason I came was that Cora, over there, used to know me and I heard that the girls were going to spend part of vacation here, and then I thought I'd kill two birds with one stone if I could earn a bit while over."

Miss Patty looked rather suspiciously at the white dimpled hands, and it was hard telling what was in her thoughts, as they finally drove off. They went down into the heart of the village, and Rose pulled the sunbonnet further down around her face, murmuring that "the sun was rather warm."

"Now, we will have to wait for the 10 train," said Miss Patty, "and if you will mind the horse, I'll just drop right in the post office and get what I want. I expect my grand-nephew on the morning train, and if it happens to come in while I'm in here, you jes' keep an eye open for a long, good-looking chap with an immense gilt chain, and tell him I'll be out as

soon as I can git my ile and lamp chimneys, and other stuff. Mind the horse, now."

So saying, off she went.

Rose sat very quiet some minutes, peeping from the depths of the bonnet. It was dreadful, this having to wait when she was in for a frolic. Ten, fifteen minutes went by, when, in the distance sounded the locomotive whistle.

"Whew!" mimicked Rose, "a grand-nephew coming! I suppose her idea of a good-looking chap is one that can do all manner of hard work, and a great gawk of a fellow he is, I know."

Her reverie was interrupted by the stopping of the train, and the rush of passengers getting on and off. With a ding-a-ling, a puff, and a snort, the great engine steamed out again, with a long line of cars trailing after.

Rose had all she could do to manage the restless old mare. When Doane finally became quiet, Rose looked over toward the depot in search of the gilt chain, that being uppermost in her mind. The passengers had all gone their several ways except two; these were a lady and gentleman.

There was a cloud of dust, a carriage drove up, and, amid a shower of greetings, the lady was helped in, and immediately driven off. Rose came to the conclusion that the tall gentleman must be the nephew aforesaid, who, spying Miss Patty's turnout, came over.

"Excuse me, ma'am, but I believe this is Miss Patty Slocum's rig, is it not? and did she send you down for me?"

"I'm in for it now," thought Rose; "he thinks I'm the hired girl, no doubt, but I'll carry it through or die, for the girls would make a laughing-stock of me." Aloud she said: "You can jump in if you like; Miss Slocum will be out presently; she is in the post office, and I expect her every minute now."

"Contrary to her expectations, he seated himself beside her, and with a polite "allow me," he took the reins from her hands.

Miss Patty's watchful eyes had taken in all that had occurred outside; she now appeared at the open door.

"I'll be there in just three minutes, Tom; jest make yourself agreeable to the young miss; she is going to help me a bit for a week or so."

"I'll wait three hours, Auntie, if you like; I'm not at all in a hurry; and the brown eyes were as full of mischief as those of Rose's. Rose's were as blue as the sky, though they might have been green or yellow for all the glimpse Tom could get of them.

He was mentally anathematizing sunbonnets of all descriptions, and wondering if the man who invented them was dead yet; if not, he wanted to make a target of him immediately. As the being beneath the (to him) hideous structure, was rather quiet, he concluded to bide his time, and if it proved interesting, he meant to have all the fun possible during his two weeks' stay. He soliloquized thus: "Now Auntie is as sharp as a steel-trap, and if this little piece here does not toe the mark, she won't have her around, but we'll fix things. I wish she'd throw back that confounded head-gear, and let a fellow see what she is like."

Presently Miss Patty, having completed her purchases, stepped out, and was handed into the wagon by the clerk, he being glad of an excuse to satisfy his curiosity regarding the occupants of the front seats.

The sun by this time was getting very hot, and Miss Patty told Tom to drive along right smart, as she had dinner to get yet, and they had three miles or so to go.

"Why, yes, Auntie, I know the precise distance; why shouldn't I, when I lived here so many years; seems though you've more enterprising folks about here than there was three years ago."

"Wall, yes; you see sence them seminary girls came, seems as though it is livelier about here; you know they built the seminary the fall you went away."

Old Doane did her best, and within half an hour they were in sight of a white house with green blinds, and lovely trees and immense rose bushes. "Jest drive 'round to the back, Tom, I've a lot of traps here and I don't like to lug 'em clear through the house." Having done as he was desired, he sprang nimbly to the ground, helped Miss Patty out, then handed her the bundles, and lastly gave Rose a firm good-sized hand and very awkwardly knocked off that terrible bonnet.

Rose untied the strings to get a little air during the drive home. The blue eyes looked defiance at the brown ones, while the brown ones had a look that pleaded, "I'll never do it again, please, ma'am."

Rose followed Miss Patty into the house, while Tom attended to old Doane. Everything was as neat as a pin in the little kitchen. The low, stuffed rockers were inviting, and Rose sat down. Having found her tongue, she went into raptures over everything she saw.

"What a dear little place you have; so old-fashioned and so homelike. Let me pare those for you. I'll do it ever so thin." Having finished her task, she went from one thing to another, and her bright ways and light step soon won Miss Patty's esteem, and Rose had a firm friend forever after.

Tom was astonished at the clear, pretty face as he tipped the bonnet off her head, and he mentally resolved to be on his good behavior, for, as he told old Doane out in the barn, "blue eyes, brown hair, short and plump, and a will of her own, which shows itself in those blue depths, full of fun, though; in fact, Doane, if you'll help me to manage it, and don't tell Auntie until it is all fixed, we'll marry her. That is, of course, providing she ain't spoken

for before this, and will have us, you know, eh Doane?"

Doane neighed as though she understood everything, and Tom gave her a whole peck of oats in his absent mindedness.

Two—three weeks glided by; Tom was a model of good behavior. Miss Patty was delighted at the success of her preserving. Rose learned the art of butter making, and she made Tom pick berries, churn butter, and in a hundred ways make himself generally useful, and though he protested that he was "sinfully abused," he could not keep out of the kitchen.

When the three weeks were up, Rose decided to tell Miss Patty that she was only a "seminary girl," and that she must go home to spend the rest of the holidays.

"I'll tell you what Rose, if you and Tom here will hitch horses, you might stay right along."

"Hurrah for Aunt Patty!" shouted Tom, "what do you say Rose, will you be my wife?"

"Oh, Tom Slocum, I have not known you but three weeks; besides what would my folks say? and don't you know, Tom, the old saying, that 'a change of name, and not of letter, is a change for worse, and not for better'?"

"I am only a school girl, Tom, and would make you a mad-cap wife."

"I'll soon tame you," laughed Tom. "We will write to father and mother—you see I claim them already—and I do not want my wife too learned. Say yer, Rose, darling, and I will attend to all difficulties, and the old saying won't be a true saying in our case."

Aunt Patty, who meanwhile sat stoning cherries, now spoke again: "Tom is a good boy, Rose, and you might do a great sight worse, 'sides I want to see him settled in life before I die."

"Well, as you are both so determined, you may have me Tom, for better or for worse, mind I warn you; it might be for worse."

"We'll take all the risks," cried happy Tom Slocum.

So in just a month from that day, Rose Stoneleigh became the bride of Tom Slocum, and a happier couple never existed. And her five bridesmaids were the girls that sat on the veranda of the hotel. Though some of them are grandmothers now, they never forgot their wild little leader, Rose Stoneleigh.—Amy Randolph.

One Man's Ignorance.

EDITORS PRESS:—Without any special desire to obtain that proud distinction, I find myself in this week's RURAL PRESS the scapegoat on whom are heaped the sins of "ignorance and indifference" of your male readers. Mrs. Nichols twits me with "being on good terms with my own" ignorance of my duties as a citizen; and presupposes a knowledge of law and jurisprudence to be a citizen's prime duty. I am quite willing to be the scapegoat if your readers may thereby have truth elucidated. But I think when an unknown individual begins to talk of another's duty, except in general terms, he trespasses on very delicate ground. Conscience and duty are both creatures of education, and mother-love is a prime factor of that education. Only yesterday I was reading "A Modern Instance" in the Century, where a mother, the child of a free-thinking father, expresses her ardent wish that her infant daughter shall be brought up a member of some church, the church which enfolds the most "good people." I think we may fairly accept it as an axiom that all mother-love would thus ardently desire. But, as the RURAL PRESS "Home Circle" column, next to Mrs. N.'s, informs us, woman "is generally ill-educated, carried away by every wind of doctrine," consequently, "believes the poor, little, ritualist curate, who knows, indeed, no more than herself."

Frequently, therefore, the ignorance of childhood, which should be easy of enlightenment, is converted, after many years of labor on the part of teacher and pupil, into the ignorance of adult prejudice or bigotry, whose darkness is oftentimes far more impenetrable.

The very name of "freethinker" was abhorrent to the children of orthodoxy very few years ago. Only yesterday I was told that an unexceptionable candidate for office could never be elected, because he was an avowed "freethinker." So, for aught I know, the name is still accursed. To me, the epithet seems a crown of honor and manliness. Freethinker, or spiritual slave, each of us must be, and anyone viewing the question of woman's rights from other than an Oriental standpoint, is something of a freethinker. Having been cradled in orthodoxy, then, may excuse some of us for accepting the subjection of women as a thing fitting and proper. Farther, to quote my favorite Lowell—

"Before man made us citizens,
Great Nature made us men."

And one's duties as a man are prior to one's duties as a citizen. It has been for many years a much more pressing question with me how to provide my family with the necessities of life than to inquire into the legal status of my wife and daughters. I learned in my Bible, years ago, that the "law was not made for a good man, but for the lawless and disobedient," etc. I took the lesson to heart, and the law and I let each other severely alone.

Then, in further palliation of my crime of ignorance of the law, let me say that while I

share the hope of having been born for Eternity, I was born into Time. Finding a few things, such as agriculture, medicine and theology, making urgent claims on me, I weakly gave my time thereto, regarding them as things of first importance to myself as a man. My duty as an ordinarily good citizen consisted, as I supposed, in non-transgression of the law. Of late, improved circumstances, consequent on unremitting work, have afforded leisure for some little study of history, and a long-latent desire for a peep at law becomes also a possibility.

Knowledge of the law I regard as a life's business. In fact, when one reads of judges reversing the decisions of inferior judges, it appears rather more than the business of one life. I know a lawyer so worn by study that he hardly has any circulation left, and I believe he is studying law still.

I wonder whether Mrs. Nichols' knowledge of the law extends beyond its discriminations between the sexes; and I wonder what may be the measure of legal study which would decently equip the average civilian against a charge of ignorance of and indifference to his duties as a citizen. Further, in testing Mrs. N.'s legal lore by the light of one or two legal stars, I began to feel that even her "knowledge" was possibly not quite securely based. It seemed the opinion of others that what happened to those widows might happen, as I supposed, to any man who neglected to provide by will for his funeral expenses, etc.

I don't know just how others get knowledge, but I find bed-rock facts hard to obtain. Assertion goes a long way even in what we are pleased to call science, and I am tired of receiving anyone's *ipse dixit* as knowledge; and though Mrs. N. may taunt or sneer, this question of woman suffrage and woman's rights is not just the altogether apparent and easy thing she would have us believe.

As long as the world's ultimate appeal is to brute force (and all law has power just so long only as brute force backs it), so long must the superior physique of the male be a power in the land. I may, and I do, think it a disgrace to civilization that our ultimate appeal is to the strongest arm; but the logic of accepted fact is stronger than my opinion. To me, national jealousies and antipathies are as anachronistic and senseless as jealousies and legal disabilities of sex. Only ignorance (fostered by an interested minority) permits these race hatreds, which culminate in wars. Civilians' interests are identical the world over; so also are the interests of the sexes. And I look for that "federation of the world" which shall equitably rule the human family, regardless of sex or race.

Finally, capacity of brain must ever be a power, if philosophy is to be credited. The average male skull is apt to be more capacious than the average female skull, which is a speaking fact in discussing this question of equality.

These considerations tend to induce me to go slow, and to endeavor to find a standpoint that shall prove the solid rock of right and truth, and not the quagmire of hastily-adopted error. Meanwhile, I can heartily sympathize with Mrs. Nichols in her indignant denunciation of ignorance and indifference, even though they include

EDW. BERWICK.

Carmel Valley, Monterey, Sept. 17, 1882.

SOMETHING FOR THE LADIES.—Science has made a discovery of a new method of bleaching white goods. It is as simple as it is said to be efficacious, and is vouched for by German chemists. It consists in dissolving one part oil and turpentine in three parts strong alcohol, and placing a tablespoonful of the mixture in the water for the last rinsing. The clothes are to be immersed in this, well wrung out and placed in the open air to dry—not in a room. The bleaching action of the oil of turpentine consists in its changing oxygen into ozone, when exposed to the light, and in this process the turpentine disappears, leaving no trace behind. It is so simple as to warrant one or more trials.

AN INGENIOUS DEVICE.—By thrusting the end of green scrub wood—"mallee scrub"—in the fire, and catching the sap driven out at the other end in a bark trough, an Australian supplied himself with water, and saved his life while crossing a waterless region. He says that a dozen mallee sticks, four feet long, and two or three inches in diameter, would give a pint of water in an hour, and suggests that the same device may possibly be found of vital importance to other bush rangers and travelers in arid regions.

WHEN KEYS ARE LOST.—When it is not convenient to take locks apart in the event of keys being lost, stolen or missing, when you wish to fit a new key, take a lighted match or candle and smoke the new key in the flame, introduce it carefully into the keyhole, press it firmly against the opposing wards of the lock, withdraw it, and the indentations in the smoked part of the key will show you exactly where to file.

ANCIENT STUCCO LUSTER.—The peculiar brilliancy of the mural painting of Pompeii is said to be due to a stucco luster of chalk and marble dust, and an Austrian architect, Hansen, who discovered this, has produced the same sort of work.

UMBRELLAS.—Philadelphia manufactures more umbrellas than any other city in the world; the annual production is valued at \$20,000,000.

Young Folks' Column.

Our Puzzle Box.

Cross-Word Enigma.

My first is in hail, but not in rain;
My second is in pretty, but not in vain;
My third is in wild, but not in tame;
My fourth is in crippled, but not in lame;
My fifth is in sorrow, but not in joy;
My sixth is in girl, but not in boy;
My seventh is in care, but not in song;
My whole is a German city strong.

JENNE

Concealed Quadrupeds.

1. Martin expects to do great things.
2. I saw the *Sebec* at sea.
3. Gallo never can hope to rival his elder brother.
4. He will either hear from Seth or see him.
5. I hope to meet you at London or at Liverpool.
6. Why assume this unseemly shape?

MELANCHTON.

Poetical Anagram.

Hkra si atht a swiphe owl;
Leik a siptri covie ti seame,
Tleigh chvre nerge staureps wrog,
Addn lita tawof meestas.

AUNT SARAH.

Hidden Diamond Puzzle

1. Send to Henry Brown.
2. Why are you so joyful to-day?
3. Returning home Kate sang "Home Returning."
4. A large quantity of yeast is consumed in the United States.

Concealed in the above are words of the following definitions:

1. A consonant.
2. Gladness.
3. An ancient poet.
4. An affirmation.
5. A consonant.

JAMES.

Decapitations.

1. Behead a bird and leave a twig.
2. Behead a bird and leave a bird.
3. Behead a bird and leave a measure.
4. Behead a large nail and leave a fish.
5. Behead a part of a ship and leave a fish.

LEO P.

Answers to Last Puzzles.

- NUMERICAL ENIGMA.**—Oliver Wendell Holmes.
BLANKS.—1. Bell, ell. 2. When, hen. 3. Part, art.
4. Gray, may.
CHARADE. Part-ridge.
WORD SQUARE.
B O L T
O H I O
L I O N
T O N E
CURTAINMENTS.—1. Area, are. 2. Aspirer, aspire. 3. Badger, badge. 4. Balm, balm. 5. Moody, mood.

A Baby and a Bear.

Henry Flynn, who resides up in the hills near Inskip, Cal., is in town to-day, and had the following incident to relate, in which a bear of the cinnamon species abducted his three-year-old daughter, not with any desire to harm the child, but through a strange kind of affection. It appears that Mr. Flynn started one morning to take a horse to pasture, about two miles distant from the house, and, as his little girl seemed anxious to go, he put her upon the horse's back and let her ride a short distance, perhaps 40 rods from the house, where he put her down and told her to run home. He noticed that she continued standing where he left her, and, on looking back after going a little farther, saw her playing in the sand. He soon passed out of sight, and was gone about an hour, expecting of course that the child would return to the house after playing a few moments. On returning home, he made inquiry about her of his mother, who said she had not seen her, and supposed he had taken her along with him. On going to the spot where he left her, he saw huge bear tracks in the sand, and at once came to the conclusion that the child had been carried off by the bear.

The family immediately made search through the forest, which was grown up to almost a jungle, rendering their search very slow. All day these anxious parents searched for traces of their child, nor did they stop when darkness came on, but remained in the woods calling the lost one by her name. Morning came, and their search was fruitless. A couple of gentlemen from below, who are traveling through the mountains buying stock, came to the house, and, being informed of the circumstances, immediately set out to find her. The gentlemen wandered about, and as they were passing a swamp spot where the undergrowth was thick, called the child, or else they were talking loud, when one of them heard her voice. He then called her by name and told her to come out of the bushes. She replied that the bear would not let her.

The men then crept through the brush, and when near the spot where she and the bear were they heard a splash in the water, which the child said was the bear. On going to her they found her standing upon a log extending about half way across the swamp. The bear had undertaken to cross the swamp on the log, and being pursued left the child and got away as rapidly as possible. She had received some scratches about the face, arms and legs, and her clothes were almost torn from her body; but the bear had not bitten her to hurt her, only the marks of his teeth being found on her back, where, in taking hold of her clothes to carry her, he had taken the flesh also.

The little one says the bear would put it down occasionally to rest, and would put his nose up to her face, when she would slap him, and the bear would hang his head by her side and purr and rub against her like a cat. The men asked her if she was cold in the night, and she told them the old bear laid down beside her and put his "arms" around her and kept her warm, though she did not like his long hair. She was taken home to her parents.—*Chico Record.*

Good Health.

Medicine Taking.

After more than 30 years of medical practice, I am fully convinced that the masses take much more medicine than is needful. I will go further, claiming that an utter disuse would be less dangerous to society—an extreme we need not adopt—than the present, reckless employment of all sorts of drugs, with but little thought or care about the nature of the drugs used. While there are a few ultraists who ignore all drugs, as they oppose all existing customs, from a mere love of oddity, it may be, there is a strong probability that enough and more than enough of "patent medicines," etc., will be taken, at least, till the whole community shall learn that "an ounce of prevention is worth a pound of cure."

Many "give the reins to their passions and appetites," with the delusive idea that they can do just as they please, indulge all of the appetites, like the swine, or worse. Encouraged by the quacks who say, "Eat what you please while taking this marvelous medicine," they may not know any better, and then expect to escape the just penalty of their sins of gluttony, etc., by taking medicine.

Though medical treatment may modify diseases, mitigate human sufferings, doing the best that can be done under the circumstances, the evils of wrong doing cannot be wholly obliterated. The Bible statement, "The soul that sinneth shall die," might have the same significance when applied to the body. Like the laws of the "Medes and Persians," those of the body never change, are never abrogated, and know no forgiveness. The "pound of flesh" must be granted, since no one can put "coals of fire in the bosom, and not be burned."

It is not the mission of drugs to abrogate God's laws of the body, but to co-operate with the recuperative forces of that body in the removal of existing evils, after the penal authority has asserted its sanctions, to deter from future violations of the sacred conditions of health and vigor, for a moral effect. Prevention is not only easier than cure, but far safer and more economical. The intelligent and honest physician orders drugs when he thinks it right and proper to do so, and then the patient should unhesitatingly take them, or discharge the doctor. The less honorable man sometimes orders them when not needed, simply because of the pressure brought to bear, well knowing that the ignorant will discharge him, and get one who will heed the whims of the sick, thinking it preferable to give some inert medicine rather than give place to a reckless and unprincipled quack.

But the great danger in medicine-taking is the popular custom of taking any nostrum that may chance to be advertised (printers' ink sells anything), neither knowing the nature of the disease nor the compound offered for sale. There is a recklessness in this matter which we do not practice in other respects. Most of this class of empirics know enough of the human system to give some of the symptoms usual in almost all diseases; so that all may find something to resemble their symptoms, and then give one trial, at least.

All should know that medicines, vegetable as well as mineral, are poisonous, at least in their more concentrated forms. As such, they should be employed with the same care that we use other poisons. It would be no more foolish for one to enter a drug store with a prescription from a reliable physician, and then, in the dark, take the contents, in part, of the first bottle reached, than to swallow the various nostrums offered for sale at the groceries, wrapped in an abundance of recommendations, which may be purchased at the small price of one dollar a dozen. It is a matter of but little importance that these nostrums are pronounced "purely vegetable," even if true, since the most poisonous substances in the world are of vegetable origin. Metallic substances, used for medicines, are more objectionable on account of the difficulty in eliminating them from the system, than from their simple, poisonous character.

I repeat, it is injudicious to take medicines at random. It is far safer to do nothing, trusting to nature's wonderful and gracious efforts—always in the right direction—than to "leap in the dark," taking, we know not what, or for what. If human health is of any value, it is of sufficient worth to justify care, intelligence, and seeking advice from those who are supposed to be well-informed in such matters, on the same principle that a "wise builder" has a plan, seeks good materials and good workmen.—*Dr. J. A. Hannaford.*

NEW APPLICATION FOR ULCERS, ETC.—Medical practitioners are employing a new application for ulcers, sores, etc. They take a hundred parts of plaster of Paris, finely powdered, and coal tar from one to three parts, and mix in a mortar; add olive oil enough to reduce the mixture to the consistency of ointment, and preserve it for use in a close vessel. The mixture is of a dark brown color, and has a bituminous smell. If applied to an ulcer, or running sores of any kind, no matter how offensive, it not only absorbs pus and destroys its fetid smell, but also dispenses with the necessity of employing lint. The oil binds the powder, without dissolving it, so that the compound retains its absorbing quality when placed in contact with a suppurating sore, and it never dries sufficiently to become inconvenient to the patient by its hardness.

Domestic Economy.

Rules for Cooking Vegetables.

A French cook gives the following general rules for cooking all kinds of vegetables: Green vegetables should be thoroughly washed in cold water, and then dropped into water which has been salted and is beginning to boil. There should be a tablespoonful of salt for each two quarts of water. If the water boils long before the vegetables are put in, it has lost all its gases, and the mineral ingredients are deposited on the bottom and sides of the kettle, so that the water is flat and tasteless, then the vegetables will not look well or have a fine flavor. The time for boiling green vegetables depends much upon the age and time they have been gathered. Below is a very good time table for cooking vegetables:

- Potatoes boiled, 30 minutes.
- Potatoes baked, 45 minutes.
- Sweet potatoes boiled, 50 minutes.
- Sweet potatoes baked, 60 minutes.
- Squash boiled, 25 minutes.
- Green peas boiled, 20 to 40 minutes.
- Shelled beans boiled, 60 minutes.
- String beans boiled, one to two hours.
- Green corn, 30 to 60 minutes.
- Asparagus, 15 to 30 minutes.
- Spinach, one to two hours.
- Tomatoes, fresh, one hour.
- Tomatoes, canned, 30 minutes.
- Cabbage, 45 minutes to two hours.
- Cauliflower, one to two hours.
- Dandelions, two to three hours.
- Beet greens, one hour.
- Onions, one to two hours.
- Beets, one to two hours.
- Turnips, white, 45 to 60 minutes.
- Turnips, yellow, one and a half hours.
- Parsnips, one to two hours.
- Carrots, one to two hours.

GREEN CORN.—A novel way to serve green corn, and one which is pronounced a notable addition to the house-wife's bill of fare, is as follows: Take one dozen ears of tender corn, choosing ears that are nearly of the same size and those of medium size; grate them; then add one quart of sweet milk, in which you have stirred till free from lumps three tablespoonfuls of flour, a quarter of a pound of butter, or a piece as large as an egg will do; four eggs, whites and yolks beaten together, with pepper and salt to your taste, are all the ingredients called for; butter a large earthen pudding dish, and bake this mixture for one hour; this will be long enough if the oven is hot when the dish is put in. This is to be served with meat and potatoes as a vegetable, though with the addition of sugar, and with a rich sauce, it takes the place of a pudding.

SPANISH PICKLES.—Four heads of cabbage, a peck of green tomatoes, one dozen good-sized cucumbers, one dozen onions, three ounces of white mustard seed, one ounce of celery seed, one ounce of tumeric, one cup of mustard and two pounds of brown sugar. Let the cucumbers stand in brine three days. Slice the onions, and chop the cabbage and tomatoes the day before making, and sprinkle with salt. When ready to make, drain the cucumbers from the brine and cut in slices. Put all the ingredients into a kettle with vinegar enough to mix all together and simmer slowly half an hour. Bottle and keep in a cool place.

TO MAKE GUAVA JELLY.—Cut up ripe guavas longitudinally into four pieces, and place them in a jar or vessel that will close tight, which immerse in a vessel of boiling water. When the fruit is well steamed, strain out the juice, and to every quart of juice put as much sugar, and boil down to the consistency of jelly and place in molds to cool. Rub the pulp of the guava through a sieve to get out the seeds; mix the pulp with sugar and boil into marmalade. This will give both jelly and marmalade from the same fruit.—*Florida Agriculturist.*

TO FRESHEN SALT FISH.—Many persons who are in the habit of freshening mackerel or salt fish never dream that there is a right and a wrong way to do it. Any person who has seen the process of evaporation going on at the salt works knows that the salt falls to the bottom. Just so it is in the pan where your mackerel or white fish lie soaking; and, as it lies with the skin down, the salt will fall to the skin, and there remain. When, if placed with the flesh side down, the salt falls to the bottom of the pan, and the fish comes out freshened as it should be. In the other case it is nearly as salt as when put in.

PICKLED PURPLE CABBAGE.—Take nice heads of purple cabbage, and slice with a sharp knife or cabbage cutter. Place in a stone jar, sprinkle with salt and let stand 24 hours. Prepare a spiced vinegar as follows: To a gallon of vinegar, allow one ounce of whole black pepper, one ounce of whole cloves, one ounce of cinnamon and one of mustard seed. Drain the cabbage from the brine and put back in the jar. Scald the vinegar with spice and pour over cabbage. Repeat the scalding operation two or three times, and cover tightly.

ONIONS WITH WHITE SAUCE.—Boil in salted water, with a teaspoon of milk added, until tender. Drain and cover with a sauce made as follows: Put two spoonfuls of butter into a saucepan, and when it bubbles add two scant tablespoonfuls of flour. Stir until well cooked, but do not brown. Then add two teaspoonfuls of thin cream, some salt and a dash of cayenne pepper.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 18 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above for EACH THREE MONTHS DELAY* which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$6.00
Half inch (1 square).....	\$1.50	\$5.00	10.00	24.00
One inch.....	2.00	6.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, September 30, 1882.

TABLE OF CONTENTS.

EDITORIALS—Dutch Freelan Bull; The Nicaragua Canal, 237. The Week; The Forests of the Pacific Coast, 244. A Notable Clydesdale Stallion; Farmers' and Mechanics' Fairs; Grape Prices; Independent Voters, 245. The Stockton Fair; Business Notes at the Stockton Fair, 247.

ILLUSTRATIONS—Imported Bull, "Moioe," 244. Method of Destroying Insects, 241. Clydesdale Stallion, "Prince Randolph," 244. The Animal Conqueror and Eureka Anti-Kooter, 247.

CORRESPONDENCE—Shaasta County Notes, 238. THE VINEYARD.—The Grape Growers' Convention, 238-9.

PATRONS OF HUSBANDRY—State Grange Meeting; State Grange History; An Exhibit for the State Grange Meeting; Farmers Convention, 240.

AGRICULTURAL NOTES, from the various counties of California, 241.

HOME CIRCLE—The Story of the Gate (Poetry); Only for Fun, and What Came of It, 242. One Man's Ignorance, 242-43. Something for the Ladies; An Ingenious Device; When Keys are Lost; Ancient Sueton Luster; Umbrellas, 243.

YOUNG FOLKS' COLUMN—Our Puzzle Box; A Baby and a Bear, 243.

GOOD HEALTH—Medicine Taking; New Application for Users, etc., 243.

DOMESTIC ECONOMY—Rules for Cooking Vegetables; Green Corn; Spanish Pickles; To Make Guava Jelly; To Freshen Salt Fish; Pickled Purple Cabbage; Onions With White Sauce, 243.

ENTOMOLOGICAL—Gall-Flies on Cottonwood, 244.

Business Announcements.

Agricultural Implements, Hawley Bros., S. F.
Abel Stern's Ranches, A. Robinson, S. F.
Chandel Iron Harrow, Benicia Agricultural Works, Cal.
Rose, The Dineen Conard Co., West Grove, Pa.
Wagons, Studebaker Bros., Manufacturing Co., S. F.
Victor Mowing Machine, Judson Manufacturing Co., S. F.
Harrow, etc., Byron Jackson, S. F.
Dissolution of Co-partnership, Jackson & Truman, S. F.
Commission Merchants, M. T. Brewer & Co., Sacramento.
Sheep for Sale, Ashton & Holcomb, S. F.
Silver Tree Seed, John Saul, Washington, D. C.
Hansell Raspberry, J. T. Lovett, Little Silver, N. J.
Patent Side Saddle, L. A. Reister, Chico, Cal.
Stockton Business College, F. R. Clarke, Stockton, Cal.
Commercial Hotel, A. & J. Hahn, Stockton, Cal.
Leather Belting, H. Rayer, S. F.
Spring Tooth Harrow, Batchelor & Wylle, S. F.

The Week.

Fairs and conventions and signs of rain continue, and everyone has something to talk about. Last week the Stockton fair drew together a large concourse, and was a success according to all accounts. This week San Jose holds the scepter, and telegraph tells the same story.

Fruit is beginning to show the inroads of the eaters, the canners and the driers. The grape crushers are in full swing, new raisins are arriving in larger quantities, and everything betokens the drawing in of the fruit season. It is now time to prepare for the downpour of the early rains. The great increase in the capacity of our warehouses, and their erection in all parts of the interior, render it much easier now to get the grain to cover than it was a few years ago. It is not wise to take too many holidays before the crops are all roofed in, for trust in autumn skies is treacherous.

This week we have another enlarged edition to accommodate the extra amount of fair matter which presses. We trust the extra editions which we are distributing at the fairs may bring us many new friends, and enable us to continually improve and advance our journal in value to the agriculture of our progressive State.

The Forests of the Pacific Coast.

We have often alluded to the comprehensive work undertaken by the census office, with Prof. C. S. Sargent in charge, to make known the forest resources of the United States in 1880. As we have stated, the forest volume of the census will be full of tables and illustrated by colored maps of the different States, showing the forest area of each. This will be published in due time. We find that Prof. Sargent has given the public a sort of a forecast of his conclusions in a well-written article in the *North American Review* for October. It is a significant fact, showing the prominence with which agricultural and industrial subjects generally are now attaining, that almost every issue of this popular magazine contains a good review of some industrial theme. Not long ago such matters were cast aside for more acceptable discussions of literary, philosophical, political and other matters.

But to return to the forests: We shall collate from Prof. Sargent's article, which treats of the forests of the whole country, such parts as contain his conclusions on the Pacific coast forest growths. He shows that the distribution of the forests of the Pacific region clearly illustrate the influence of moisture upon forest growth. The rainfall of the northwest coast is very large, exceeding that of any other part of the continent; it gradually decreases with the latitude, and on the coast at the southern boundary of the United States is reduced to an average annual precipitation of less than 10 inches, not quite one-eighth of that received on the southern coast of Alaska. High mountain ranges, parallel with the coast, and extending from Alaska through the peninsula of Lower California, dissipate much of the moisture attracted from the Pacific ocean, leaving the whole vast of interior region east of these mountain ranges, and lying between them and the eastern edge of the Pacific region, imperfectly supplied with water. It is a region of light, uncertain, and unequally distributed rainfall, heavier at the north, as on the coast, and decreasing gradually with the latitude, in nearly the same proportion.

The whole of the Pacific region is composed of the mass of mountain ranges and narrow valleys which form the Cordilleran system. The precipitation of moisture, both snow and rain, is, of course, heavier on the mountains than in the valleys between them, increasing, other things being equal in proportion, to their height. In the case of the region in question, the western slopes of the mountains facing toward the ocean receive a larger precipitation of moisture than their opposite eastern ones. The forests of this region correspond with its rainfall. Along the northwest coast there is a strip of forest unequalled in density by any forest outside of the tropics; but this heavy growth does not extend east of the western slopes of the main Coast ranges. It pushes southward along the California coast, where the redwoods illustrate the maximum of forest productiveness. It decreases in density with the latitude on the slopes of the Sierras, disappearing entirely from the California Coast range south of Point Conception.

Throughout the Pacific region, the forest is confined to the mountains. The great interior ranges are forest-clad; at the north, the higher ones often heavily. At the south these mountain forests are light, often disappearing entirely from the lower ranges. In southeastern Arizona, and the adjacent parts of New Mexico, the forests, under the influence of heavier and more regularly distributed rainfall, are, however, denser than those in the same latitude farther west. But the forests of this whole region, north as well as south, are the forests of dry country. They are nowhere luxuriant as compared with the forests of the Pacific or the Atlantic coast. The trees have grown very slowly, and are often of immense age; underbrush and seedling trees, which characterize a vigorous forest growth, are wanting, except at the extreme north, or in the canyons of some of the highest ranges. Everywhere these forests show that their struggle for existence has been a severe one. They hold the mountains, but they just hold them, and no more. The drier valleys are treeless, or nearly so.

It is not improbable, in the light of recent scientific investigations, that even so recently as the time when some of the immediate ancestors of the trees which form these forests were growing, the whole interior region, now believed to be gradually drying up, enjoyed a more abundant rain-fall than it now receives, and that these forests thus originally grew under more favorable conditions than at present. If this hypothesis is correct, it will be easy to understand why, under less favorable circumstances, their reproduction will be difficult. The interior forests at the north may be expected, however, thanks to the present rainfall of that part of the country, to reproduce themselves slowly; but so slowly must this process go on, that, judging from the age of existing trees, many hundred years will have passed, if these forests are destroyed, before their successors can attain sufficient size to be of economic importance. Through all the southern part of the interior region, the struggle for life has been so severe that the stunted groups of trees, which barely deserve the name of forests, have only succeeded in finding a foothold in the high can-

yons about the heads of the scanty streams. The age of some of these small trees is immense. Few young trees are growing up to replace those which perish in the course of nature; and, once destroyed, the reproduction of these forests is so doubtful, or must at least be so slow, that the possibility of it, even, need not be considered in any practical discussion of the question.

Unlike the forests of the Atlantic, those of the Pacific region are composed of a few coniferous species, generally of wide distribution. Broad-leaved trees are almost entirely wanting in these forests, or, where they occur, are confined to the valleys of the coast, and to the banks of mountain streams. They nowhere form, as in the Atlantic region, an important element in the forest composition, and, economically, are of little importance.

The heavy forests of the Pacific region are still almost intact; other forests of this region, less productive, although from their position even more valuable, have already nearly disappeared. The unequaled forests of fir of the northwest coast hardly show the marks of 30 years of cutting and annually increasing fires. In this humid climate, young trees of the same valuable species spring up so quickly on land stripped of its original forest covering, and these new forests grow with such remarkable rapidity, that there is little danger of their final extinction. Any attempt to estimate even the productive capacity of this belt of forest is vain, although it is safe to assume that it contains the largest and most valuable body of coniferous timber remaining in any part of the world. The noble forests of pine and fir which grace the western slope of the California Sierras are still, so far as their mature trees are concerned, largely intact, although the increase in the number of forest fires in this region is alarming. The Sierra forests, thanks to their usually inaccessible position, have so far, for the most part, escaped the organized attacks of the lumberman. Serious, and often fatal, injury has been inflicted upon them, however, by the sheep which every summer are driven up by thousands to pasture in the cool, moist, subalpine meadows of these high mountains. The sheep, enforced by great bands of horses, cattle and goats, clean everything before them; nothing but the large trees and the most stubborn and thorny chaparral escape their voracity. Every young tree, every bud and every blade of herbage is devoured; everything green is destroyed; and the sheep tread out from the dry, gravelly hillsides the roots of all young and delicate plants.

The Sierra forest is, over most of its extent, a forest largely composed of full-grown trees, containing but few young seedlings, and little undergrowth to shelter and protect them; its condition, then, is critical, and unless measures can be taken for effectually limiting the range of browsing animals, its total extinction must be merely a question of time.

The belt of redwood forest along the California coast has already suffered severely at the hands of the lumberman, and many of its finest and most accessible trees have already been removed. A large amount of this valuable timber is still standing—less, however, than has generally been supposed; and at the present rate of consumption, the commercial importance of this forest will have disappeared at the end of a few years more. It will, however, owing to large annual precipitations of moisture received by this portion of the California coast, and the unusual vitality of the redwood tree itself, spread again through the canyons of the Coast range; but centuries must elapse before such new forests can rival in productiveness or extent those which California is now so rapidly dissipating. The forests of the northern interior region are still comparatively intact. Few demands upon them have yet been made, although extensive and destructive forest fires sweep bare every year great areas along the mountain sides. The northern forests are largely composed of the valuable species of the northwest coast, and, with proper protection, will long supply with fuel and building material the agricultural population now rapidly pushing into this part of the United States. The great pine forest which extends east from the flanks of the San Francisco mountains, in Arizona, nearly along the 35th parallel of latitude across the New Mexico boundary, has, up to the present time, escaped serious injury. Less valuable in its composition than the forests of Montana and Idaho, and yielding timber of comparatively inferior quality, this broad belt of pine is—owing to its isolated position between wide stretches of desert—of prime importance to the future development of this region. The remaining forests of the interior region, including those of the high Colorado mountains, are largely wasted. The mining industry has already made serious drains upon them, and fires are licking them up in every direction. It is hardly possible to realize the damage which has been inflicted upon these forests during the past 20 years. They are scarcely reproducing themselves anywhere, and in a few years, unless the present rate of destruction can be reduced, they will have entirely disappeared.

NATURAL SULPHURIC ACID.—It is said that a remarkable discovery has been made in Sweetwater county, Wyoming. It is a deposit of sulphuric acid in a natural state. The odor, chemical action and general appearance of the stuff demonstrates it to be a pure quality of sulphuric acid. The ground is impregnated over a large area—100 acres or more—and parties have filed claims upon it.

ENTOMOLOGICAL.

Gall-Flies on Cottonwood.

EDITORS PRESS:—I send you a curiosity in the shape of bulbs on the stem of the leaves of a cottonwood tree growing on our lot. There are thousands of these bulbs on the tree, and hundreds of insects in each bulb. The eggs seem to be deposited there by a fly, as the bulb is perforated. The insect is found almost as soon as the leaves reach their growth, and they are there yet at this date. I have no microscope, but I think they are mosquitoes. I wish you to examine them with a microscope, and classify them, if possible. One thing is certain, they are not dangerous.—S. B. McCORMACK, Turlock.

These are large galls or swellings, just at the base of the blade of the leaf, and just where the blade narrows into the leaf stalk. The gall is about half an inch in diameter, of a greenish color tinged with red. Probably many living in the neighborhood of cottonwood trees have noticed the peculiar swellings, and have been at a loss to account for them. We cannot do better, perhaps, than give a general description of gall insects, and to do this, we draw upon a sketch prepared for the *RURAL* several years ago by Major Wright: Among the many odd forms of insect life, none are more curious than the gall insects. Like all winged insects, they pass through the four stages of (1) the egg, (2) the larva or maggot, or grub, or worm, (3) the pupa, or cocoon or chrysalis, (4) the perfect or winged state.

What especially distinguishes them from other insects is, that in the larva or worm state, they are found enclosed in cells of very varied forms and colors, which grow abnormally on different kinds of plants—including trees, shrubs and herbs. Oak, hickories, cottonwoods, willows, sumacs, azaleas, rose-bushes, the golden-rod and other herbs, and even grasses abound with them. An odd feature marking them, and illustrating the great maxim—"like causes produce like effects"—is, that in some way, the galls containing the larva partake unmistakably of the nature of the plant on which they grow.

These cells, or galls, the homes of the various larvae, grow in the spring or summer as excrescences, because of the irritation produced by the eggs deposited under the bark by the mother insect, or by the young grub boring into the plant in search of its needed food and protection, guided by the promptings of instinct.

The perfect, or winged insects, which deposit these eggs, that are in turn to pass through the larva and chrysalis state into insects like themselves, in due course of nature, are quite varied in form, and belong to five of the seven groups or orders into which the true insects are now divided. Some of these are: 1. Clear-winged flies (*hymenoptera*), shaped like wasps and bees. Members of this group form in our common oak-balls and the nutgalls of Asia Minor, such a necessary ingredient making ink, and the Dead Sea apples, or apples of Sodom, found on the scrub oaks of southern Syria; also, the pretty colored rose-galls, covered with prickles, and the noted joint-worm, which often seriously damages our growing wheat, rye and barley. 2. Two-winged flies (*diptera*), shaped like mosquitoes, gnats and house-flies. They form galls on willows like pine cones; apple galls and filbert galls on grapevines; trumpet galls on grape leaves. The Hessian fly, so destructive to grain, is among these. 3. Bugs proper (*hemiptera*), like plant lice. Some of this group make the green, shining galls, and the rose-colored swellings on the cottonwood trees, and the hollow, reddish galls on sumac leaves. This class includes the phylloxera, both the species which forms at least 16 different kinds of galls on hickory trees alone, and that notorious and dreaded species which has played such havoc in the vineyards of France and so alarmed the vine growers of California for a year or two past. 4. Beetles (*coleoptera*), consisting of a kind of weevil, which, by its punctures and deposit of eggs, causes swellings in grapevines and raspberry stems. 5. Scaly-wing insects (*lepidoptera*) or moths. There are fewer species of this group than in either of the first four mentioned. Their larva form swellings in the stems of the golden-rod, false indigo, and perhaps other herbaceous plants.

Then, besides these five groups, there are gall mites (*acarina*), which belong to the spider family, as they generally have eight legs, rather than to true insects, which have but six legs. Yet they come pretty near the dividing line of true insects, as some of them have six legs. These little mites form purse-like galls on leaves of the wild plum and wild cherry.

WOOD DECAY.—The peculiar decay of wood is due to the inroads of a certain fungus on the fiber of the timber, says an American farming paper. When wood is seasoned, it is dried, so that fermentation of its sap cannot take place; in fact, the sap has evaporated. But when the wood, even after seasoning has been accomplished, is exposed to warmth and moisture at the same time, ordinary decay sets in, and paves the way for the growth of the little fungus, producing dry rot. Sometimes disease begins within the interior of the wood, the little spores or seeds of the fungus soaking into the roots of the trees while dissolved in rain water. The effect of the disease is that the wood fibers soften and dry, so that, finally, they may be rubbed to powder between the fingers.

THE excitement among the negroes on the school question at St. Louis has subsided, the negroes agreeing to send their children to the schools provided by the Board.

A Notable Clydesdale Stallion.

We give on this page the picture of a famous Clydesdale stallion owned by Powell Bros., of Springboro, Pa., and one of 100 or more which they have on their large breeding farm. A sight of the Clydesdales on their place is a memorable one. A writer for the *Ohio Farmer*, who lately visited the farm, says: It was a grand show to see lot after lot led out, two-year-olds, three-year-olds, and monstrous aged stallions and mares, in numbers that nearly wearied one to look at, a number of them weighing over 2,000 lb., but all in perfect breeding condition, and showing wonderful action, full of life and vigor, and combining, in the most perfect form, all the superior points of the model draft horse. Messrs. Powell Bros., after many years of very close study of the business, and extensive observation, claim the Clydesdale to be the superior of any other draft horse; that he has more bone, better developed muscle, better feet, more purely bred, better physical formation for heavy draft purposes, greater endurance for heavy and long-continued work, more action, better disposition, better eyes, and the only draft horse that has a recorded pedigree in their native country.

Prince Randolph is a dappled brown Clydesdale stallion, foaled June, 1875, imported by Powell Bros., "Shadeland," Springboro, Crawford county, Pa. He was sired by Drew's Prince of Wales (673), one of the most noted stallions in Scotland, winner of first prize at the Highland Society's show at Aberdeen in 1869, second at Dumfries in 1870; first at Kelso in 1872, and first at Royal Agricultural Society's show at Manchester. He is by General (322), winner of first prize at the Highland Society's show at Inverness in 1865. He is by Sir Walter Scott (797), by Old Clyde (574), by Scotsman (754), a very noted horse of his day.

Prince Randolph's dam was Young Mailie, by Young Campsie (929), winner of prize at the Highland Society's show at Edinburgh in 1869. He traveled the Glasgow district two seasons—1868 and 1869—and was afterwards sold to the Emperor of Austria. He is by Campsie Jack (119), winner of first prize and gold medal at the Highland Society's show at Kelso in 1863; the Fife and Kinross premium two years in succession; the Shotts and Whitburn premium four years in succession, and the Ayr county premium in 1868. He is by Johnnie Cope (416), by Justice (420), by Prince (603), by Clyde (155), by Clyde (153), by Broomfield Champion (95), by Glander 2d (337), by Glander 1st (336), by Glander, alias Thompson's Black Horse (335) foaled abt 1870, and was the most noted of all the great funders of the Clydesdale breed.

Prince Randolph's grandam was Old Mailie, by Lochend Champion (448), winner of first prize at the Highland Society's show at Perth in 1861; the gold medal of same society at Kelso in 1863; the second prize at the Royal Agricultural Society's show at Battersea in 1862, and the Glasgow premium in 1865. He is by Prince (603), by Clyde (155), by Clyde (153), by Broomfield Champion (95), by Glander 2d (337), by Glander 1st (336), by Glander, alias Thompson's Black Horse (335).

Prince Randolph's great grandam was by Prince of Wales (666), winner of Renfrewshire premium in 1858; Lunarkshire in 1859 and 1861, and Camwath in 1860. He is by King's Horse (430), by Prince (603), by Clyde (155), by Clyde (153), by Broomfield Champion (95), by Glander 2d (337), by Glander 1st (336), by Glander, alias Thompson's Black Horse (335).

Thus it appears that Prince Randolph is one of the most choicely bred Clydesdales ever imported. The horse, it is said, does full justice to his splendid breeding.

CHANGE OF FORM.—The *Prairie Farmer*, one of the most valued of our exchanges, comes to us under the name of the *People's Illustrated Weekly and Prairie Farmer*, and changed in form to 16 pages, having abandoned the old blanket sheet so unhandy to the reader. It is now fully illustrated, and will, we trust, find profit in its reforms.

Farmers' and Mechanics' Fairs.

EDITORS PRESS:—Judging from the knowledge gained while attending the State fair during the past week, it would seem the farmers and manufacturers ought to enjoy the privilege of a fair which they do not now possess. It should be one where all implements could be shown and tried at their work, and separately proven as to its merits and demerits.

If there is anything desirable on a farm, it is a good tool or machine, and if there is anything undesirable that a farmer should avoid, it is the purchase of a poor, worthless implement. He not only loses his money, but his time, and perhaps a portion of his crop, while trying to make it work. Thus, we see the need of experimental exhibitions, where all implements can be shown at work, and then the farmer has a chance to choose understandingly, and the manufacturer could show the peculiar advantages of his machine. As it is, the machinery is only looked at while not at work, and its merit guessed at by its looks, which are often deceptive.

At the State fair six days were mostly spent at horse racing, and about two hours in examining machinery and tools, and yet there was a large assortment, and unlike any previous fair. There were a great many new inventions of this coast, and a great deal of home manufacture, which certainly should demand attention and

Grape Prices.

The *Napa Reporter* says: The offering price for wine grapes at St. Helena and Pine station, we understand, is from \$30 to \$35 per ton. Sonoma City wine makers are contracting at the same price. Grapes will probably bring, in this vicinity, for the present crop, from \$25 to \$30 per ton, and for choice varieties, probably a little higher rates.

The Yountville correspondent of the *Napa Register* says: The grape-picking season is upon us, and some of the wine cellars are crushing, but next week they will all be in full blast. Grapes are ranging in this vicinity from \$25 to \$33. Mission and Muscat are \$25; all other foreign varieties are \$30, except Zinfandel, which are \$33, and large lots will command \$35.

The *Anaheim Gazette* says: At a meeting of grape buyers, held in Los Angeles last Saturday, it was agreed that the following scale of prices would be adhered to: For Mission grapes, \$20 per ton of 2,000 lb.; for Muscats, \$18; other foreign varieties, such as Black Hamburg, Malvoise and Zinfandel, \$22.50 per ton. The standard per cent. adopted for sugar of all grapes is 23%, Balling's saccharometer; and for each per cent. under the standard a discount on the above prices will be made of \$1 per ton, and for each additional per cent. of sugar over this standard an additional price of 50 cents per ton will be paid. It is understood that these prices mean for grapes delivered at the manufacturers. The adoption of the rule relating to

Independent Voters.

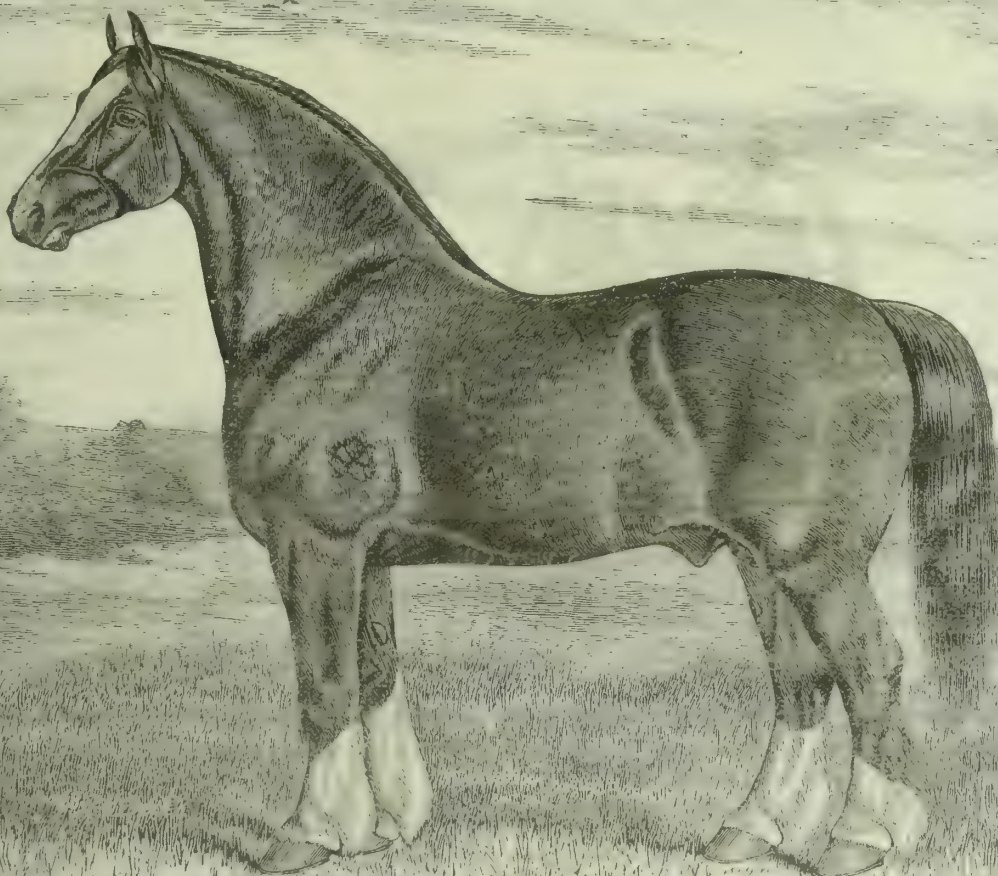
The political school of California is in disorder. The masters have lost control of their pupils, and many are the mutterings that fall on the ear. In them you may hear the distant roaring of a torrent of discontent, which is growing louder and louder as November draws on apace. It has come to be almost an axiom, that party platforms, which each candidate of every party is, nowadays, pledged to support, are no more indicative of the after-election career of men than are heavy rains a sign of scarcity of water. It is evident, also, that people are beginning to understand this, and will hereafter vote to a greater extent than ever before, not for platforms, parties or principles, but for the excellence or superiority of men. To speak plainly, there will be a vast deal of independent voting at the coming election. People should vote carefully and conscientiously. It is the sacred duty of every man to cast his ballot where it will do most public good, to the best of his knowledge and belief. He should therefore endeavor to inform himself, as well as possible, in regard to the men placed before the public for election. The times betoken independent thinking.

From a careful perusal of the best political papers of the day, and from personal interviews with leading political lights, one is led to the opinion that many who have hitherto been straight out party men, will thoroughly ponder the situation, and vote only for such men as have been honestly and fittingly nominated. We advise farmers especially to inform themselves, and exchange views on the political situation whenever they meet; to read everything in regard to men and measures consistent with their duties as electors, and to place their ballots knowingly and deliberately where they will best benefit the public welfare. Let not prejudice or the lower passions govern any man in discharging this sacred duty, the guardian of our liberties. Let no buglesound triumphant influence you the weight of one poor scurvy, nor boom of cannon, or blaze of bonfire. Yield not to the swelled up patronizing politician, nor be affected by his flattery, for he deals it out as the waiter does the soup, and if he truckles before you now, it shows that he has no independence of spirit. Think what such a man would do in office, where an independent and straight forward course is the only one respected. It is a momentous time; look well to your ballots. There is,

politically, no better recommendation for any individual than the fact that he is known to think for himself and form his own opinions. Nothing much worse can be said of a man, in a political sense, than that he suffers himself to be "lead around by the nose."

CLOSING UP.—There is now a gap of a little more than 600 miles between the approaching ends of the Northern Pacific railroad, and this is being closed up at the rate of nearly four miles per day. On the first of this month a daily line of four-horse stages commenced running between the two ends of the line, and by the 1st of October the schedule passenger time between Chicago and Portland will be reduced to eight days, which is less than the present time between the two cities by way of San Francisco. A force of 8,000 men is employed in pushing forward the road, and the whole line is expected to be completed and in running order early in 1883.

To imitate ebony, wash any compact wood with a boiling decoction of logwood three or four times, allowing it to dry between each application. Then wash it with a solution of acetate of iron, which is made by dissolving iron filings in vinegar. This stain is very black, and penetrates to a considerable depth into the wood, so that ordinary scratching or chipping does not show the original color of the wood. It is a mistake to mix the solutions of logwood and iron before applying them to the wood, as some recipes direct.



CLYDESDALE STALLION PRINCE RANDOLPH, OWNED BY POWELL BROS., SPRINGBORO, PA.

mention by the committee. I do not blame the present committee; but the custom is certainly deplorable, and a radical change should be made. Many erroneous awards were made because of the haste in judging. The work was done too hastily. Yet all are liable to just such mistakes when there is no trial made, and no time given for proper examination.

Another matter it would be well to mention is the fact that no implement or machine gets a second premium; but the fast horse gets the money, 3d, 4th and 5th premiums, and a lot of these old fellows follow the fairs for a month or two every fall, picking up the hard-earned coin, and what is the benefit? what do we know when the jockeys get through with the race? One thing we do not know, and that is, which is the fastest horse. To try the speed of breeding horses and their young, to improve our stock, also to try their draft and their walking speed, I think a premium is deserving; but to pay all our attention to horse racing, and call it a fair, reminds me of the minister who could consistently take his boy and go to the circus because it was called a menagerie.

California should now have a chance to exhibit her manufactured goods, and as far as practicable, at work. There could be plowing done, also all the harrows, seed sowers, clod pulverizers, etc., shown, and alfalfa could be in readiness to cut and rake and pitch; also a few stacks of grain to test the threshers and engines; and no implement should receive a premium unless shown at work. This could be termed a fair that would be of mutual benefit.

A SUBSCRIBER.

the standard of sugar is understood to have been made necessary by the practice of many grape-growers of Los Angeles of irrigating their vineyards just as the grapes were ripening. In this way the grapes were made watery and heavy, and the amount of saccharine matter in the juice was proportionately lessened. It should be stated, in explanation of the price of red for Muscats, that that grape makes a variety of wine for which there is only a limited demand. The flavor is so pronounced that Muscatel, as the wine is called, has few admirers.

POULTRY PREMIUMS.—There were several errors in the published list of poultry premiums at the State fair. R. G. Head, of Napa, was credited with premiums on Dark Brahmas, White and Brown Leghorns, which he did not exhibit. He does not breed Dark Brahmas, and his White and Brown Leghorns were moulting, and were not at the fair. But Mr. Head took important premiums which were not noticed. He took the first premium for Black Leghorns and for Bronze turkeys. Both these varieties were very fine, the Bronze turkeys being pronounced by some the best ever shown at Sacramento. Mr. Head exhibited seven varieties, and received six first and three special premiums.

OUR AGENT IN NAPA COUNTY.—Mr. L. L. Woodmansee is presenting the claims of the Press to the prosperous people of Napa county. We trust that our friends may find it convenient to aid him in his work to extend the patronage and influence of our journal.

HOME PRODUCTION.

JUDSON MANUFACTURING CO.'S

VICTOR MOWING MACHINE.

The First and Only Mower Made on this Coast.

Silver Medal Awarded at the Mechanics' Fair, San Francisco, 1882.

WE CLAIM THAT

THE VICTOR IS THE BEST MACHINE

Ever Offered to the Farmers on this Coast, and the following are a few of the Reasons why it is so.

1st. Because it has great strength and durability, yet is very simple in its construction.

2d. The **COMPOUND DRAFT ATTACHMENT** is one of the best inventions ever applied to a Mowing Machine, and renders it entirely free from side draft.

3d. The Finger Bar always being in line with the Pitman, admits of the knives working with the Bar in any position, even when folded, thus obviating all danger of breakage by raising the Bar to pass obstructions when in gear, and adding greatly to the strength of the cutting apparatus by doing away with a joint in the Finger Bar.

4h. It has the best and strongest Pitman ever used on any machine geared high, with two pauls in each wheel, it will always cut its way out.

We have testimonials from some of the best farmers in California, who have used the VICTOR, and in every instance they recommend it over any Machine ever sold on this Coast.

The fact that it is made here, where Extras can always be obtained, is worthy of the consideration of every farmer who contemplates purchasing a Mower.

But we wish it distinctly understood that we ask no favors on account of its being a home production. If it does not, under all circumstances, prove equal to—and in cutting Alfalfa or Grain, the superior of—any Mower ever used, it may be returned to the Agent of whom it was purchased, and the money refunded.

The following are a few of the Testimonials received from those who have used the VICTOR MOWER the past season:

JUDSON MFG CO., San Francisco.

GENTS:

I am very well pleased with the Victor Mower purchased of you: 1st, Because there is no side draft, the horses pulling direct from the cutting apparatus. 2d, Because the pitman is shielded from any obstruction, and not liable to be broken. 3d, Because you can stop and start without backing, and turn without increase of speed. 4th, The wheels carrying the cutting bar remove much of the friction. 5th, The floating apparatus lets it run over very rough ground with ease and without breakage, (which is no small item in parts remote from the city). Also, the boxes are better than I ever saw before; in fact, the whole machine, for simplicity, strength, durability and light running, make it the best Mower of the day. Yours respectfully,

A. G. RUDDOCK.

BOONVILLE, Mendocino Co., Aug 27, 1882.

JUDSON MFG CO.

GENTLEMEN:

I can truthfully testify to the excellent qualities of your Victor Mower. I purchased one last May, and have cut 120 acres over very rough ground. It is the lightest draft Mower I ever run. Wishing you success,

I am your obedient servant,

WILLIAM PRATHER.

CENTERVILLE, Alameda Co., Aug. 30, 1882.

JUDSON MFG CO., San Francisco.

GENTS:

I have used one of your Victor Mowers during the past season, and consider it the best machine ever made. It is by one-third the lightest draft machine I ever used, and I have

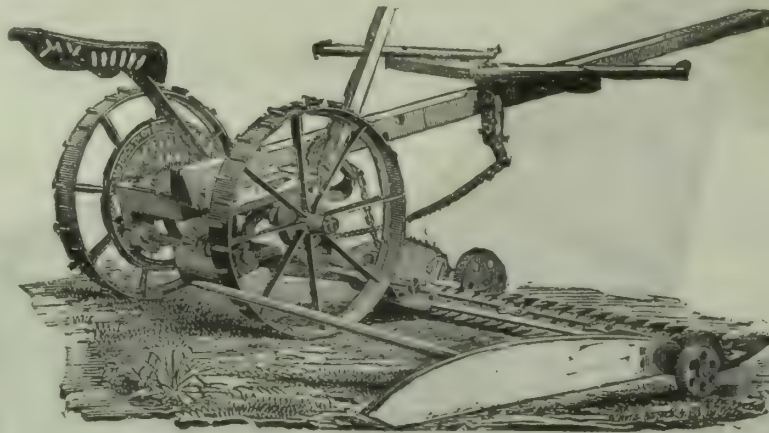
Made by the

JUDSON MANUFACTURING CO.,

Office, 402 Front Street,

Factories at Oakland.

SAN FRANCISCO.



chine, and revolving gun metal boxes instead of Babbit.

5th. Being geared from both wheels it will cut a circle either way, one wheel acting as a pivot, thus doing away with stopping and backing on corners, saving time, and avoids fretting the horses.

6th. Backing up to get under motion, so objectionable in other machines, is entirely done away with in the VICTOR. Being

run mowing machines for the past 20 years. There is no side draft whatever, and it is a very easy machine to operate. My boy, who is only 10 years old, cut over 60 acres during this season, of Burr clover, wheat and wild oats, mixed, that cut over four tons to the acre. Success to the Victor.

JOSEPH ROSE.

HEALDSBURG, Aug. 28, 1882.

We, the undersigned, having used the Victor Mower made by the Judson Manufacturing Co., of San Francisco, can testify to its superior qualities, and conscientiously recommend it to the farmer as an excellent machine, and the best adapted for use on this coast of any mower that has ever come under our observation.

H. M. WILSON,

President Bank of Healdsburg.

WM. MATHORN, Healdsburg.

E. TEUAFER,

A. H. BARTH, Windsor.

WEST POINT, CALAVERAS Co., Aug. 4, 1882.

JUDSON MFG CO.

The Victor Mower I purchased of you has given perfect satisfaction, both in heavy alfalfa and fox-tail; as I had the machine on trial, you may be sure that I gave it a good test. It is the lightest running and best adapted for all purposes of any machine I ever saw. One of my neighbors, Mr. Ham, has a Victor, and he thinks there is no machine like it.

FRED. GREIVE.

VANCOUVER, W. T., Aug. 10, 1882.

JUDSON MFG CO.

One of the Victor Mowers sold by us cut 170 acres and never stopped a minute for repairs.

GRIDLEY & WHITNEY.

The Stockton Fair.

The Stockton fair, which was held last week, was a gratifying success to the managers, and a compliment to the enterprise of a wide-awake and stirring section of the State. The display at the park was far better in point of true agricultural exhibits than at any recent fair, although this fair shared with all others in California the preponderance of the racing element. But that by liberal premiums and judicious advertising the display of other agricultural material was better than heretofore is a hopeful sign, and we are glad to record it.

The pavilion was unusually good this year in its scope of exhibits and in the management of the affairs generally. A special committee had charge of this part of the fair, and we are assured that the good behavior and absence of disreputable characters was gratifying to all. Adjoining the pavilion was a dancing-room where the music was put to its best use by the young people.

The Stockton Independent reviews this year's fair as follows: Never in the history of the San Joaquin Valley Agricultural Association has the outlook been more flattering at the close of the third day, and the management may well feel proud of the success with which its efforts have been attended. There is manifested by the large number in attendance at the fair the present season, a much greater interest than ever before, not only in the races, which are highly satisfactory, but in the entire stock and machinery display at the park, and the immense and varied exhibit at the pavilion. It was reported of the State fair that the rough element took Sacramento by storm, and ruled with a high hand. Certainly, a very different state exists in Stockton. Good order prevails throughout, both day and night, not only at the fair grounds, but at the pavilion. We have yet to chronicle a single unlawful act of any consequence, either at the track or in the city, which speaks well for those who have the fair in charge, as well as the zealous attention of the police force of Stockton.

The Live Stock Premium.

The following is the list of awards for live stock:

Horses.

Thoroughbreds.—Best stallion, three years and over, first premium to Joe Daniels, owned by H. S. Sargent, Stockton; second premium recommended to Nathan Coombe, owned by Wm. E. Smith, Minnitas; best mare, three years and over, first premium to Mollie Hall, owned by Wm. Booth, Milpitas; best mare, one year and over, first premium to Alice Hall, owned by J. N. Randall, Turlock.

Horses for all purposes.—Best stallion, three years and over, premium to Neptune, Jr., owned by G. W. Trappan, Stockton; best stallion, two years and over, first premium to ch stallion, by Priam, J. H. Whitney, Stockton; second premium recommended to Duroc, owned by W. G. Phelps, Stockton; best sucking colt, first premium to Dandy, owned by Dr. C. Gratton, Stockton; best mare, three years and over, first premium to Brownie H., owned by L. Hewlett, Oakland; best mare, two years old, first premium to Mollie Miller, owned by Wm. Thomas, Douglass Flat.

Roadsters.—Best stallion, four years and over, premium to Upright, owned by Walter Morris, Stockton; best stallion, two years old, premium to Echo, Jr., owned by L. Hewlett, Oakland; best stallion, one year old, premium to blk s, by Buccaneer, owned by G. Vallensin, Hicksville; best trotting sucking colt, first premium to blk c Abbottsford, owned by L. U. Shippee, Stockton; best mare or gelding, four years and over, first premium to Whisper, owned by C. Younger, Forest Home; best mare or gelding, three years old, first prize to Hazel Kirke, owned by J. B. McDonald, Maryville; best mare or gelding, two years old, first premium to Cyclone, owned by Walter Emoms, Stockton; best yearling filly, first premium to Hattie B., owned by Noyes Bailey, Stockton; best trotting sucking filly, first premium to bay filly by Hawthorne, owned by Noyes Bailey, Stockton.

Draft Horses.—Best stallion, three years and over, first premium to Tornado, owned by F. S. Killman, Petaluma; best stallion, two years old, first premium to Monarch, owned by F. S. Killman, Petaluma; best sucking colt, first premium to Colt, by Enterprise, owned by Uriah Martin, Stockton; best mare, three years and over, first premium to Fannie, owned by Uriah Martin, Stockton; best mare, one year old, first premium to Gertrude, owned by F. S. Killman, Petaluma; second premium recommended to stallion, three years and over, to Prince Consort, Jr., owned by L. U. Shippee, Stockton.

Carriage Horses.—Best span carriage horses, 16 hands and over, first premium to Hercules and brother, owned by O. Johnson, Modesto; second best span, premium, pair sorrel geldings, owned by L. Gerlach, Stockton; best single buggy horse, premium to Silvertail, owned by O. Johnson, Modesto; second premium recommended to Flora, owned by W. G. Phelps, Stockton.

Jacks.—Best Jack, two years and over, premium to Lippincott, owned by R. J. Green, San Francisco; best Jennet, premium to Duchess, owned by Freeman & Shippee.

Mules.—Best pair mules, premium to Pet and Susie, owned by L. U. Shippee, Stockton.

Saddle Horses.—First premium recommended to Black Prince, owned by B. C. Trefry, Tulare; second premium recommended to Bluehard, owned by A. B. Nixon, Sacramento.

Cattle.

Durham Cattle.—Best bull, three years and over, premium to Second Duke of Alameda, owned by C. Younger, Forest Home; best bull, one year old, premium to Forest King, owned by C. Younger, Forest Home; best bull calf, premium to Eighth Duke of Forest Home, owned by C. Younger, Forest Home; best cow, three years and over, premium to Jessie Maynard, owned by C. Younger, Forest Home; best cow, two years old, premium to Oxford Rose, 3d, owned by C. Younger, Forest Home; best cow, one year old, premium to Fifth Louan of Forest Home, owned by C. Younger, Forest Home; best heifer calf, premium to Tenth Rose of Forest Home, owned by C. Younger, Forest Home.

Jerseys.—Best bull, three years and over, premium to Pinafore, owned by E. Woods, Modesto; best bull, two years old, premium to Ezra Mameluke, owned by H. S. Sargent, Stockton; best cow, three years and over, premium to Daisy, owned by H. S. Sargent, Stockton; best cow, two years old, premium to Clark Beauty, owned by H. S. Sargent, Stockton; best cow, one year old, premium to Queen, owned by H. S. Sargent, Stockton.

Ayrshires.—Best bull, three years and over, premium to Archie, best bull, two years old, premium to Lindo; best bull, one year old, premium to Macbeth; best cow, three years old and over, premium to Stellita; best cow, two years old, premium to Stellita; best cow, one year old, premium to Sultana; recommend special premiums

to bull calf, Malcomb, and heifer calf, Sybil. All the cattle in this class are owned by George Bement, of Redwood City.

Graded Cattle.—Best cow, three years and over, premium to Mattie, owned by E. Wood, Modesto.

Best Cattle.—Best herd, six head (over 2½ years), premium to C. Younger's herd of Durhams, headed by second Duke of Alameda; best herd, five head (under 2½ years), premium to C. Younger's herd of Durhams, headed by Forest King; committee recommend special premium to Geo. Bement's herd of Ayrshires.

Sheep.

Best Spanish Merino ram, two years and over, premium to Moscow, L. U. Shippee; best Spanish Merino ram, one year old, premium to —, L. U. Shippee; best Spanish Merino ewes (pen 5) two years and over, premium to —, L. U. Shippee; best Spanish Merino ewe lamb (pen 5) premium to —, L. U. Shippee; sweepstakes above class premium to Moscow and five lambs L. U. Shippee; best Cotswold ram, premium to Hancock, owned by C. Younger, Forest Home; best South-Down ram, premium to Sonoma, owned by George Bement; best pen Cotswold ewes (pen 5) premium to C. Younger, Forest Home; sweepstakes, best ram and five lambs, premium to Hancock and lambs, C. Younger, Forest Home.

Swine.

Best Berkshire boar, first premium to —, owned by L. Shippee, Stockton; best Berkshire sow, first premium to U. Sh — owned by L. U. Shippee, Stockton; best Poland — boar, first premium to Jim, owned by Dr. Gratton, China; best Poland China sow, first premium to —, Stock by Dr. Gratton, Stockton.

Poultry.

Premiums for seven varieties awarded to Thomas Waite, Brighton, Sacramento Co., and premiums recommended for six other varieties.

Business Notes at the Stockton Fair.

(Written for RURAL PRESS by J. C. H.)

Stockton is just now an epitome of California industrial activity. Manufactures are thriving, trade is good, real estate in and about the city is advancing, and there is a stir and lustle about the place which is highly gratifying to the visitor and, we doubt not, to the inhabitants as well.

The recent fair gave the leading manufacturers and

seated, four-spine farmer's carriage, plain and very serviceable. The Superior drill, the Bradley Garden City cultivator, iron beam, and the Garden City cultivator, wood beam, very desirable implements, fine for the corn-field and other places where plants are to be tilled. He had the L. Dow pulverizing harrow, a favorite and the pulverizing cultivator, also an excellent implement. But the pride of the display, as far as noted, was the exhibit of Furth & Bradley, single and double sulky plows with steel beams, the latter or sulky plows, single and in gangs. He had them from 12 to 13 inches cut. One breaking plow, for hard and deep work, is especially attractive. Mr. Shaw may well be proud of this exhibit, as it is not surpassed.

The Grangers' Union

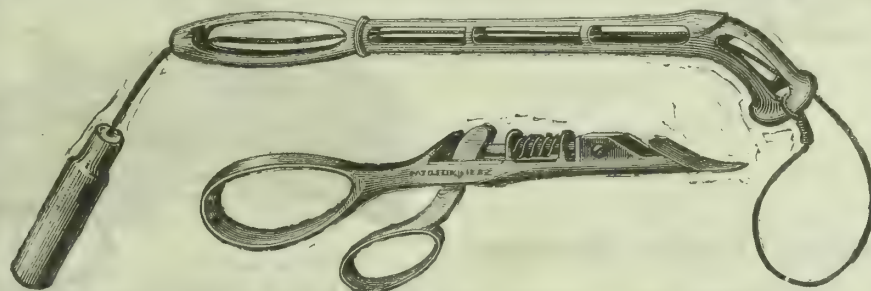
Also made a fine exhibit. The Triumph drill, a 15-hoe implement, which plants a track 10 ft. wide; the spring tooth harrow, a favorite implement for working all kinds of soils; Baldwin's fodder cutter, a neat and handy machine, and many other implements, were exhibited. And then there were wagons, buggies and carriages from the Benicia Works, fine, well-made, strongly-ironed and handsome-looking vehicles. The largest exhibit was the grand display made by the Grangers. Plows of all sizes, patterns and makes; fanning mills, harrows, barbed wire, cultivators of many varieties rendered this department very attractive. The firm may well be proud of their display, which added so much to the success of the fair.

E. J. Marsters

Exhibited one of his self-feeders, an implement which feeds grain to the cylinder with the old motion as followed by the men who handled the grain before self-feeders were invented. It is pronounced by many to be superior to any self-feeder yet invented. The display, on the whole, was very creditable, and deserving of especial consideration.

Wright Nash & Co.

Had one of their new barley mills, or crushers, on the ground, and it received its full share of praise. These



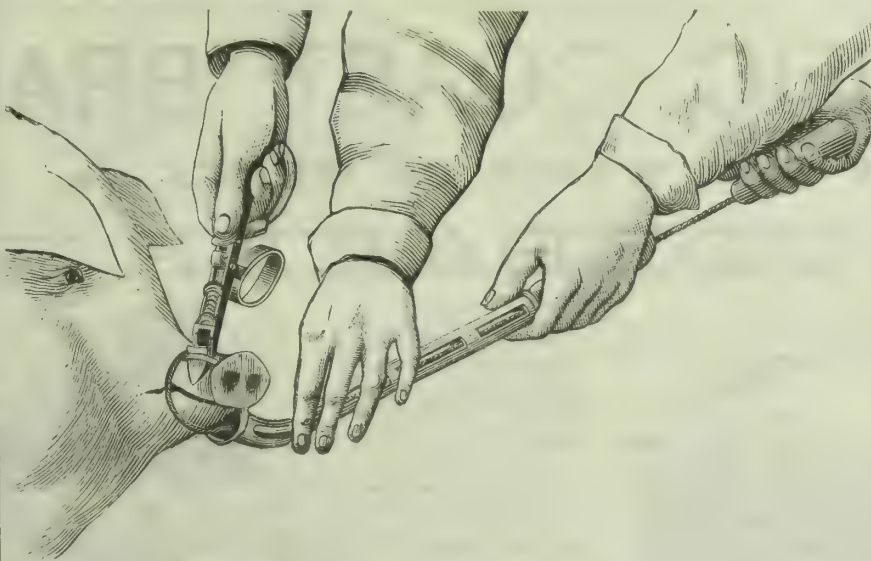
THE ANIMAL CONQUERER AND EUREKA ANTI-ROOTER.

business men of Stockton a chance to display their enterprise to please the people, and they embraced it. The exhibits were, as a rule, very creditable, and we shall mention a few which chiefly attracted our attention.

John Caine.

The leading foundryman and machinist of Stockton, is maintaining his position, and is put to his best to answer

crushers are on the roller principle, and are pronounced by those who have used them to be very superior. The grain crushed is not heated or in the least injured, and feeders pronounce it superior to any ground by the old process. The firm also exhibited a warehouse elevator with which three men can pile as many sacks of grain in a day as five can by working in the old manner. The firm



THE HOG HOLDER AND TENDON CUTTER IN OPERATION.

all the demands for work which are placed upon him. At the fair he had a number good of things, as, for example, the Studebaker wagon, also gang plows of his own manufacture, etc.

Bailey, Badgley & Co.

Had a fine exhibit. They occupied a section in the pavilion with separators—Minnesota Chief pattern—McCormick mowers and six of the Morrison double-shin, steel beam plows of various sizes. One Iron King mower cuts six feet, with center draft. With this machine the farmer can cut his hay from one side of the field, or, in other words, he can cut "back and forth." The firm had four carriages, including farmers' spring wagons, with or without tops; an elliptic spring buggy and a two-seated Taylor, three-spring farm carriage and a fine farm wagon with a one and a half inch spindle, all of the Studebaker make. These carriages will well repay examination. Then they had one of the celebrated buckboards, made by Ben. Stacey, of Lodi, a neat, compact vehicle. The display was very comprehensive and excellent.

J. H. Condit & Co.

Had, at the park, two improved Champion mowers. They cut grain, grass or tules, on level land, on the side hill, on the side or top of a levee, or in the bottom of a ditch. Another specialty is the Oliver chilled plows, one of the finest implements ever made. The firm has the agency for these plows for Calaveras, San Joaquin, Tuolumne and Stanislaus counties.

H. C. Shaw

Had his space filled with a fine exhibit and a conspicuous one. He had three of the Fish Bros.' farm wagons—fine specimens of the wheelwright's work. He had two

headquarters of farmers driving into Stockton. It is a large, well-kept and pleasant stopping place, and is a temperance house. It is in the heart of the city and is the stage office. The Commercial is worthy of the attention of the traveling public.

H. H. Horse Medicine

Is still popular on the farm and in the city stables. Large shipments are being made to the front, and many animals are kept in good shape for work by its use. It is certainly a great equine benefactor.

Yosemite House

Continues to receive the favor of the tourist and the local individual who desires food and shelter. The landlord is well up in the art of hotel keeping, and his guests appreciate it.

Furniture.

A. Easton exhibited at the fair one of the finest stocks of furniture, but we are told that, owing to other business changes, he will close out his stock by January 1st, and retire from the furniture trade.

C. E. Williams & Co.

Continue the manufacture of their famous squirrel poison, which is being largely used with good results. The hand-some tanned goatskins for foot rugs in the carriage and the house are still a specialty of the firm.

Abietine.

This remedy is gaining wider introduction each year, and many testimonials of its efficacy are received.

Combined Harvesters

Of David Hower's pattern were shown on the fair grounds and attracted much attention. These machines have made a good record this year. They have reduced the cost of grain gathering on a large scale to a small figure.

The Sperry Mills.

The rebuilding of the Sperry mills, on an enlarged scale, is an item of great importance. The increase of the flouring facilities of the interior will do much to build up the State. Sperry's new mill will cost fully \$200,000. It is a beautiful and substantial brick building, the plans of which were drawn with the intent of combining economy in space with adaptability to the contemplated work, and were the result of a long practical experience in milling matters. It is not only a success on the score of complete utility, but it is also an ornament to the city of Stockton. It possesses the advantage of being on the margin of tide-water communication with San Francisco, and its close proximity to railroad transportation affords it ample opportunities for shipment by either vessel or car. The building is divided into three departments. The first, which is the mill proper, is 50x100 ft., and five stories high. The second department is occupied by the cleaning machine, and is 40x100 ft., including the packing-room, and is three stories high. The third, or warehouse department, is 117x100 ft., and two stories high. The ground on which the building stands was laid in concrete two and a half feet thick, and upon this solid foundation the foundation was laid and the structure erected. The machinery embraces the latest patents and most recent improvements, and is so arranged that when in operation the grain shall pass steadily onward without manual handling, through all the ramifications of the mill, until it is turned out at last in the highest known grade of flour, at the rate of 1,000 barrels per day of 24 hours.

To Keep Hogs from Rooting.

To keep swine from rooting, is one of the essentials of hog growing on enclosed lands. The old device has been the insertion of a ring in the snout. Another method, which is put forward as a great improvement over the old method, is by cutting a piece from the tendons which operate the shovel on the end of the snout. To perform this operation, ingenious appliances have been invented, which we show in the engravings on this page.

To operate on the hog, you must first catch, and then hold it tightly. To do this, the "animal conqueror," shown in the upper figure of the small engraving, is said to be very effective. The handle is of malleable iron, and through this passes a flexible white wire of six strands, which is drawn tightly around the nose of the animal, and from which it cannot escape. This animal holder is also effective for conquering fractious animals of all kinds. It is especially good as a horse twitch. It serves a good purpose in castration and obstetric operations when force is necessary.

The special machine for cutting the tendon is shown in the lower figure of the small engraving. The sharp point is thrust beneath the tendon, which rises over the notch, when it is quickly cut by drawing up the lower handle of the cutter. A piece of one-half an inch in length is removed.

From under each eye, running direct to the center of gristle or rooter at end of nose, are two leaders, from which the rooter acquires its power, by their contraction and expansion, to loosen the earth, and ringing or cutting the rooter or snout does not, in any way, affect the power of these leaders; therefore, the reason why they often fail to accomplish the purpose intended. But it is claimed that to cut a section or piece out of each of these powerful leaders, completely does away with his ability to ever root again.

We have seen testimonials from those who have used the machine, in Illinois, to the effect that in from three to five days after operating with this cutter, you cannot observe where insertion was made. The Conqueror holds the hog perfectly steady for the use of the cutter, which works quick, sure and simple, viz.: Insertion, draw, cut, and you have your section or piece of leader. It is said that the hog will go to eating at once.

The larger engraving shows clearly the manner of using these devices for overcoming the rooting power of the hog. The instruments have separate names; the holder being called the "Animal Conqueror," and the tendon cutter is the "Eureka Anti-rooter." G. G. Wickson, 319 Market street, San Francisco, has the general agency for this coast, and from him any further information can be obtained.

Commercial Hotel.

The Commercial hotel, kept by A. & J. Hahn, is the

THE IMPROVED CALIFORNIA

SPRING TOOTH CULTIVATING HARROW,

Manufactured by

BATCHELOR & WYLIE,

Is superior to any other implement for preparing a seed bed on summer-fallow ground. For volunteering purposes it is unequalled, and will cover grain better than any other implement now in use. These Harrows have been in use over two years in this State,

AND THE GENERAL VERDICT HAS BEEN IN THEIR FAVOR.

Every farmer will be greatly benefited by giving them a trial before purchasing any implement for Surface Cultivation.

From Our Many Testimonials We Submit One Only:

JACINTO, Colusa Co., Cal.
Messrs. Batchelor & Wylie, San Francisco, Cal.
GENTLEMEN: I am convinced that your Spring-Tooth Harrows and Cultivators are the most practical, the most efficient and the BEST implement I have ever tried, used either as a

CULTIVATOR
OR A
HARROW.

For volunteering, for working summer-fallow, or land that has become compact by sun or rain, or for covering seed. I



have TESTED THEM CAREFULLY, under all circumstances, and now have

EIGHTEEN

Of the largest sized at work on my ranch, and I think them

INDISPENSABLE.

Have recently applied your IMPROVED Fasteners to the entire number, and consider that they FULLY DOUBLE THEIR VALUE.

Very respectfully
Yours,

H. J. GLENN.

INQUIRE FOR

Improved California Spring Tooth Harrow!

Manufactured Only by

BATCHELOR & WYLIE,

31 Market Street,

SAN FRANCISCO,

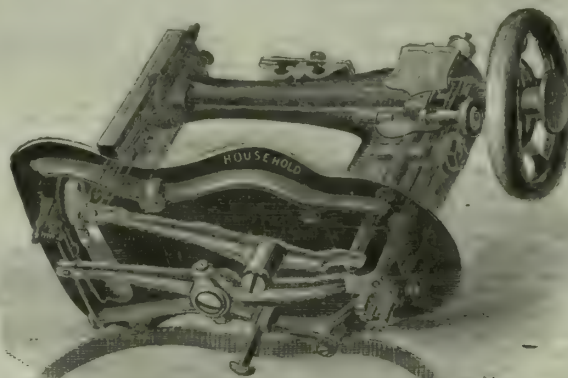
CALIFORNIA.

THE

Easy Running, Simple and Beautiful

"HOUSEHOLD."

This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm, giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



THE SHUTTLE

Is very simple, of cylinder shape and open at one end. The

BOBBIN

Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

It has a loose fly wheel for winding Bobbin without running the Machine. The

TREADLE

Sets on anti-friction bearings and never requires oiling. It is the Finest Finished Machine ever offered to the public.

STYLES AND CASH PRICES

No. 1 Plain table, 1 drawer, 1.84
No. 2 1 drawer, cover and drop leaf, 2.14
No. 3 As illustrated in above cut, 2.50
No. 4-2 drawers on each side, 2.88
28 Write directions for shipping plainly. Complete list of actual prices free.

HOUSEHOLD HEAD.

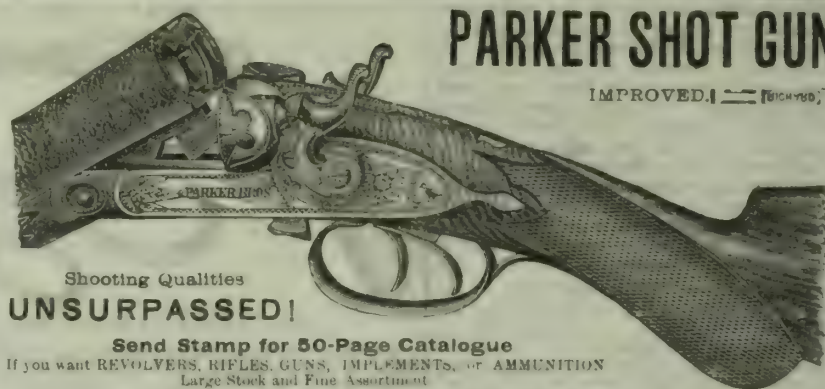
MARK SHELDON,

Wholesale Agent,

Agents Wanted.

PARKER SHOT GUN.

IMPROVED. 12 BORE.



Shooting Qualities

UNSURPASSED!

Send Stamp for 50-Page Catalogue

If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION
Large Stock and Fine Assortment

Send for Circular and Prices, and mention this paper.

E. T. ALLEN, Agent for the Pacific Coast.

NO. 416 MARKET STREET.

SAN FRANCISCO, CAL.

PACIFIC COAST BRANCH.

If you want THE BEST WAGON ON WHEELS you Should buy only

THE STUDEBAKER WAGON



THE STUDEBAKER WAGON WITH STAKE RACK BED.

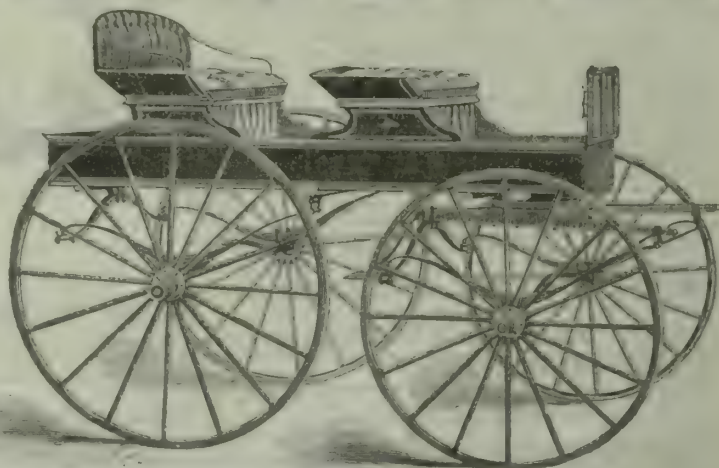
Made from the best selected INDIANA TIMBER thoroughly seasoned and prepared for the hot, dry climate of California.

We are now using, and shall continue to use exclusively hereafter in our Iron Axled Wagons, the celebrated

Goncord Axles,

which are well known to be the lightest running and most durable axles made.

Our Thimble Skin Wagons have our patent Truss Axles which greatly strengthen the axles.



STUDEBAKER PLATFORM SPRING WAGON.

THE STUDEBAKER is the only Wagon in which the Slope Shouldered Spoke is Used.

The many advantages over the square-shouldered spoke commonly used can be seen in the annexed cut. It compresses the hub, making the most solid and substantial wheel possible. Saves refilling, and is strong where the square tenon is weak. We have a full and complete stock of

Four-spring Wagons.

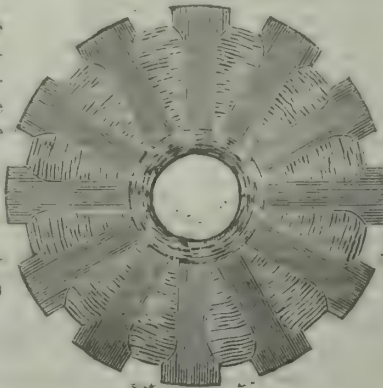
With and Without Tops.

Platform Spring and other Spring Wagons,

As Well as a large line of

Top and No-Top Buggies and Carriages.

We are now permanently located in Our New Warerooms, and will be pleased to show our stock to any, whether wishing to purchase or not.



Studebaker Bros.
MANUFACTURING CO.,

201 & 203 Market St., Cor. Main,
SAN FRANCISCO.

U.S.★ WINDMILL.

First Premium at the State
Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out. It does its work with less loss of power from friction than any other mill. It is easily regulated to do as little or as much work as may be required of it. It is self-governing, and very sensitive to the least change in the wind. It will run with less wind than any other mill of the same size, doing the same amount of work. It is simpler and more compact in construction than any other first-class mill. It is the most durable windmill known. It is offered at as low a price as any other first-class mill.

D. C. PAUL, General Agent,
Livermore, Cal.

Attention, Housekeepers!!

The immense stock of
Furniture, Carpets, Crockery and Household Goods of
A. EASTON,

Will be offered at cost from OCTOBER 1st until JAN. 1st. Bargains for all.

El Dorado Street, One Door South of Main,
STOCKTON, CAL.

COMMERCIAL HOTEL.

"Farmers' Headquarters."
MAIN STREET, STOCKTON.
Rates, \$1.25 to \$3.00.
Free Coach from all Railroad and Steamboat Stations.
A. & J. HAHN, Proprietors.

SILVER TREE OF CAPE OF GOOD HOPE.
(Leucadendron Argentum.)
Fresh seed direct from the "Cape" can be supplied by the undersigned at \$2.00 per ounce, free by mail. This beautiful tree is undoubtedly hardy in the southern portion of the State.
JOHN SAUL,
Washington, D. C.

FOR SALE.

17 Half Spanish, Half Saxony Bucks. 1 Leicester Buck. 8 Leicester Ewes. Apply to
ASHTON & HOLCOMB,
413 Montgomery Street, SAN FRANCISCO.
STOCKTON

BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address
P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

JOHN ELLIS,
Landscape Engineer and Garden Architect,
Practical Nurseryman and General Horticulturist.
Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.
Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

HEAR YE DEAF.
Garmore's Artificial Ear Drum.
An invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years. He hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured.
JOHN GARMORE,
5th & Race Sts., Cincinnati, O.

JOSEPH F. HILL,
MANUFACTURER OF FIRST-CLASS
Buggies, Farm & Freight Wagons,
OF ALL DESCRIPTIONS,
Cor. Thirteenth and J Sts., Sacramento, Cal.
Repairing promptly attended to.

California Inventors
Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as Journalists and large practice as patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING and SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

**TOWER'S CELEBRATED
OIL CLOTHING.**
Water-Proof and Non-Combustible.
Mount Vernon Co.'s Duck.
All Widths and Weights.
Russell Manufacturing Co.'s Solid Cotton Belting. Black and White.
E. DETRICK & CO., Sole Agents,
5 to 9 California, and 108 to 112 Market Streets, San Francisco
BAGS. TENTS. HOSE. TWINES.



H. ROYER,
SAN FRANCISCO.
**BELTING and LACING
FULLED RAWHIDE ROPE.**
Manufactured by
HERMAN ROYER, 855, 857, 859 and 861 Bryant St., San Francisco.
(ESTABLISHED 1868.)

CHEAPEST. BEST.
BOOTH'S SURE DEATH
To Squirrels, Gophers, Birds, Mice, Etc.
Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.
STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by
A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.
FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

J. F. FARNSWORTH. M. T. BREWER
M. T. BREWER & CO.,
Fruit and Produce Merchants.
WHOLESALE DEALERS IN
Green and Dried Fruits, Produce, Seeds, Nuts and Honey.
1008, 1008 and 1010 Second Street (bet. J and K) SACRAMENTO, CAL.

**THE DINGEE & CONARD CO'S
BEAUTIFUL EVER-BLOOMING
ROSES**
SPLENDID POT PLANTS, specially prepared for immediate bloom. Delivered safely by mail postpaid, at all post offices. Splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for \$10; 100 for \$13. WE GIVE a Handsome Present of choice and valuable ROSES free with every order. Our NEW GUIDE, a complete Treatise on the Rose, 76 pp., elegantly illustrated—free to all.
THE DINGEE & CONARD CO.,
Rose Growers, West Grove, Chester Co., Pa.

HANSELL RASPBERRY
A record of earliness, and unsurpassed in other respects. Manchester, the greatest of all strawberries. GRAPE, BLACK, CURRANTS
A superior stock of Plants of all the leading varieties, both new and old. Lovett's Small Fruits are the best. An illustrated price catalogue telling how to get and grow them, free. J. T. LOVETT, Little Silver, N.J., introducer of Cuthbert Raspberry and Manchester Strawberries.

**JOHN BERGSTROM,
ORGAN BUILDER,**
29th. and Mission Sts.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

Commission Merchants.
Grangers Business Association,
SHIPPING and COMMISSION HOUSE.
No. 38 California St. SAN FRANCISCO.
Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.
Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.
Warehouses and Wharf,
At "THE GRANGERS," Contra Costa Co.
GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

SEND YOUR CONSIGNMENTS TO
COMMISSION MERCHANTS
AND WHOLESALE DEALERS IN
CALIFORNIA & OREGON PRODUCE
109 & 410 DAVIS ST.
SAN FRANCISCO
"THE OLDEST HOUSE"

DAVIS & SUTTON,
No. 75 Warren Street, New York.
Commission Merchants in Cal. Produce
REFERENCES.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

ESTABLISHED 1860.
P. STEINHAGEN & CO.,
(Successors to J. W. GALE & CO.)
Fruit and General Commission Merchants,
And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.
Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

PETER MEYER. LOUIS MEYER.
MEYER BROS. & CO.,
—IMPORTERS AND—
Wholesale Grocers,
—AND DEALERS IN—
TOBACCO AND CIGARS.
412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco.
Special attention given to country traders.
P. O. Box 1940.

DALTON & GRAY,
Commission Merchants
And Dealers in
CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.
404 & 406 DAVIS STREET,
P. O. Box 1936 SAN FRANCISCO.
CONSIGNMENTS SOLICITED.

JAS. P. HULME, Late Miller & Co. JACKSON HART.
HULME & HART,
(Successors to MILLER & CO.)
Wool, Grain,
AND GENERAL

Commission Merchants.
10 Davis Street, near Market,
SAN FRANCISCO.

MOORE, FERGUSON & CO.,
COMMISSION MERCHANTS
Grain, Flour, Wool, Etc.
(Members of the San Francisco Produce Exchange)
211 and 213 Clay St., S. F.
Liberal advances made on Consignments.

ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hays' Asthma Cure, prove most conclusively that it is all that it is represented to be. Dr. Hays' Treatise on Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, and from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. B. W. HAYS & SON, Cincinnati, Ohio.

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, **DR. J. McLEISH,** No. 215 West Fourth Street, Cincinnati, O.

**REISTER'S
PATENT SIDE SADDLE.**
This is the finest and best saddle yet invented for ladies' equestrian exercise. Send for circular and price list to
L. A. REISTER,
Patentee and Manufacturer,
Chico, Butte County, CALIFORNIA.

FRUIT DRYING!
THE ZIMMERMAN
Portable Galvanized Iron
FIRE-PROOF DRIER!
Is the best thing yet introduced for the purpose.
Fruit evaporated by the Zimmerman Process commands the highest price of any. Fruit growers should send for descriptive catalogue, with testimonials, to
LINFORTH, RICE & CO.,
325 Market Street, S. F.
Or on the following agents: Jno. B. Niles, Los Angeles; L. S. Leeb, Marysville; T. B. Watt, Salem, Or. T. W. Miller, The Dalles, Or.; H. M. Porter & Co., Walla Walla, W. T.

Lands for Sale and to Let.

Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano, Co., Cal.

CREDIT SALE

Of 3,000 Acres

-OF THE-

BEST FRUIT LAND IN THE STATE,

To be Sub-divided in Lots to Suit Purchasers.

In part—well improved grain land; some rich bottom land, and a large tract of timber and pasture land, from \$5 per acre upwards.

These lands are situated from 5 to 10 miles from the town of WATSONVILLE, in the celebrated Pajaro valley, Santa Cruz county, Cal.

TERMS—One-fourth cash; one-fourth in one, two and three years.

PRODUCE AND WOOD

Taken at Market Rates in Payment for this Land. Apply to

"Pacific Coast Land Bureau,"
22 Montgomery St., San Francisco.
Or to W. E. KING,
Hazel Dell, Watsonville, Cal.

Good Crops Every Season
Without Irrigation.

Free by mail specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

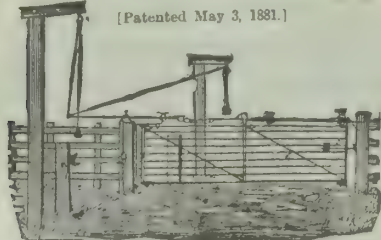
Address "Exchange & Mart," Santa Cruz, Cal.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.CAMPTON'S
Self-Opening Automatic Gate,

[Patented May 3, 1881.]



For Farm Use and Fancy Residences.

It is the Best Gate where ladies have to do their own driving. For simplicity and durability, the only reliable automatic gate in use. No complex machinery. By a single lever it is thrown out of the center of gravity and opens and closes itself by its own weight. A child six years old can open it. We manufacture different styles gates from \$25 to \$100, for a cheap farm gate made of wood and iron, \$20 for iron. Tubular and Wire we charge from \$75 to \$100, according to the style wanted. For reference as to the merit of this gate we refer you to a few of the following gentlemen who have used the gate.

H. M. Loring, President of the State Agricultural Society, Davisville, Yolo Co., Cal.; J. D. Carr, Salinas, Monterey Co., Cal.; Judge Weller, Milpitas, Santa Clara Co., Cal.; Juan Gallegos, Mission San Jose, Alameda Co., Cal. For further particulars and Illustrated Price List, address JOHN AYLWARD, P. O. Box 88, Livermore, Alameda Co., Cal., or JAMES STANLEY, Mission San Jose, Alameda Co., Cal.



On 50 large size CARDS. Remembrance, Souvenir, Handkerchief, etc. No. 2, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100. Each card has a different design. 20 fine Gold Leaf Edge Cards, turned corners, 10c. Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Prints supplied with black and white photographs. Established 1870. NORTON CARD WORKS, Northford, Conn.

Agricultural Books.

Orders for Agricultural and Scientific Books in general will be supplied through Dewey & Co., at published rates.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,500 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The walls are constructed with the works by rail, are over 40 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel, also the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sully Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

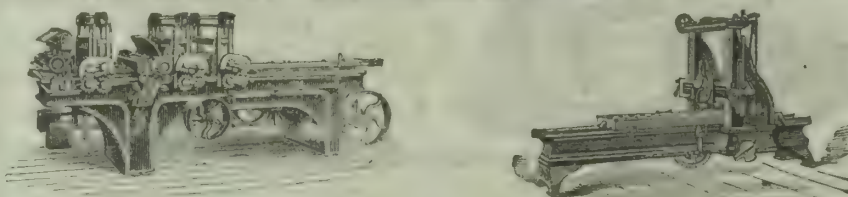
WE ALSO MANUFACTURE

Hill's Eureka Single Sully Deep Tiller. Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers. Cultivators. Improved Granger Gang. Sully Hill Gang. Gen. Seed Sowers. Improved Single and Double Plow. Double Deep Tiller. Hill's Improved Headers. Single Plows. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin Rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard Line of Agricultural Implements. We desire to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are necessarily adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,

STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

W. R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

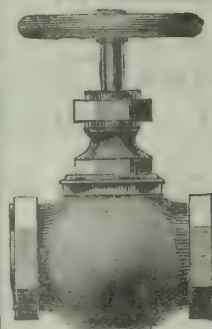
Lift and Force Pumps,

Brass Cocks and Valves,

For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

WANTED.

A responsible firm to manufacture Patent Wood and Brass Butter Molds. The work can be seen at 425 Front Street, San Francisco, Cal.

MERRILL'S PATENT REIN HOLDER.

This is a sure and certain preventative to keep horses from running away. Price \$2.50. Address W. P. MERRILL, Florin, Sacramento Co., Cal.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$5; Alexis from \$3.50 to \$5; Mens Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Mens Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorsey, 527 Commercial St., S. F.

Educational.

The Harmon Seminary.

BERKELEY, CAL.

A NEW BOARDING AND DAY SCHOOL, FOR YOUNG LADIES.

Will be Conducted by REV. S. S. HARMON and MRS. F. W. HARMON, for the last 10 years principals of Washington College.

The HARMON SEMINARY will receive girls of all ages; the instruction comprising Primary, Preparatory and Academic. Thorough course in the English branches. The Arts, Music and Modern Languages in charge of well-known masters. Special course preparatory to the State University.

The HARMON SEMINARY will be first-class in all respects, and will combine the best educational advantages with home care, guidance and guardianship.

The first year will open August 3, 1882.

For Prospectus and other information, address

S. S. HARMON, Berkeley, Cal.,

Or E. J. WICKSON, 414 Clay St., S. F.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

Paid in installments, \$75.

Send for circulars.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, E. C. Atkinson, Sacramento, Cal.



417 Kearny Street, San Francisco.

C. N. ANDREWS, President.

G. B. BARNARD, Business Manager.

Send for Circulars.

THE DAVIS GUN.



The best Shooting Guns for the price. Nine Stub Twist Barrels. Pistol Grip. Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting 12-gauge, \$32; 10-gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire-arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

Not Fail to send for our FALL Price-List for 1882. Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address

MONTGOMERY WARD & CO.,
227 and 229 Wabash Avenue, Chicago, Ill.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAGE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

H. PIERCE, San Francisco. Yerba Buena Herd Guernseys and Jerseys now have "Coomassie," "Victor" and "Scituate" strains.

B. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

TOULOUSE GEESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks' Eggs \$3 per dozen.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. O. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

BEEES.

J. D. ENAS, Sunnyside, Napa, Cal., Breeds Pure Italian Queen Bees. Comb Foundation.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **L. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

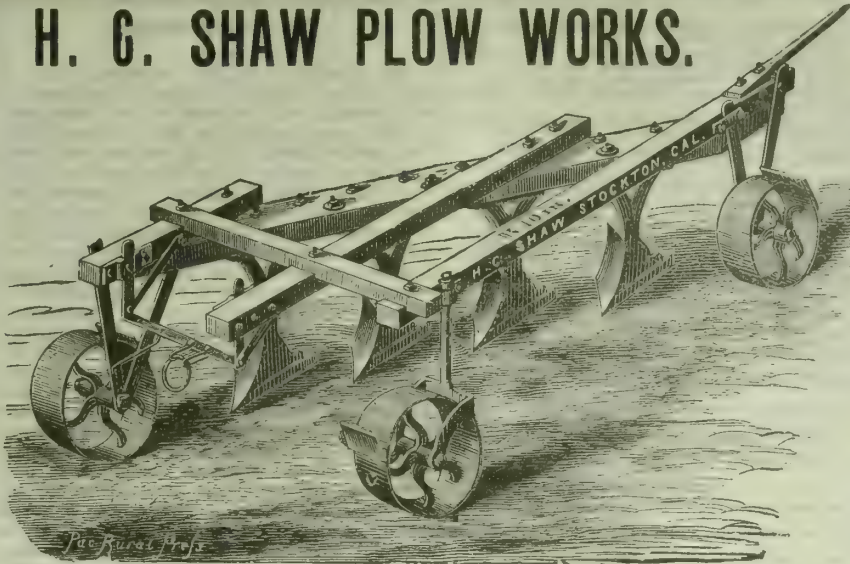
Office—318 California Street, Room 2.

Silos, Reservoirs, Head Gates,

ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

Oakland Poultry Yards.

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

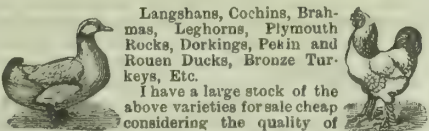
And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR, WHICH IS MADE IN THREE SIZES.

No. 1. Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.

PURE BRED POULTRY.



Langshans, Cochins, Brahmas, Leghorns, Plymouth Rocks, Dorkings, Pekin and Rouen Ducks, Bronze Turkeys, Etc.

I have a large stock of the above varieties for sale cheap considering the quality of the stock. My Birds are raised on large farms, where they have unlimited range, giving them a

VIGOROUS CONSTITUTION,

Which is very desirable in any Breeding Stock.

For further information send 3-cent stamp for new circular and price list, to

R. G. HEAD, Napa, Cal.

POULTRY.

Hogs & Cattle.

Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES, Los Angeles, Cal.

LANGSHANS.



My Langshans are genuine Major A. C. Croas's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported Eggs for hatching.

MRS. J. RAYNOR, 1416 Folsom St., S. F.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast

Dewey & Co. { 252 Market St. } Patent Agt's

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to **CHAS. DUSENBERG & CO.**, Sole Agents, 314 Sacramento Street, San Francisco.

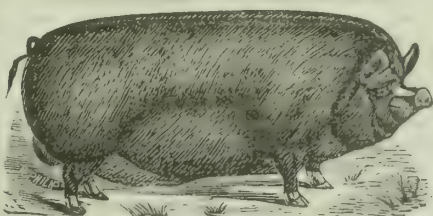
LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FALKNER, BELL & CO.**, San Francisco

BERKSHIRES A SPECIALTY.



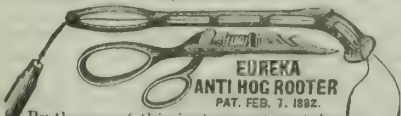
My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

HOG RINGING A FAILURE! OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.

"Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address

G. G. WICKSON,

General Pacific Coast Agent,

No. 319 Market Street, San Francisco, Cal.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

CRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTPELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President..... Napa Co
J. H. GARDNER,..... Rio Vista
T. E. TYNN,..... Stanislaus Co
URIAH WOOD,..... Santa Clara Co
J. C. MERYFIELD,..... Solano Co
H. M. LARUE,..... San Mateo Co
I. C. STEELE,..... Yolo Co
THOS. MCCONNELL,..... Sacramento Co
O. J. CRESSEY,..... Merced Co
SENECA EWER,..... Napa Co
A. D. LOGAN,..... Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

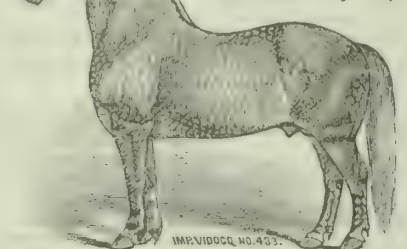
OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. Ry.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world.

Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogues.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,

STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address **PACIFIC RURAL PRESS** Office, San Francisco. January, 1882.

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL

DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.

40 Merchants' Exchange San Francisco, Cal.

ALL KINDS OF CASKS, TANKS, ETC.
Ship, Mining and Water Tanks a Specialty

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Sept. 27, 1882.

Trade is still slow, and grain prices rather weak. Dairy and poultry yard produce has improved. Fruit and Vegetables are about the same as last week.

The latest from abroad is the following:

LIVERPOOL, Sept. 27.—Wheat—California spot lots are dull at 9s 2d to 9s 5d. Cargo lots, 4s for just shipped, 4s 6d for nearly due and 4s 8d for off coast.

Eastern Wool Markets.

Boston, Sept. 26.—Wool is steady and firm, with prices well sustained and a good demand from manufacturers. Ohio and Pennsylvania fleeces have sold at 40¢ for X, 42¢ for XX, and 44¢ for choice XX and XXX. Michigan fleeces are firm and in demand at 40¢ for No. 1 fleeces, 44¢ for No. 2, and 46¢ for No. 3. Unwashed fleeces are in demand at 17¢ for low and coarse; 25¢ for fine and medium, and 34¢ for medium selections. Combining and delaine fleeces continue firm in demand at 42¢ for delaine and 46¢ for fine No. 1 combing. Pulled Wool is reported in fair demand at 42¢ for choice superior, which are scarce, and 26¢ for common and good superiors. Foreign Wools are quiet, but the stocks are light and very little desirable is to be found on the market.

The Foreign Review.

LONDON, Sept. 25.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Only the tail of the harvest remains to be secured, and the condition of samples does not improve. Values continue to drop, having fallen to the extent of 1s in the provinces and 2s in London. Foreign Wheat is in very small demand, and prices continue to decline. The off-coast trade shows little more life and prices decline. There have been 17 arrivals and 14 sales. Wheat on passage and for shipment is flat, closing at a decline. The floating bulk has decreased. Flour declined 2s. Foreign is in small supply at prices lower. Barley and Oats are the only descriptions of native produce in favor with sellers. Maize, foreign Barley and Oats, cheaper. Sales of English Wheat during the past week, 51,553 quarters, at 25s 1d per quarter, against 46,616 quarters, at 48s 5d for the corresponding period last year.

London Wool Market.

LONDON, Sept. 25.—At the Wool sales to-day 8,200 bales were disposed of, comprising Port Phillip and Sydney. Good spirit was manifested; prices firm.

LONDON, Sept. 26.—At the Wool sales to-day 8,700 bales were sold, chiefly New Zealand and Cape. Good demand and prices firm.

Freights and Charters.

Freights have tumbled during the past week, and at the close the market is nominal at from £1 17s 6d to £2 for Liverpool direct for the general run of vessels. Charters reported since the last weekly review number 11 vessels, of a register of 14,577, or a carrying capacity of 21,865 short tons, or 437,300 ctns. The chartered Wheat fleet in port has now a register of 55,807, or an export capacity of 83,710 short tons, or 1,774,200 ctns, against 77,286 tons at the same time last year. There is also an engaged register of 1,663 at San Diego. The disengaged tonnage in port has been materially reduced during the week, and now shows a register of 55,198, or an export capacity of 84,297 short tons, or 1,685,940 ctns, against 3,781 tons at the same time last year. There is also a disengaged register of 7,130 at Wilmington. Tonnage now on the way to this port has a register of 254,708, against 389,784 at the same time in 1881, and 208,913 in 1880.

BAGS.—Bags are still lower. The following are wholesale rates: Calcutta Wheat, 8¢; Oakland, 8¢; Potato Gunies, 15¢; Wool Bags, 42¢.

BARLEY.—Barley is being shipped in rapidly, and the pressure has a tendency to reduce rates. We note sales: 100 tons No. 1 Feed, September, \$1.20; 100, October, \$1.30; 100, November, \$1.31; 200 No. 2 Feed, September, \$1.20; 200, \$1.25; 50, October, \$1.26; 200, December, \$1.28; 200, seller 1882, \$1.25; 100 No. 1 Feed, October, \$1.20; 100, \$1.30; 200, November, \$1.31; 100 No. 2 Feed, November, \$1.27. Sales on the Grain Exchange of 200 No. 1 Feed, September, \$1.20; 100, \$1.20; 300, \$1.29; 300, December, \$1.31.

BEANS.—Beans are very quiet, and rates unchanged.

CORN.—Sales of 100 tons No. 2 yellow, seller 1882, \$1.40, and 100, \$1.39. Spot yellow is quotable at \$1.70 to \$1.75.

DAIRY PRODUCE.—The choicest butter is becoming scarce, and the fancy brands have sold up to 45¢. There has been an advance of about 2¢ per lb on all grades. Cheese is unchanged.

EGGS.—Eggs have also advanced this week, although there are great quantities of railroad Eggs coming in.

FEED.—Grain has dropped about \$2 per ton, and is now weak. Hay and other Feeds are unchanged.

FRESH MEAT.—Hogs arrive freely, but are quickly absorbed, and rates are maintained. Beef is scarce, and other Meats do not change.

FRUIT.—There is little change. Grapes are, perhaps, a shade lower.

HOPS.—The highest rate mentioned by dealers is 57¢ per lb for choice California, but holders do not hesitate to talk 60¢ as their mark.

OATS.—Oats are very plentiful and weak, and about 10¢ lower per ctn.

ONIONS.—There is no change.

POTATOES.—Potatoes are in good supply. Good lots bring \$1 per ctn for nearly all kinds. Sweet Potatoes have advanced to \$1.50 per ctn.

PROVISIONS.—There is no change in rates. There is still fairly active.

POULTRY AND GAME.—There is a sign of fall prices setting in, as all Fowls and Ducks are worth about 50¢ per dozen more than last week.

VEGETABLES.—Garden stuff is getting scarcer, and rates show a little advance on Peas, Beans, etc. Marrow-fat Squash is selling much better this week.

WHEAT.—Wheat is dull and weak, and rates the same as last week at \$1.02 to \$1.04 for Shipping and \$1.07 to \$1.10 for extra choice. Sales on the Grain Exchange of 100 tons No. 2, October, \$1.02; 200, \$1.02; 100, \$1.02; 900, November, \$1.04; 600, \$1.04.

WOOL.—Fall is coming in more freely. Spring shows lower prices. Sales of 18,000 lbs. Fall, free, 17¢; 50,000 do defective do, 9¢; 850,000 do Humboldt Fall, private. Choice Northern Fall is quotable at 15¢; fair do, 13¢; 14¢; Free Mountain, 13¢; 15¢. Defective Fall is quotable at 10¢; 12¢ for Southern Coast and San Joaquin.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Sept. 27, 1882.

BEANS & PEAS.		ONIONS.	
Bayo, ctn.	25 50	Filberts.	14 15
Butter.	3 25	Red.	30 40
Castor.	3 50	Silver.	50 70
Peas.	2 50	POTATOES.	
Red.	2 50	New, ctn.	50 75
Pink.	2 50	Early Rose.	65 85
Large White.	2 50	Petaluma, ctn.	—
Small White.	2 50	Tomatoes.	75 100
Lima.	2 50	Humboldt.	—
Field Peas, 100 lbs.	2 50	Idaho.	—
do, green.	2 50	Peacocks.	—
BROOM CORN.		POULTRY & GAME.	
Southern.	3 31	Jersey Blue.	—
Northern.	4 6	Cuifer Cove.	—
CHICORY.		River, red.	85 100
California.	4 41	Chile.	90 105
German.	6 47	W. Oregon.	—
DAIRY PRODUCE, ETC.		Peorless.	90 100
BUTTER.		Salt Lake.	—
Cal. Fresh Roll, lb.	35 40	Sweet.	—
do, Fancy Brands.	42 45	Hens, doz.	6 50
Pickle Roll.	30 32	Roosters.	6 00
Pickle, new.	29 30	Broilers.	5 50
Firkin, new.	30 32	Ducks.	5 50
Eastern.	18 20	do, Mallard.	4 00
New York.	—	do, Teal.	1 75
CHEESE.		do, Sprig.	—
Cheese, Cal., lb.	12 13	Geese, pair.	1 25
EGGS.		do, young.	1 50
Cal. Fresh, doz.	40 42	White, doz.	50 60
Ducks.	36 37	Turkeys.	16 19
Oregon.	35 36	do, Dressed.	—
Picked here.	—	Turkey Feathers.	—
Utah.	25 35	tail and wing, lb.	10 20
FEED.		Snipe, Eng.	75 100
Bran, ton.	17 25	do, Common.	50 60
Corn Meal.	10 38	Quail, doz.	50 60
Hay.	20 25	Rabbits.	100 125
Middlings.	20 25	Hare.	75 100
Oil Cake Meal.	—	Venison.	9 11
Straw, bale.	55 60	PROVISIONS.	
FLOUR.		Cal. Bacon, extra.	16 17
Extra, City Mills.	5 25	do, clear.	17 18
do, Co. ntry Mills.	4 75	do, Medium.	17 18
do, Oregon.	4 75	Light.	17 18
do, Walla Walla.	5 00	Lard.	15 17
Superfine.	3 50	Cal. Smoked Beef.	14 15
FRESH MEAT.		Shoulders.	94 104
Beef, 1st quality, lb.	7 1/2	Hams, Cal.	16 17
Second.	6 1/2	do, Eastern.	17 18
Third.	5 1/2	SEEDS.	
Mutton.	4 1/2	Alfalfa.	10 12 1/2
Spring Lamb.	6 1/2	do, Chile.	—
Pork, un-dressed.	6 1/2	Canary.	5 1/2
Dressed.	10 1/2	Clover, Red.	14 15
Veal.	8 1/2	do, White.	45 50
Milk Calves.	7 1/2	Cotton.	24 30
do, choice.	—	Hemp.	8 10
GRAIN, ETC.		Italian Rye Grass.	25 30
Barley, feed, ctn.	1 70	Perennial.	25 30
do, New.	1 25	Millet, German.	10 12
do, Brewing.	1 12	do, Common.	7 10
do, New.	1 30	Mustard, White.	—
Chevalier.	1 35	do, Brown.	24 30
Buckwheat.	1 35	Yellow.	24 30
Corn, White.	1 70	Key Blue Grass.	20 25
Small Round.	—	do, 2d quality.	16 18
Oats.	1 50	Sweet V Grass.	—
Milling.	—	Orchard.	20 25
Rye.	2 00	Red Top.	—
Wheat, No. 1.	1 62 1/2	Hungarian.	30 40
do, No. 2.	—	Mesquit.	10 12 1/2
do, No. 3.	1 50	Timothy.	7 11
Choice Milling.	—	TALLOW.	
HIDES.		Crude, lb.	8 12
Hides, dry.	19 1/2	Refined.	11 12 1/2
Wet salted.	9 1/2	WOOL, ETC.	
HONEY, ETC.		San Joaquin, free.	18 20
Beeswax, lb.	23 25	do, fair.	18 19
Honey in comb.	12 15	do, dusty.	15 17
Extracted.	9 10	do, Southern Coast.	14 22
do, dark.	7 8	Modoc & Siskiyou.	24 25
HOPS.		Humboldt.	26 27 1/2
Oregon.	52 55	Calaveras & Foot.	—
California.	55 57	do, hill.	22 24
Wash. Ter.	52 55	Stanislaus & Tuol.	22 24
Old Hops.	—	do, unmo.	22 24
NUTS—Jobbing.		Sonoma & Mendoc.	25 27
Walnuts, Cal.	11 12	do, cino.	25 27
do, Chile.	11 12	Nor Sacramento.	23 25
Almonds, hds. lb.	8 10	Oregon, eastern.	23 25
Soft shell.	15 17	do, Valley.	23 27
Brazil.	10 12	PEANUTS.	
Pecans.	14 15	do.	7 8

Fruits and Vegetables.

WHOLESALE.

WEDNESDAY M., Sept. 27, 1882.

FRUIT MARKET.		VEGETABLES.	
Apples, bx.	35 1 00	Apricots.	13 1/2
do, Basket.	40 60	Blackberries.	14 16
Apricots, bx.	50 75	Citron.	28 30
Bananas, bunch.	2 50	Dates.	9 10
Blackberries.	5 00	Figs, pressed.	3 4
Cantaloupes, ctn.	10 40	Nectarines.	11 12 1/2
Casa, each.	—	Peaches.	5 6
Cherry Plum, bx.	25 75	do, pared.	13 15
Cocoanuts, 100.	6 00	Pears, sliced.	7 8
Crabapples, bsk.	—	do, whole.	8 9
Crabapples, bsk.	12 50	Plums.	10 12
Currants, chst.	4 00	Pitted.	10 12 1/2
Figs, box.	25 50	Prunes.	10 11
Gooseberries.	4 6	Raisins, Cal, bx.	—
Grapes, bx.	40 50	do, Halves.	—
do, Rose Peru.	60 10	do, Quarters.	—
do, Muscat.	50 65	Eighths.	—
do, B. Hamb'g.	50 80	Zante Currants.	8 10
do, Tokay.	60 85	Artichokes, sk.	25 50
do, Isabella.	70 75	Asparagus, box.	—
Limes, Mex.	10 00	Beets, ctn.	—
do, Cal, box.	75 30	Cabbage, 100 lbs.	87 100
Lemons, Cal, bx.	50 1 50	Carrots.	—
Sicily, box.	—	Cauliflower, doz.	1 00
Australian.	—	do, whole.	1 00
Nectarines.	—	Cucumbers, bx.	30 45
Oranges, Cal, bx.	4 50	Eggplant, box.	—
do, Tahiti M.	—	Garlic, lb.	1 1/2
do, Mexican.	15 00	do, poor.	1 1/2
do, Loreto.	—	Lettuce, doz.	10 12
Peaches, box.	50 1 25	Mushrooms, bx.	—
do, Smocks.	50 60	Onions, green, lb.	—
Pears, bsk.	65 80	Peas, green, lb.	2 1/2
do, Bartlett, bx.	1 00	Parsnips, lb.	—
do, do, bsk.	1 00	Peppers, sk.	50 75
Pineapples, doz.	6 00	do, Chile.	—
Plums.	40 60	Rhubarb, bx.	25 75
Quinces, bsk.	—	Squash, Marrow.	—
do, box.	75 1 00	do, lat, ton.	8 00
Prunes.	60 75	String Beans.	2 4 1/2
Raspberries, chst.	—	do, wax.	2 4
Strawb's, chst.	10 00	do, Lima.	2 1/2
Wat'mel's, 100.	7 00	Summer Squash.	—
DRIED FRUIT.		box.	40 50
Apples, sliced, lb.	4 1/2	Tomatoes, box.	10 25
do, evaporated.	9 11	do, Pottsville.	75 1 00
do, quartered.	5 6		

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

OVER 180,000 Howe Scales sold—Hawley Bros., Hardware Co., General Agents, San Francisco.

A GREAT INVENTION.

History and Features of the Spring-Tooth Harrow.

(Written for the RURAL PRESS by J. C. H.)

The triumphs of American genius in inventing and making agricultural implements are in keeping with these progressive times, and assume proportions in quality, design and quantity that challenge successful competition. While we accord to science and art their triumphs, advancement and usefulness in this electric age—the material prosperity and wealth of these United States—have been and will continue to be her marvelous agricultural resources. The Arab, with his crooked stick, or the sturdy Briton, with his cumbersome tools, with cheap labor, may eke out a precarious subsistence; but it has been the destiny of our agriculturists, with American implements and labor-saving machinery, to utilize the wealth of our vast prairies, change them to waving wheat fields, and furnish an abundance of food for the starving millions of the earth. In the grand results that have been wrought out by perfect cultivation, and the hopeful prospects for the future, the

California Spring Tooth Harrow and Cultivator

Will take its place as one of the chief factors and leading agricultural implements. Science and experience have demonstrated that the soil draws its power and productiveness in large proportions from the air and sun. In a like measure it depends upon the condition of the earth as to mellowness and proper condition. To prepare the earth to receive the highest benefit in drawing from the elements sustenance, life and reproductive qualities, in a word, to rehabilitate an exhausted soil and maintain the highest state of cultivation for cereals, vegetables or fruit, the California Spring-Tooth Harrow is the

Acme of Perfection,

And may be properly termed a wonderful invention.

In the use and experiments made with the California Spring-Tooth Harrow, a great number of our most intelligent and largest farmers in this State have given written testimonials that the actual increase in their crops of cereals has been from 25 to 50 per cent. With this experience, several of our largest grain raisers and grape growers use as high as thirty harrows and cultivators in cultivating, seeding and volunteering.

Having attained such favorable results, it may be well to ask

How and Why?

1. Each tooth acts separately and independent of the others, and while one tooth is raised and is passing over obstacles, the next one is sunk in the ground, cultivating the shallow places.

2. The tooth presents a cutting surface hav-

ing a lifting, mellowing and tremulous action that approaches almost to an act of titillation to the soil.

3. Its peculiar shape gives it the power to mellow up the hardest surface, and it is frequently used to soften race tracks where the old-fashioned harrow would have no effect.

4. This spring motion lightens the draft, and gives it the power of being a self-cleaning harrow.

5. It has been improved by Messrs. Batchelor & Wylie, manufacturers, to work the adobe lands or the sand plains of California.

6. For surface cultivation or volunteering, it will perform the necessary work with one-third less team power.

7. This tossing motion and lifting action of the tooth pulverizes and loosens the earth in such a perfect manner that it seems to give it a magic power to grow cereals or vegetables.

This great invention has had a History of Trials, Experiments and Triumphs

That are parallel with the reaper and thrashing machine. In 1869, Mr. David L. Garver received letters patent, with but indifferent and discouraging results, until he transferred his right to D. C. & H. C. Reed & Co., of Kalamazoo, Michigan, when, under their push, enterprise and skill, with a whole year of experiments, a tooth was made, having the right temper to withstand the ordeal and work. There are many instances of rebuffs and ridicule from farmers who were solicited to even try it, that would have discouraged almost anyone to manufacture this implement. In a short time its power was demonstrated, and results following its use were such, that the demand for it was unprecedented. Orders came from all parts of the country, and agencies were established in all the principal cities.

Messrs. Batchelor, Van Gelder & Co.,

Purchased the territory west of the Sierra Nevada, and established their manufactory at Sacramento, Cal., in the year 1880, and continued to manufacture the Improved California Spring-Tooth Harrow until February, 1882. At this time

Messrs. Batchelor & Wylie

Succeeded to the old firm, and removed their manufactory to Spear street, and their warehouses to 31 Market street, San Francisco.

The demand for the Spring-Tooth Harrow has been more than doubled each year in California, and a number of our shrewdest and most skillful farmers regard it as the only implement that can successfully cultivate summer fallow through our long and dry seasons. Anticipating an increased demand, the enterprising manufacturers, Messrs. Batchelor & Wylie, are prepared to meet it, and in introducing and supplying this new and approved implement of husbandry to this and adjoining States, will add largely to the wealth, prosperity and resources of the Pacific coast.

FOR MUSICAL SOCIETIES.

Glee and Choruses, easy and difficult, are found in Emerson's CHORUS BOOK (\$1.00), Perkins' AMERICAN GLEE BOOK (\$1.50), Gebbie's FESTIVAL CHORUS BOOK (\$1.25), Perkins' GLEE AND CHORUS BOOK (\$1.), GERMAN FOUR-PART SONGS (\$1.50), and Zerrahn's INDEX (\$1.)

Easy Glee and Part Songs are found in abundance in Perkins' new CHORAL CHOIR (\$1.) and his new PEERLESS (75 cts.), also in Emerson's HERALD OF PRAISE (\$1.) and IDEAL (75 cts.)

1,000 or more separate Octavo Choruses, Glee and Anthems, each 6 to 10 cents.

BEAUREGARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to
Break off,
or Nuts to get Loose.



Is the Boss of the Field.
It combines Strength,
Lightness of Draft and
Durability.

Light, Strong, Durable, Cheap, and Indestructible, Best Iron Harrow Made.

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and, like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW is the Best, Cheapest and Lightest Draft.**

PRICES:

1 Section, with 24 Teeth.....	\$14 00	3 Sections, with 72 Teeth and Draft Bar.....	\$42 00
2 Sections, with 48 Teeth and Draft Bar.....	28 00	4 Sections, with 96 Teeth and Draft Bar.....	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide.
For further particulars, Address:

BENICIA AGRICULTURAL WORKS, Benicia Cal.,

Or BAKER & HAMILTON, Agents, S. F. and Sacramento.



A Rapid and Permanent cure for
DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

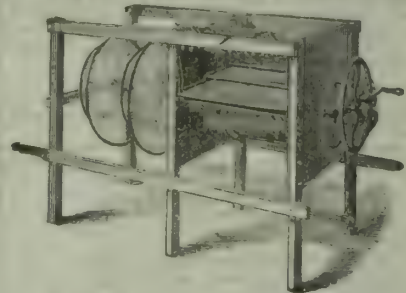
And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CHOLIC, COLIC, CHOLERA MORBI, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.
N. B.—Correspondence solicited from Wholesale Drug-gists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,
Sole Proprietors and Manufacturers,
293 Cutter Street, CINCINNATI, OHIO.

NEW INVENTION!

Patented July 25, 1882

Awarded Bronze Medal, Mechanics' Fair, 1881.



"California Chief"

GRAIN CLEANER.

Office, 409 California St., San Francisco

"Abel Stearns

RANCHOS."

The Center of Los Angeles Valley.

Embracing Anaheim, Westminster, Artesia, Garden City, etc. Thirteen miles southeast of Los Angeles City, within the Artesian Well Belt. Hundreds of flowing pipe wells. Water near the surface. Rivers on two sides; ever-flowing creek runs through the tract. Front on the Ocean. Transportation and passage by Steamships or Railroad. Southern Pacific Railroad through the tract. Twenty-one hours from San Francisco. The unsold land for sale or lease in sections or fractions. Apply to Trustee A. ROBINSON, 318 California St., San Francisco.

Or to ROBERT J. NORTHAM, Anaheim, Cal., or concerning Westminster Colony, to REV. ROBERT STRONG, Westminster, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent, per annum. Send for Circulars and Maps.



M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento
ALL KINDS OF

**Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.**

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREENE

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

BOONE & MILLER,

Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Antenwirth's Club-Foot Shoe. Send for circulars, WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

PACIFIC RURAL PRESS

Volume XXIV.]

SAN FRANCISCO, SATURDAY, OCTOBER 7, 1882.

Number 15

A Curious Marine Animal.

We give our readers on this page a glimpse at a peculiar denizen of the deep known as the argonaut. The argonaut is a mollusk of the class known as cephalopods. The cephalopods, or cephalopods, (from two Greek words meaning "head" and the "foot," because the "arms" or "feet" surround the mouth,) are the highest class of the mollusca, and include the cuttle-fishes, nautili, argonauts, ammonites etc., all marine and carnivorous, and all laterally symmetrical, having a shell usually straight, but sometimes coiled in a vertical plane. The nautili and argonauts alone have external shells, though many extinct species had them; but the other living species have generally an internal shell, of which "cuttle-fish bone" affords an example. The cephalopods have muscular arms or tentacles, used in prehension and locomotion; many have fins, and all have the power of locomotion by forcibly expelling water from the gill-chamber. They generally have two large eyes, ear cavities, each containing an otolite, two jaws, and a fleshy, spinous tongue. The nervous system is well developed. The brain forms a ring encircling the oesophagus. The gills are either two or four in number, placed in a chamber into which water is admitted by a slit, and from which it is expelled through a "siphon" or "funnel."

The argonauts (*Argonauta*) are a genus of mollusks of the class cephalopoda; is commonly called "paper nautilus." The latter name is derived from the fragile nature of the boat-like shell in which the argonaut floats on the surface of tranquil seas. The shell is not chambered like that of the true nautilus, but has one spiral cavity, into which the animal can retire and be completely hidden. There is no muscular attachment of this animal to the shell, which is said to be peculiar to the female, who uses it for incubation, as a nest. Several species are known. They have eight arms, two of which are expanded into broad membranous discs, which were formerly believed to be sails, and the other arms were regarded as oars; but, though the fable is perpetuated by the poets, it has long been known that the animal really propels itself by ejecting water from its funnel. When it desires it folds its arms, retires within its shell, and sinks to the bottom.

The argonaut shown in the engraving is the female, and is quite a gorgeous animal. The male is an insignificant little chap. It is said by the naturalist that the female when she becomes lonely takes up the little male for a ride in her ship, and when she tires of his society she pitches him overboard again to shift for himself in the mighty deep.

HOSTS OF NEW FRIENDS.—We welcome with pleasure the hosts of accessions to the ranks of RURAL readers which are now being made. Our already liberal list in Santa Barbara county has been more than doubled, and San Luis Obispo county has done nearly as well. We trust all new readers will speedily perceive that the RURAL is a constant searcher after agricultural truth, and that every reader is invited to be a special contributor. It matters not how small may be the contribution of experience. Any simple point on which one reader knows more than we do, let him send forward the information at once. We cannot afford to linger in ignorance. Let every spark of experimental truth gleam forth. The RURAL is a chat club in which all have the floor at once. Let the facts and observations fly!

SANTA BARBARA FAIR.—We have received from our regular contributor, B. W. Crowell, a very interesting account of the Santa Barbara fair, which we are forced to lay aside for next week's RURAL.

The gross receipts of the Postoffice Department for the fiscal year ending June 30, 1882, amounted to \$41,265,317, against \$36,217,511 the previous year.

Nostrums Exposed.

The Sophomore class of Michigan State Agricultural College have been making good use of their leisure time in the laboratory by analyzing the various nostrums which have flooded the markets of that state, and of which other states have had their full share. Judging from the enormous sums which must be paid for advertising them, the sale of these worthless substances constitutes one of the greatest systems of swindling in the whole country, and one of the best things chemists can do is to expose them, as the students of the Michigan Agricultural College have done—the results of whose useful work we copy from the *College Speculum*, the real cost of the article and how it is made being given, and its market price.

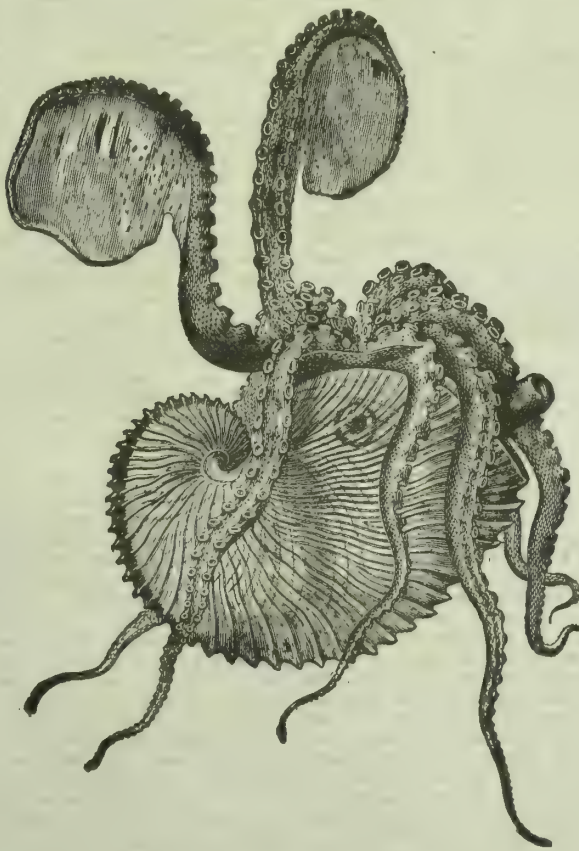
1. Coaline.—Eight ounces of sal soda (carbonate of soda) in a gallon of water, with a few

of water. Cost 5 cents; retail price \$1.50.

9. Marie Fontaine's moth and freckle cure.—"For external use only. Put the contents of this package into an eight ounce bottle, and then filled with rain water." The package contains 32 grains of corrosive sublimate, or mercuric chloride. Cost 1/2 cents; retail price 50 cents.

This is only a part of the nostrums examined by the class in chemical analysis, and other substances, await their turn.

A NEW PEACH.—We have been shown a painting by Leussier of a new peach which originated on the place of the late Mr. Edwards in Sacramento county. The painting shows a very large and beautiful fruit, and those who saw the painting and the fruit side by side at the State fair assure us that the artist did not overdo the fruit. The new peach is called the Cali-



THE ARGONAUTA ARGO.

drops of nitro-benzol to give it an agreeable odor. Costs 3 cents a gallon; retail price 40 cents.

2. Silver Plating Fluid.—An ounce vial of solution of nitrate of mercury, which will form a temporary silver coating when rubbed on brass, copper or silver, which speedily tarnishes when exposed to the air. Cost 3 cts.; retail price 50 cents.

3. Nickel plating fluid is the same as 2, except that a little nitrate of copper and nitrate of nickel are added to the solution of nitrate of mercury. Cost 3 cents; retail price 50 to 75 cents.

4. Fire test powders, to prevent explosions in kerosene lamps, the breaking of lamps and chimneys, and the danger of burning from the use of low-grade oil. These are pill-boxes containing one or two ounces of common salt, colored with aniline red. Cost 1 cent a box; retail price 60 cents, or two for a dollar.

5. Fire proof powder from Wisconsin is waterlime. Cost 1/2 cent; retail price not known.

6. Silver polish. Pill-box filled with waterlime. Cost 1/2 cent; retail price 25 cents.

7. Ozone. A package of about one-half pound weight, consisting of pulverized sulphur, colored with lamp-black and scented with oil of cinnamon. Cost 4 cents; retail price \$2.

8. Spear's preservative fluid consists of one ounce of bisulphite of soda dissolved in a pint

fornia. It is quite round in form with a shallow suture; color ranging from a rich yellow in the shade to bright red and almost a purple in the full sun. It is a clingstone and has a rich yellow flesh, highly flavored. The California ripens in August and September. It has been propagated by C. W. Reed & Co., of Sacramento, and a limited number of trees will be sold in dormant bud. The size of the fruit is quite remarkable. Fifty peaches we are assured weighed 30 lbs.

SEEDLING FRUITS.—The numerous samples of new fruit shown at the last meeting of the State Horticultural Society were referred to a committee (W. W. Smith, of Vacaville, and A. T. Hatch, of Cordelia,) who will report upon the new fruit at the next meeting. It is the desire of the society to examine and report upon all new fruits, and it is to the interest of the originators to send forward samples, for the reports of the society's committees will bring the fruits before the public with the verdict of disinterested experts. The meeting of the society is always on the last Friday of each month, and samples sent a few days beforehand, to E. J. Wickson, Secretary, at 414 Clay St., S. F., will be duly laid before the society.

Failure of the Eastern Apple Crop.

It is probable that anything we have to spare this year in the way of dried apples will command a good price, and no one should let his apples go to waste. An intimation that the Eastern trade is looking this way for dried apples, is seen in a demand which has sprung up for dried apples to ship to New Orleans. The fact is, that the apple crop in the Eastern States is well nigh a failure this year, and the fruit instead of being a staple will be a luxury. This is true of Michigan and other apple States of the West to a greater or less extent, and in New York, the head center of apple production, there is almost a complete failure. We read that Benjamin Baker, proprietor of the East Hamburg orchard, which has become famous as being the largest in western New York, returned from a tour of observations through all the principal apple-growing counties of the State. He reports the crop a total failure. The counties of Niagara, Genesee, Orleans, Cattaraugus, Chautauqua, Erie, Monroe, Livingston and Oneida will barely produce enough of the fruit for the village markets. At this time of the year the ruling price for early apples should be \$1 to \$2 per barrel, and local dealers have generally been able to contract for fall and winter varieties at \$1.50 to \$3 per barrel. Prime stock is at this time readily taken at \$4 to \$5 per barrel, and the coming winter will see ordinary apples selling at \$10 per barrel. This is the conclusion of the most capable judges in the community. So light a yield the State over has never been known before. This should lead California growers to dry every spare apple, and dry it as well as possible.

AGED ALFALFA.—How long will an alfalfa field last is a question of no little importance to growers. The question may perhaps demand different answers, according to different locations and conditions; but all records throwing light upon the subject are of interest. A writer for the *Country Gentleman* tells of being in England last May, after a long absence. He says he remembered a fine piece of lucern (alfalfa) growing on Eldersfield Court farm, belonging to Mr. Wm. Hall, over forty years ago, about five miles west of the old battle town of Tewkesbury, and now being farmed to the extent of 500 or 600 acres by his old friend Thomas Pensam, who is a very successful farmer. Hearing at Gloucester that his old friend and youthful companion was yet living, he at once repaired to the Court close by the old church, and after an hour or so he went to the place where the lucern formerly grew on the dry marly hill near by. But the old piece of lucern, after being mowed four times a year for twenty years, more or less, had been ploughed up, and the ground seeded to mixed grasses. Mr. Pensam at once took the writer across the road to another piece of lucern, now growing on a continuation of the same hill, which he planted 12 years ago, and which has been cut and carted to the stable loft four times a year during over a decade. These records show a long period of satisfactory growth. What is the history of California alfalfa fields? Many of our readers, no doubt, have interesting observations and experiences to report.

SANTA CRUZ FAIR.—The Santa Cruz County Agricultural, Mechanical and Manufacturers' fair will be held at Olympic hall and adjoining buildings, in the city of Santa Cruz, on the 19th, 20th and 21st of October, 1882. There will be a full display of the products pertaining to livestock, field, orchard, garden, forest, shop, manufactures, fine arts and natural history. The Executive Committee are: F. A. Hihn, Martha Wilson, Jos. Francis, E. B. Cahoon, Martin Kinsley, Mrs. B. Kooser, W. W. Waterman. It is expected that the fair will be a notable success, and all should contribute to it.

For coaching horses in England hunters are now used, and the price varies from \$500 to \$700.

HORTICULTURE.

State Horticultural Society Meeting.

The regular meeting of the State Horticultural Society was held at the Academy of Sciences, on Friday, September 29th, President Hilgard in the chair. The meeting was well attended, and much interest manifested. Milton Thomas, of Los Angeles, was elected, and the following gentlemen were proposed for membership: W. M. York, of Berkeley; Richard Wheeler, of Alameda; John Ellis, of San Francisco, and W. P. Hammond, of Oakland. It having been decided to nominate the officers for the ensuing year, E. W. Hilgard, for President; J. V. Webster, for Vice President; E. J. Wickson, for Secretary, and R. J. Trumbull, for Treasurer, were renominated. A. I. Hatch was named for Second Vice-President, and for the Board of Directors there were proposed W. H. Jessup, of Oakland; W. B. West, of Stockton; James Shinn, of Niles; Dr. J. Strentzel, of Martinez; Matthew Cooke, of Sacramento; J. Lewelling, of Napa; N. Carr, of Sonoma, and A. P. Hatch, of Solano. The election will take place at the annual meeting, October 27th. There was some discussion concerning the building up of the library and cabinet of the society, and the matter was postponed for further consideration at the next meeting.

Mr. Jessup: I think nothing would be better than to have models made of all seedling fruits for preservation in the cabinet of the society. There are some seedlings here to-day that are unsurpassed in appearance and in flavor; models of these should be preserved.

Prof. Hilgard: The agricultural department of the University would cheerfully undertake to do that. Mr. Klee is now doing that with the fruits that grow in the experimental orchard of the University. If it should please the coming Legislature to make an appropriation for the University, we could undertake to take casts of the fruit to supply both the University and this society with copies.

Dr. Gibbons: I wish to bring to the attention of this society a seedling apple from my garden. It is a medium-sized, light-colored apple, with crisp flesh and agreeable flavor. There don't appear to be any fixed character in regard to its shape. The calyx-cup, in some cases, is deep; sometimes almost obliterated. The stem is sometimes large. The peculiarity of the tree consists, first, in its immense prolificness. There were seven apples grown on this little stem. This is not an exception. Where there is one there are five, sometimes seven, and sometimes 10. There are several clumps growing together on each peduncle. On three fruit spurs there are nine apples, all averaging the size of these which you now see. It appears to me, as far as I have seen, that it is going to be a valuable accession. The tree is not over five years old.

Mr. Blowers showed some dried peaches from Mr. Thissel's place, near Winters. They were the Muir, a freestone. They made five pounds two and one-half ounces of dried fruit from 25 lbs. of peaches.

Mr. Shinn: The results of some careful experiments, in yield of dried fruit, were shown at the State fair. Of peeled peaches, the best that I noticed was 15 lbs. to the hundred. If this sample is 5 to 25, it equals 20 lbs. to the hundred.

The Insect War.

Mr. Cooke: I have just returned from Southern California, San Diego, San Bernardino, Los Angeles and Fresno, and I must report to the society that the work is going on beyond expectations. At Orange about 150,000 lbs. of whale-oil soap have been used this year. The determination of the people is to get rid of the red scale insect, and Mr. A. Clark has shown that it can be done. Nearly a year ago he discovered a tree in his orchard that was badly affected with the insect, and he at once built a fire under it and totally destroyed it—tree, insects and all. He then discovered that the adjoining trees were also somewhat affected, and not feeling like burning them all up if a milder remedy could be discovered, he set about the task of killing the insects, and at the same time saving the trees. He gave them a thorough spraying with whale-oil soap and water, mixed in the proportion of one pound of soap to one gallon of water. He did the work most thoroughly, and a careful examination afterwards failed to find a single live scale on the trees treated. He has a furnace in which the compound is heated. He has a force pump, throwing two streams of liquid, and three men can thoroughly drench 40 trees per day, and do it in a manner to reach every insect on the trees.

I went down to San Diego and found one of the largest orchards infested with the codlin moth. It was confined to one orchard, but it can compete with any orchard in the Sacramento valley for the codlin moth. Down around the roots you can get from 10 to 12 worms around each tree. They are going to work to annihilate them.

In the box-case we haven't made much progress. Our case is still in court. We have money enough to go on and see what there is in the law. In our appeal to the fruit growers for funds we have received generous responses.

The Black Knot of Plum and Cherry.

Dr. H. W. Harkness: A few weeks ago I spoke of finding the "black knot" in the Yosemite

valley. It is the pest which is the worst we have to contend with so far as the plum and cherry are concerned. Yesterday I was shown a specimen from the hills west of Menlo Park, by J. P. Moore. I greatly fear it will become the pest in the valleys. It will be a terrible foe of the plum and cherry growers.

What Fruits to Plant for Profit.

Mr. Hatch: Our object in to-day's discussion is to find which fruits there is the most demand for, and then we can raise those varieties.

Dr. Chapin: I would say that in our region at San Jose we have come to the conclusion that it depends upon the locality. At one place the Moorpark apricot bears perfectly. In other places they haven't had a crop of Moorpark for 14 years. On my land the apricot is very profitable, whereas the peach is worthless, but does finely a few miles from me on the hills. I should hesitate about stating what kinds of trees to plant; I cannot tell. The only way by which to determine the question is to plant an experimental or family orchard containing all the good varieties, and then see which fruit does best.

In planting a large orchard one should select the fruit which matures the best and which is the most productive, and which would fill the demand most perfectly.

Mr. Hatch: What is the chief cause of the failure of the apricot in some places?

Dr. Chapin: It is a difficult matter to determine. The climate is apparently almost the same, and the soil is almost identical; and yet I think the climatic conditions exert greater influence than the soil. It is a fact, but what the reason may be is difficult to determine.

Fruit for the Market.

Mr. Hixson: If you raise your fruit and dry it like the dried peaches shown here to-day, everybody will say the peach business is good. They will bring 25 cents a pound. If you go to work and raise them, and dry them out on the hen-house, they will bring about 5¢ to 6 cents. Again, are you going to ship a small quantity of 400 or 500 boxes, when they should be thousands, to induce a dealer to work up the trade? You must make up your mind how you are going to market your fruit. If you raise your peaches, and peel them, and evaporate them, they can use up a good many carloads on the other side. Raise apricots and sell when you can get four cents a pound, green; but if you sell them for two and a half cents, then you say apricots are not good for profit. They would pay better if properly dried. The dried fruit demand is extending. We have a demand for New Zealand and a demand for New Orleans. The demand from New Orleans is something we never had before. There was a man in to-day who wanted a carload of dried apples for New Orleans. They have a class of customers who will take a rougher class of fruit than the Yankees will. It depends entirely upon the manner in which the farmer proposes to handle his fruit, in order to tell whether there is any pay in it or not. They can't make good dried fruit from green fruit with worms in it.

Mr. Shinn: I understand the question is, "what fruit or fruits are most promising for profit for fruit growers in this State to grow?" What may be profitable in one place may not be in another. There are places in this State where the almond may be as profitable in the long run as any tree; but in many places they are not worth growing. One of my neighbors gets a good crop of almonds every year. Not three miles from there a man is going to cut up his orchard. They are the same variety. We can prove that this is the main thing, that what is profitable in one place is not in another. Almost anything in the fruit line will be profitable here if we can get good crops. If a man plants an apple orchard to-day in good soil, and produces good keeping apples, he will meet the market in San Francisco as well as with any other fruit. I am thinking of planting an orchard, and I don't know what I shall plant; but if I had land suitable I should plant apples. For the next five years the apples will be continually getting worse. I should plant those which will keep; beginning with the Bellflower.

There are some people going crazy over the Petite prune. They are exceedingly profitable. One hundred tons were taken from an orchard of 11 acres of eight-year-old trees.

Six years ago a gentleman came to me and said: "I want to plant an orchard; what shall I plant?" I said: "If you will tell me what trees you want I will let you have the trees. I can't tell you what to plant." He insisted on my telling him what to plant. I would not do it. At last I said this: "I would not have all my eggs in one basket. I can't advise you to plant all apples, or all peaches, or all pears. If I were planting a large orchard I would plant more than one variety." So he planted half a dozen kinds. Some things he planted he had better have let alone.

I don't know but what my preference would be for the right kind of peach, which could be nicely peeled, and put upon the market a first quality of dried peeled peaches.

Mr. Jessup: There are evidently some varieties of fruit that produce well in some localities, while in some localities they don't produce at all. But we have enough varieties of those kinds that always produce well, and are always found profitable; such as are good for canning and drying, as the peach, plum and apricot. I have never heard of but one locality in which the plum and prune do not grow, and that is in the southern part of the State. The Victoria, the Washington, the Jefferson and Yellow Egg will produce well on nearly every soil, and in

every part of the country; and they are equally good for canning as drying. The plum will always be good for drying. When you think of 17 to 28 lbs. to the hundred, it is profitable raising it. The Columbia plum, which is not good for canning, is the best plum in the world for drying. There is nothing to equal it. It is not surpassed by the finest prune.

There are many varieties of apples which produce well on any soil and climate. There are some hardy varieties of apples, as the Bellflower, that will always be found profitable to raise. I don't think there is any discount on raising the apricot or prunes and plums where they will grow. While other fruits were killed, the Bulgarian prune on my place bore heavily. Then there is no question about those varieties being profitable to raise, and we can raise them anywhere. The cherry depends on the locality, soil and climate. The cherry is a profitable fruit, and always will be, for those who have a suitable locality for it. I sold Lusk 25 tons of cherries, including 10 tons of black cherries. I think next year they will take all the cherries they can get. As a matter of course, cherries can be raised on few soils and climates. There is no doubt about apricots.

Leonard Coates: Mr. Shinn mentioned the subject of apples, and about the probability of their paying well. There are several varieties which always pay well; the Red Astracan, the Alexander, Bellflower and Hoover do well in Napa. The Hoover does well throughout Napa and Sonoma counties. It is a very deep red, approaching the purple. It sells high. These varieties sold for 90 cents to \$1.10 this year where they have been carefully picked and no wormy one put in. Some fruit growers are making vinegar of the wormy apples. Of the winter apples, it is difficult to say which are the best varieties. The Newtown Pippin and Cook's Sonoma Seedling keep well. The Hoover does not keep longer than Christmas. The Pearmain will keep, but are tough and of a bad flavor.

Apples.

Mr. Hixson: The Gravenstein is one of the best summer apples.

Mr. Klee: A few remarks on the Gravenstein: I came from the country where it was originated. It has always been a great puzzle to me why the Gravenstein is one of the earliest of summer apples here. In the north of Europe they grow a great many. They do not ripen before the beginning of November, and keep as late as January. It has occurred to me that they couldn't be exactly the same Gravenstein. I believe there are different varieties. It may be very desirable to get the real Gravenstein. The only complaint with the variety we have, is that it comes in too early.

Dr. Chapin: The Gravenstein is a very early apple with us at San Jose. The fruit ripens, and is entirely gone in August. It may be that it is not the original Gravenstein, but that is the way it grows here. If there is a difference, I should be glad to get some from the original. There is another kind that is a very choice apple—Skinner's Seedling. It is a very fine table apple, and a valuable cooking apple. It has a beautiful appearance—it is of a creamy color.

Mr. Coates: The Gravenstein ripens the second week in August. It is the whitest drying apple.

Mr. W. W. Smith: Our climate has a great deal to do with the ripening of the Gravenstein. We can get it in the market the 1st of August. I have picked it the 1st of August, and we see it now in the market grown in different soil and climate. No apple brings better prices than the Esopus Spitzenberg. It grows to perfection and keeps well. We cannot be guided by any one rule throughout the State.

I should as soon plant the fig as anything else in Vacaville. I would take the common California black fig. I would sell the first crop fresh and the second crop dried. The location and soil have a great deal to do with the kind of fruit to plant. In some parts of California the apple, pear and plum are most profitable to plant. In the interior valleys the peach, apricot and nectarine are most profitable. I think the nectarine is going to be one of the most profitable fruits we can plant, and I think the next run will be on the nectarine. The flesh is a pure white, and, when dried, makes the most beautiful dried fruit I ever saw. I dried a few this year and last year.

As to the varieties of pears, the Bartlett takes the lead. Of other varieties, the Winter Nellie is profitable for shipping East. I think this pear, often called Winter Seckle, will succeed well.

Some say there is nothing more profitable than plums. They do so universally well that almost everyone can plant them with a good deal of security.

Mr. Hatch: Can we raise more than we can sell?

Mr. Smith: I will say this much: If we farmers will take pains to put it up in proper order, I don't think there is any trouble about flooding the market. We cannot take an inferior article of green fruit and make good dried fruit of it. Take good fruit and let it mature on the tree and then dry it, or can it, and you will find a good market for it. We cannot raise a superior article of fruit if we let our trees overbear, and neglect the pruning, and don't cultivate the soil, and then expect to get a good price for it. We must learn these things by experience. Experience and practice will teach a man to take care of his trees.

Mr. Shinn said that he could not tell a man what to plant. I don't believe there has been a year since I have been in this State (and that

is 16 years), but what I have planted fruit trees, and it is as much of a puzzle as ever what to plant for profit. I want to plant some this winter. The planting season is almost here, but there are so many good ones that I don't know which to select.

It is generally admitted that the Royal apricot succeeds better than any other in Solano county. You can sell 1,000 tons of Royal apricots when you could not give away other kinds. In some localities the Moorpark succeeds well, but it is not universally so. The Royal is the best for drying and the best for shipping, in some localities. There is no definite rule by which to go in planting. If the apple succeeds better in your locality than any other, plant that; if the peach, plant that; if the apricot, plant that; and so on. In finding out what fruits succeed, we can tell generally by what the neighbors grow around the place. The cherry, where it succeeds well, is one of the most profitable fruits we can plant, but it does not succeed well all over the State.

I have the St. Ambrose apricot. I can see but little difference between that and the Royal. I have fruited that two years. The only difference is that it is a little larger; but it grows on young trees, which will always make a difference. I think it is identical with the Royal. Another year may change my mind on that. If it is larger, it is that much better. It has the same shape, is flattened just about as much as the Royal is.

Mr. Blowers: I wish to suggest to Mr. Hatch that if the agents of Eastern firms are allowed to import trees every season, they will soon furnish a market for our plums in the shape of Mr. Curculio.

Mr. Klee: In regard to the Blenheim apricot, it is in Berkeley at the University grounds. It has borne splendidly. It is the first apricot that has borne four years in succession. I took from the tree as much as 300 lbs. this year, of fair size. A number of other apricots had no crop at all. The Royal is not there.

Prof. Hilgard: There is one point I have always insisted on; that is, that not sufficient care is taken to make the exact agricultural adaptation of this country known to outsiders. There should be a good description of the State, and the success of the different fruits in the different regions.

Peaches.

Mr. Smith: In regard to peaches, in planting peaches I would say, avoid, as much as possible, those which are red at the pit. Plant those that are white at the pit. The canners are getting so they object to those which are very red pitted. We expect our market, for some years to come, to be through the canners. The peaches without the red pit are better when you come to dry them. The red does not add any to the appearance, to my notion. Also avoid those varieties that curl. There are some varieties that do not curl. In regard to the varieties that do not curl, I would mention the Early Crawford, Foster, Suequehanna, Salway and Reeves' Favorite. They ripen in succession. One can market them early and never have a great many on hand. The Foster is a good one which does not curl. It is better than the early Crawford. Mary's choice does not curl but little. Of the Yellow Cling, the Orange Cling (Sol. Runyon's Seedling), and the Lemon Cling, are the best I know of. There are quite a number of white clings, and it is very hard to decide which are best. We have a white cling in our neighborhood called the McKevitt's Cling, which is one of the finest. I would plant largely of it; it is free from curl, and is the finest shipping peach I ever saw, of any kind. The Heath is a good one, but curls. The Muir peach, as a drying peach, is as good as any I know of. It is one of the most perfect freestones I ever saw. When fresh it is pretty nearly white, and dries whiter, which adds to the beauty of the dried fruit. If I could get a white peach, not red at the pit, I should like it better than this. The Le Grange is one of our best freestones, but curls three times out of five. Last year I had 130 trees, which netted me \$1,100. The year before I did not get one box off the trees. We had the curled leaf very badly.

Mr. Jessup: Have you observed that the trees which have the thickest, heaviest leaves are more liable to curl than those which have light, thin leaves?

Mr. Smith: No. The glandless ones are not likely to curl. The Comet is a fine peach, but is very red at the pit.

Mr. Klee: The Comet does not curl at all at Berkeley. It is the only one out of 40 varieties that does not curl. It is not ripe yet. There are a few which would bear a crop if they had not curled so badly in the spring. There are some 30 odd varieties that are nearly dead with it.

Mr. Smith: Mr. Klee says the Comet is not ripe at Berkeley yet. I picked it at my place two weeks ago. You can see what difference the soil and climate makes in the fruit.

Peculiarity in Ripening.

Mr. Hatch: Mr. L. W. Buck, a neighbor of Mr. Smith, picked cherries, and peaches, and apricots from 10 days to 2 weeks earlier than I can, and he can pick Bartlett pears two weeks later than I can.

Mr. Smith: I can confirm that statement; and Mr. Buck is the only man that has good Bartlett pears in the market at San Francisco to-day. It seems very singular that the same region should produce the early and late fruit, but it is not so singular after you understand it. In Vaca valley the hot weather sets in very early in the season, owing to the peculiar shape

of the mountains and valley. About the last of July there is a kind of stop in the growth of our trees. The water goes down (as we say), and everything stops growing. The Bartlett pears will stop growing right there. They remain about six weeks without increasing in size. Then comes the turn in the season—the weather becomes cooler, the moisture rises, and the fruit begins to ripen up beautifully. Mr. Buck puts the first cherries and apricots in this market. They will get ripe before our dry season comes—before this stoppage comes on. All the cherries and apricots ripen before that part of the season comes, while Bartlett pears will hang on through this dry season. Mr. Buck has late peaches in the same manner.

Mr. Hatch: Anything we can grow in our locality to advantage will be profitable if it is put up in good shape. But I thought that perhaps there were some kinds more profitable than others on account of demand. Pears, apples, peaches, apricots, nectarines or cherries—which of them will the demand be greatest for, and last the longest. Then if we have the place to raise that kind, let us raise it.

The fashions in fruit change very rapidly. An opening may be made for a variety which we have no demand for now. That would be the very best fruit to plant. I want to find out what will be the fashion.

The Fig.

Mr. Hixson: I thought from investigation that the fig would be the next run after the nectarine. It attracted more interest than any other thing which I happened to have a sample of, in the East. From the interest which the people East gave the subject, I think it would be one worthy the farmers' attention. I had a talk with a gentleman who is one of the largest importers of the United States, and he said, if you will improve this sample just a little, you have struck a bonanza. The sample which I had was the white fig dried.

Mr. Hatch: A gentleman told me that in Vaca Valley the common black fig tree is very profitable for the dried product.

Mr. Smith: In regard to the fig, members of the society will remember that we get two crops and sometimes three. Taking the two or three crops together, it makes a profitable kind of fruit. The first crop will not dry—it will rot first, because there is so much juice. The second crop is allowed to dry on the trees and fall off on the ground. Then they are picked up and thrown into a sack and sent to market. That is the way 99 out of 100 are sent to market. It may be possible to dry the first crop with fire heat. I know by repeated trials that I cannot dry the first crop in the sun.

I spoke in regard to the nectarine. I had reference to the local demand. What the demand abroad will be I can't tell.

Mr. Jessup: I was talking with Lusk, of Oakland, and he spoke of one variety of fruit that he had never got enough of—that is Coe's Golden plum. It is one of the finest canning fruits in the country.

Mr. Klee: We have not spoken of good shipping pears yet, save the Bartlett. There must be a good number of later pears which would be profitable to ship. The Howell is a good pear. In my short experience I found that to be the best one of those pears ripening at that time. It will keep a full month. I picked them in the middle of August. It got ripe in a fortnight or three weeks. It is considered a very fair pear, and a very good bearer. There is another little pear I tested last year. It has a flavor resembling the Bartlett. It is small, but inasmuch as the Seckel is small that should not be any objection. It has two good qualities. It has a thin skin and keeps well. The name is Andre Desportes.

Continuance of the Discussion.

At this point the discussion closed, as the hour was late. Upon motion, the same subject was continued until the next meeting, as the general opinion was, that the matter was but partially set forth. The other subject for the next meeting is "The Future of the Society, and How to Advance its Usefulness." It will also be the annual meeting and the election of new officers, and reports of the retiring of old officers will make the meeting a busy one.

Fruit on Exhibition.

The fruit exhibits at the meeting were quite extensive and interesting. W. P. Hammond had samples of the Japan plum, as grown upon the ranch of the late John Kelsey, in Berkeley. It was looked upon as a great acquisition. The Secretary showed specimens of a new seedling peach received from A. O. Carpenter, of Ukiah. It was originated by Dr. McCowen, of Ukiah, and is a good sized, beautiful yellow-cling peach, clear yellow to the pit; of good shape and generally valuable. Mr. Klee showed the following pears from the University orchard: Howell, De Tonges, Andre Desportes, Calabasse Monstrense, Paradise d'Automne, Napoleon the Third. Mr. Jessup brought a seedling peach, grown by Dr. Grattan, of Stockton. Leonard Coates had Marshall's Red Bellflower apple, a seedling from Yellow Bellflower, supposed to be crossed with Red June; also the Walter peach, a chance seedling from a yard in Oakland. Mr. Shinn showed the Salway and Mammoth Cling peaches, and Vandervere apple.

ELECTRIC STORAGE.—A New Haven man has taken out a patent for an invention of his which he claims secures the absolute storage of electricity for electric-lighting purposes.

THE DAIRY.

Notes on Mountain Dairy Farms.

EDITORS PRESS:—Owing to press of business, I have been unable to write up this country since leaving Wilson creek until the present time. After leaving Merrillville, which is a small hamlet, consisting of post office, hotel and store, located at the head of Willow Creek valley, I crossed over the ridge to Eagle lake, which is a body of water covering nearly 100 square miles of territory. It is very deep, and is intensely blue in color. There is a company at work tapping the lake with a tunnel which will strike it 12 ft. below the surface. The water is to be used for irrigating purposes in the Honey Lake valley, of which there is some 200,000 acres, susceptible of reclamation, as soon as water is led on it. It is nearly all good farming land and will produce good crops of grain, grass, vegetables and fruits when irrigated. The tunnel will also be utilized for the purpose of carrying down lumber and cord wood, of which an inexhaustible supply grows on the western shore of Eagle lake.

Skirting along the shores of the lake for a distance of eight miles, I passed the goat ranch of Mr. Davis, on which there are kept about 5,000 head of Angora goats the year round, subsisting on the abundant bunch grass and browse that the surrounding hills afford. The owner shipped his season's clip to Boston, on which he realized about 80 cents per lb.

From the lake, I crossed over a ridge to Grasshopper valley; from there I sheered off to the lower end of the Manline plains, about eight miles distant, where I visited Mr. George Bayley's dairy of 20 cows, which is under the able management of Mr. Charles Wells, an old and experienced dairyman.

Returning again to Grasshopper valley, which is some 10 or 12 miles in length, and some three to four miles in width, and contains a half dozen ranches. I stopped at the ranch of Anderson Loveland, where he is milking 45 cows, but intends to increase the number to 60 another year. Mr. Loveland has one of the best dairy sites that it has ever been my good fortune to see. A very large spring puts out of the side of the hill, which, when dammed up, forms a reservoir, from which a flume leads the water to the dairy house, where it is used to wash, scrub and cool the dairy house, besides turning a wheel which does the churning. The water marks 48° Fahrenheit, which is cold enough for any use.

From this valley, I crossed over a range of hills to Adin, which is located at the northeast corner of Big valley. On the way thither, I passed the mining camp of Hayden Hill, which contains some valuable quartz mines. They are worked by private parties. A San Francisco firm bonded one of the mines last year, but the owners and they could come to no terms. From the present indications, the day is not far distant when Hayden Hill will be a flourishing mining town. Wood and water are both easily accessible.

The town of Adin is located on Ash creek, which rises in Ash valley some 18 or 20 miles to the eastward and flows into the Pitt or upper Sacramento, which enters Big valley at the northwest corner and flows through it, going out at the southwest end. Adin is a small town of 200 inhabitants.

Big valley is quite large, being about 10 or 12 miles from east to west and from 6 to 12 miles wide from north to south. The valley is well watered by Ash creek, Willow creek and Pitt river. There is a great deal of waste land in the valley; in fact the majority of the land is not susceptible of cultivation, but what is under cultivation yields good crops of wild grass, grain, the more hardy vegetables and, in some of the most favored localities, fruit grows, but the climate is too frosty to depend on raising it.

Mishaps to the Dairymen.

The valley is well adapted to the dairy business, but, unfortunately for the farmers, a few years ago a very severe winter caused them to feed out all their stock of hay; and just as they thought spring was at hand, and the last of the hay had been fed out, a very severe snowstorm set in, which killed hundreds of cattle and horses, thus nearly, or quite, bankrupting the farmers. Numbers of them have not got over the shock yet, and, to add misery to affliction, the crickets have swept everything before them for the past two years. This season they have been so bad as to take nearly the entire grain crop of the valley, and the outlook for next year is equally gloomy, as they have laid their eggs in quantities.

From Adin I went to the little hamlet of Lookout. The place is located on the Pitt river at the northwest angle of the valley.

There are some very good ranches in this part of the valley, one of which I visited; Mr. H. P. Brown, who cuts considerable hay, raises some grain and milks a few cows, but his chief occupation is cattle, horse and mule raising. Mr. Brown has a herd of very fine horses and mules, all of which he finds a ready sale for in the lower valleys.

From here I went to the little town of Beiber, which is also situated on Pitt river, about four miles from where it leaves the valley. Beiber is on a very nice, level piece of ground, commanding a fine view of the valley. The town has a

Cheese Factory.

Which was started up by an enterprising young man, who went East from this State and

attended Prof. L. B. Arnold's lectures, given before the New York Dairymen's Association, and the dairymen's associations of eastern and western Ontario. He, after some severe and disheartening trials, has succeeded in producing a cheese that the Sacramento and San Francisco buyer will give as much for as the best Eastern cheese, which is equivalent to saying, the very top price of the market. His factory has the capacity of working up the milk of 80 to 100 cows, but, owing to some disagreement between him and the farmers, he has been unable to procure enough milk to serve the factory to its capacity.

There are a few butter dairies in this neighborhood, notably those I visited here—Mr. Lew Powers, who milks about 40 cows, and Mr. Fred Meyer, who milks about 30 cows.

From here I returned to Adin; from there I started to Alturas, via Round valley, which is a small valley, contains about a dozen ranches, and northeast of Adin about two miles. This valley, like its neighbor, has been overrun with crickets for the past two or three years.

From here I crossed over the mountain to the Hot Spring valley, which empties into the Pitt river. The hot spring, from which the valley takes its name, is located at one side of the road. It is about 20 ft. in diameter, and of an unknown depth in the center (I thrust a pole down to a depth of 12 ft. without going to the bottom), the water raises about a foot in the center, and is in one continuous boil. Old settlers say that it used to spout up from four to six ft. in height, but the Indians have thrown so many stones in it as to choke it down to its present height. I had no thermometer to test it, but it seemed to me that it was some several degrees hotter than ordinary boiling water. It is superheated from the steam below, I suppose. The Hot Spring valley is best adapted to hay raising, and contains several nice ranches, which produce wild hay in large quantities.

From here I passed on to the Clover Swale, which is a small valley putting out from the main Pitt River valley. It contains five or six choice ranches. Those I visited were Mr. Peter Ivory's, who cuts several hundred tons of hay and milks 24 cows. His brother, Edward Ivory, cuts considerable hay, and keeps a small dairy. Mr. James B. Redden milks 40 cows, and cuts a fine lot of hay. I also visited the dairy of old Mr. Essex and his son Charles. They have a large spring, near the dairy house, which they lead in with a flume to turn a wheel for churning purposes. The water is quite warm, about 75° in temperature. Mr. E. milks 30 head of cows. The arrangement of his dairy house and fixtures are the neatest and most convenient of any I have visited for some time.

From here I crossed over to the south side of the Pitt River valley to the ranch of Henry Hilton. He cuts a large crop of hay and milks 40 cows; but, at the time of my visit, he had them back in the mountains on a little valley where he keeps them in the summer.

From here I crossed back again to the north side of the valley to Alturas, which is the county seat of Modoc county, is situated on a nice piece of level ground in the forks of the north and south forks of Pitt river. The towns contain between three and four hundred inhabitants, I should judge by appearances. For a court house a large building is used that was built for a livery stable. There are quite a number of fine ranches in this neighborhood, on which they cut large crops of hay, all wild or nearly so, and some grain is raised. I visited one of them, the property of the Dorris Bros. They cut six or seven hundred tons, and stack in monstrous ricks 40 to 50 ft. wide and from 100 to 200 ft. long and 40 to 45 ft. high. They use a derrick and a grab fork worked by horse power; take from two to three cwt. at a load. There are several small dairies in this neighborhood. The Daygett Bros. each milks 20 cows; John Wall also milks about 25 head.

From here I took a trip up around the head of the South Fork valley, which opens out south from Alturas to a distance of 20 miles. The most part of the valley is owned by Mr. Geo. Bayley, who is a cattle man who owns several thousand head of stock cattle and several ranches. This ranch is 10 miles in length and three miles in width, all under fence.

Returning to Alturas, I started for Goose Lake valley, but as this letter has exceeded the proper length of correspondence, I will close for this time, and finish up my trip through the Goose Lake and Surprise valleys to Jamesville in my next.

Eagleville, Surprise valley, Modoc Co.

A NEW SCREW.—It is well known that screws when used in soft wood are usually driven in with a hammer, and given a turn or two with a screw-driver to bring them flush. Recognizing this fact, a manufacturer has brought out a new screw which is adapted for driving, and which enters the wood without tearing the grain. The gimlet point is dispensed with and a cone point substituted. The thread has a pitch that it drives in barb fashion, offering no resistance in entering, but firmly resisting all attempts to withdraw it except by turning it with a screw-driver.

NEW SOURCE OF OZONE.—The essences of odorous plants, such as clover, mint, lavender, juniper, lemon, bergamot, are stated by Prof. Mantegazza to be even more powerful in developing ozone in sunlight than is phosphorus. He suggests that such highly odorous plants should be freely planted about houses in miasmatic regions.

FORESTRY.

Forest Trees of California—No. 14.*

Magnificent Red Silver Fir.

(*Abies [Picea] nobilis* var. *Magnifica*.)

The fir grove murmurs with a sea-like sound.—W.

This most magnificent cinnamon-bark silver fir of the Sierras—their valleys or intervals, steppes, meadow margins, or contiguous to cliffs of the ragged rocks—is by far the largest and most stately of all the firs. Found at an altitude of 7,000 to a little above 9,000 ft.; attains from 200 to 300 ft. in height, 10 to 12 ft. in diameter, and is reported even 14 ft. In its glory we behold the massive, towery and somewhat rounded or domed sequoian summit; indeed its general port is even of more densely thickened outline than those giants of our Alps. The mass of this foliage is made up of formal, well-defined, round, table-like terraces, as in the typical *nobilis*; like branching, more or less in successive flights to the top, yet sufficiently broken, here and there, to preserve variety and still suggestively hold the mind to ideal order, dignity and grandeur the most imposing, the most magnificent. These innumerable segments of circles, silver lined and barked above, that deeply naps the ample folds of this broad mantle of sylvan magnificence, are but multiplied lines of regal beauty, perfection and symmetry. The earlier state of growth does not greatly vary from that of age, but rather foreshadows it; the form, then, is one of perfect regularity, on the precise conical plan, from a broad base by lessening turreted series of branches, whirling aloft to the conic or, at length, sub-conic top, tipped by a strong, straight, rigid leader shoot of vigorous growth. Perhaps this would prove too formal for the eye to dwell upon alone, but in nature they are never alone, nor in forests of their own. This strict outline is more bold viewed in midday among the mountains. It then and there stands in striking relief against the usual rugged background of rocks and awe-inspiring alpine cliffs, and seems more harmoniously combined, complemented, and in due keeping with high mountain scenery. Yet, as a single object, or within a restricted circle, it is much more softened and silvered from beneath by the nightly camp-fire, or when naturally crimson-fired by rising and setting suns. When thus aglow, diversified by other sylvan surroundings, the picture is one of surpassingly softened beauty—fascinating quite beyond description; the very warm, glowing bark of body and boughs, always lovely, now more radiantly reflective than ever, reminds us of that other "fir tree set in the desert of the desert"—sacred emblem of perceptive scientific truth of a superior order. As the wind waves leave their own beautiful rippling records on the highland sands, so do the water waves leave theirs along the shore; they also sing a similar song, the emblematic significance of which is nearly alike the same, for saith not the poet truly?

"The fir grove murmurs with a sea-like sound."

Hence it is that hearts nicely attuned to nature's harmony in the great forestal variety full oft catch the grand orchestral chant that swells sublime in the mountain heights or sweetly dies along the gale, and even the tacit echoes from some far-off song, perchance, comes softly swelling on the listening ear when a still small voice of silence is all about—above, below—and not a leaf astir among the boughs.

As for the serene haunts of the hermit mountain bird and the merry pine squirrel, the fir trees are their house—a velvety bed, and board forever spread in silvered emerald. The beams of these temples are as the goodly cedars, and their rafters of fir, decked in gold and royal purple pillars, as it were, of the heaven's tent and table, silver lined, balsam perfumed, their airs are pure and sweet as the breath of lilies. Lordly shadows and secure shelters are they, where the weary pilgrim is wont to rest or repose in Eden sleep, on a virgin bed of boughs.

Dr. Englemann remarks: "Leaves of the young tree flat, scarcely grooved, never, I believe, notched; fibrous bundles in twos. On full-grown trees, and especially on fertile branches, the leaves are one-fourth wider than thick, or even perfectly square; the resin ducts in these leaves, placed equidistant from the edges and keel, separated from the epidermis by a layer of hypodermis cells, externally indicated by a green stripe dividing the bands of stomata, so that these leaves show four lower white bands. Cones six to eight inches long, two and one-half to three and one quarter thick, purple; bracts lanceolate, shorter than the broad scale, wing of the slender seed very oblique, wider than long; the only seed examined had ten cotyledons." The scales flat and set horizontally, or not bent, so as to cup the cone.

The texture of the timber apparently like cedar—darker heart; makes excellent firewood; has been accredited valuable by some writers, but we have no personal experience or observation of its applied utility; said to have been extensively used in some localities, but from our observation of fallen trees in the forest, it seems to us liable to speedy decay when left exposed to the weather.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

The tenth annual session of the State Grange was duly opened by Worthy Master Daniel Flint, in the new hall of the Good Templars, Stockton, at 11 A. M., Tuesday, October 3, 1882. The hall was handsomely decorated by Stockton Grange. The roll of officers was called as follows:

Roll of Officers.

Master, Daniel Flint, Sacramento.
Overseer—S. T. Coulter, Santa Rosa.
Lecturer—E. W. Davis, Santa Rosa.
Steward—Nelson Carr, Bennett Valley (Santa Rosa P. O.).
Assistant Steward—T. T. Hopper, Rio Vista.
Chaplain—G. L. Douglas, Yuba City.
Treasurer—C. C. Steele, Pocatello (official address, San Francisco).
Secretary—J. V. Webster, East Oakland (official address, San Francisco).
Gate Keeper—Wm H. Johnson, Richland, Sacramento county.
Clerks—Mrs. Hettie Deming, Vallejo.
Pomona—Miss Hattie E. Sprague, Sacramento.
Flora—Mrs. Lilly G. Jasper, Wheatland.
Ladies Assistant Steward—Mrs. Nellie G. Babcock, Temescal (Oakland).
Executive Committee—C. Grattan, Stockton; G. W. Hancock, Sacramento; P. H. McGrew, East Oakland.

The Chaplain, Gate Keeper and Flora were noted absent, and their places temporarily filled as follows: J. F. Deming, Chaplain; W. L. Overheiser, Gate Keeper, and Sister M. J. Frisbie, Flora.

A larger number of representatives and visiting patrons were present than at the opening of the session. Many of the veteran Masters and Past Masters and their wives were present from nearly all parts of the State.

The opening was preceded with several inspiring Grange songs, rendered by select voices from various Granges, accompanied by Mrs. Lucy P. Goff, of Stockton Grange. The warm and pleasant greetings within the new and beautifully-decorated Grange hall was in cheering contrast with the wind and storm without, which, unfortunately, kept some of the warm-hearted but disappointed Patrons at home.

After the appointment of Committees on Credentials and Order of Business, a recess was taken until 2 P. M.

Tuesday Afternoon.

The reports of the Committees on Credentials and Order of Business were adopted.

Daily sessions were fixed from 9 A. M. to 12 M., 1:30 to 5 P. M., 7 to 10 P. M. The usual committees were appointed. The Secretary's, Treasurer's, Executive Committee's, District and State Lecturer's reports were received.

The severe storm which prevented many Patrons near Stockton from attending cleared off during the afternoon.

Tuesday Evening Welcome to State Grange

Worthy Master Marsh, of Stockton Grange, in his address of welcome, expressed much gladness in meeting so many Patrons present, and the hope that the session would prove highly profitable, as well as one of pleasure; and, in the name of Stockton Grange, heartily welcomed one and all. Social acquaintance is one of the good features of our Order, and he admonished the Patrons of Stockton to use their best efforts to promote the sociability and acquaintanceship of all present.

Sister Jeanne C. Carr, by request of the W. M., responded in her usual eloquent manner, paying a touching tribute to departed members of the State Grange, and kindly words for those unavoidably absent.

Worthy Master Flint then delivered his address, which was heard with much interest. We give the following

Extracts from Worthy Master Flint's Address.

Brothers and Sisters of California State Grange. Elected one year ago to preside over your annual deliberations, to keep a vigilant eye on the welfare of our beloved Order, and to assist and cheer on its forward movement, I come before you to give a report of my stewardship, to point out some of the mistakes of the past, and offer a few suggestions for our future guidance.

In this connection, permit me to say a few words relative to myself, and of the noble Patrons who have so generously come to my assistance, in furtherance of the great work we have in hand. Surprised at the sudden and unexpected honor thrust upon me, in being raised from the ranks of the Order to the exalted position of Master of California State Grange, and, realizing the duties and responsibilities which the position necessarily entails, my equilibrium was, for a time, lost; the power of intelligent speech was denied me, and I felt like one in water beyond his depth. My agitation was not caused by want of faith in the ultimate success of our Order, but because of the backwardness of our fraternal work as experienced on this coast. I realized the necessity of exalted ability to guide and direct the organized progress of the Grange; to give warning of obstructions in our pathway, the danger of delays, and to encourage the work by pointing out the grand success which our Order is destined to attain.

Condition of the Order.

During the past year I have visited nearly every subordinate Grange in the State; and, in so doing, have sacrificed my time, convenience and private business. Cheerfully have I done this, paying most of my own expenses, with no wish or hope of reward other than that which is given, in knowing the work of the Order has been advanced, and conscious of performance. My great endeavor has been to strengthen the Granges by encouraging their membership to renewed efforts in behalf of more thorough work, greater unity and harmony; and that the benefits of the Order, through them, might be made manifest to those outside the gates.

Whatever advances have been made, or conquests won, during the year just past, I claim that a title of the honor, conceding the meed of praise to be due the noble band of brothers and sisters who have met me everywhere with a kindly greeting, encouraged my work in their midst, and in the darkest hour have stood about me, every one with a shoulder to the wheel of progress. As before intimated, the work of the Order, since I assumed the Master's chair, has been hampered and embarrassed in consequence of an empty treasury, against which orders could not be drawn to pay the necessary traveling expenses of State Grange officers and District Lecturers desiring to visit Granges at a distance; hence it may seem, to those not acquainted with the facts, that the work in reviving dormant Granges has not been prosecuted with that vigor which is essential to their reorganization. Nevertheless, the support which I have received from the State and District Grange Lecturers has enabled us to make some revivals, and to materially strengthen many weak and tottering Granges, largely increasing their membership, which has encouraged the building of halls, and placed them on the high road to prosperity. For the future, as in the past, we propose to advocate filling up the ranks of the Granges, already established, with the very best material among the farmers of the State, and by inducing back into the Order those who have already enjoyed some of its benefits, but who, from various causes, have strayed away from the fold. When we succeed in this matter, as we are at present in a fair way of doing, the reaction, we hope, will so work in our favor that it will be comparatively an easy matter to re-establish them on a stronger basis than before. Let us inculcate, by precept and example, that we fully appreciate the teachings of our Order, and stand as living monuments to show that farmers are susceptible to the benefits of education and progression. There is no question in my mind but that the Grange is stronger to-day, in all that appertains to stability of purpose, richer in experience, and possessed of more hope for the future, than it ever has been since its first advent on this coast.

Education

In the beacon light of our Order, around which centers its soul, and from which flow the living waters, designed to keep forever growing the rich pastures of the mind. Imbued with this spirit, and so fully alive to its great importance in the southern sections of the Union, where the means of popular education were to some extent limited, the Grange established schools in the name of the Order, guided their direction, which, so far as heard from, have met with unqualified success. In this favored land of ours, from which none other obscures the gorgeous sun in his setting, the multifaceted appropriations made for the service, coupled with its intelligent disposition, gave our public-school system a completeness which relieves Patrons here of serious concern about the school education of their children. Nevertheless, it is our duty as Patrons to keep a watchful eye on the management and direction of this great conservatory, in which are being moulded the minds and hearts of the generation which is to follow ours, carrying with them, for weal or woe, the fortunes of the State. Although there are many among us to-day, yet on the ascending grade of life, while others have reached the summit and begun to go down on the shady side of existence, nevertheless none are too old to learn. From the beginning it was so ordained, that man's labors upon the earth should be so interwoven with good deeds, and profitable lessons learned, that in the end, like a beautiful temple built by a master hand, no stain or blot should be left to mar the workmanship. Therefore, in the work that is before us, let our motto be written in golden letters: "Onward! Excel! Grow!" I find the Grange the cheapest instructor and the best teacher. In my travels and intercourse with the members of the Order, I have observed that those who are the most regular in attendance are the most intelligent, and the most ready and able debaters, as well as the most cheerful and happy in disposition. At their homes I find a greater amount of order and system than is apparent with those who do not belong to the Grange, or who are indifferent and neglectful in their attendance at the meetings of the Order, and that their tables are heavily laden with choice books, papers and periodicals.

Co-operation

Furnishes an ever-present theme, on which much discussion has arisen, and many lectures been given. Yet the subject is imperfectly understood, and visionary conceptions of it are so common, that failure often follows the parade of a poor beginning. Success can only attend it where external conditions are favorable, unity of action prevails, backed by money and business capacity. Life is so short, and time so precious, the average of man will not follow up the investigations essential to success in co-operation; frequently, therefore, when enterprises of this order are undertaken the plan is crude, the co-operation but in name, consequently failure is well assured.

As we farmers pride ourselves a great deal on the gift of faculty of common sense, can we not learn a great deal with an observing mind, from comparatively small things in themselves, but in reality embracing the very embryo of co-operation? I do not know of a more direct way of illustrating physical co-operation than this: A teamster, with his 10 or 12 mules, loaded with as many thousand pounds of freight. At the signal from the driver, and the jingle of the bells, each mule plants his feet in the ground, and the load moves like a thing of life. Now, these same mules, hitched to an ordinary gang plow, turning over in fine shape, 10 or 12 acres a day, will exert a great power for good. But take these same mules, and hitch them, to the same plow in circular form, and what is the result? Each mule pulls with the same power and willingness that he did before, but each is laying out his strength independent of the other, and pulling in a different direction. The result is wear and tear of material, and lost power and time. I have attempted in a slight way, to give some feeble illustration of physical co-operation; but space is too short, and it is, perhaps, unnecessary to go into details of mental, social, financial, manufacturing, agricultural, and labor co-operation.

This seems to be the day of association, co-operation and corporation. It seems that the farmer is almost the last person to call to his aid this immense power in the management of his domestic economy.

When the farmers shall be brought to a full realization of the immense power and benefit of the three words, "association, co-operation and education," then will he be given the proper station that he is entitled to among his fellow men, and instead of, in derision, being called the mudsill of society, he will be proud to have an appellation applied to him which conveys the meaning of that which is solid and enduring in the mental, social and material structure of things.

When the Grange was first established, nearly every State had more or less co-operative stores and associations. Some of these establishments were managed by designing men; some failed by lack of experience, and others by incompetent persons, and some lacked patronage, consequently a majority proved failures.

But since the Grange has got into better working order,

and many of the place and curiosity seekers have dropped out, institutions that have been established have met with better success. Like the institution of a great many other new societies, some of the over-zealous members tried to accomplish too much in too short a time.

If we apply the same pluck and perseverance in the establishment and maintenance of beneficiaries connected with our Order that we do in the management of our farms, and when a crop fails go to work and plant another, having hope of future reward, we will make every legitimate undertaking a success.

Quasi Grange Institutions.

Through the kindness of the officers of the institutions below named, we have been furnished the following synopsis of business transactions, connected therewith:

The Farmers' Union of San Jose

Its commercial business, in 1874, with a capital of \$15,000, under the management of nine directors, all of whom are farmers, has paid an annual dividend of 10% ever since, and has been very much enlarged. We have paid up capital to date of \$150,000; our sales last year amounted to almost \$400,000. Our sales up to this time this year, are 10% more than last year, for the same months. The stock is worth 15% premium. Some of it has changed hands lately for 20% above par.

The Grangers' Business Association of San Francisco.

This institution was incorporated in February 1875. It continued business with a moderate degree of success, until 1881, when new life was infused into it, swelling its business so that its sales reached nearly \$1,500,000, and I am informed that its net profits for the last year were over \$20,000. In 1881 it purchased land near Port Costa, and erected a wharf and warehouse 650 feet long. Three ships can lay alongside of the wharf at one time. The warehouse has a storage capacity of 18,000 tons. The total cost of the property was \$30,000. The association owns one-third interest in the property on the corner of California and Davis streets, San Francisco, now occupied by it and the Grangers Bank. These two corporations are causing to be erected a \$10,000 three-story brick building, on a lot immediately adjoining the building occupied by them. The value of this city property, of which the Grangers' Business Association is one-third owner, is estimated at \$150,000.

The Grangers Bank

Was incorporated in April, 1874. The last official statement, giving the condition of the Grangers' bank at the close of the year, must be gratifying to the friends of the bank to see so creditable a showing made. We cite items from the reports from year to year, that as an idea of the growth of the business from year to year may be had:

	CAPITAL STOCK	TOTAL ASSETS	PROFITS
1874	\$100,000	\$176,845	\$12,768
1875	200,000	357,218	21,344
1876	300,000	514,730	29,542
1877	400,000	673,814	38,580
1880	400,000	1,760,844	43,141
1881	500,000	1,917,577	60,578
Sept 1882	500,000	1,326,294	41,157

This shows that the bank has greatly increased its business, and has increased the profits accruing to stockholders. In 1879 the percentage of profit was 9.18%; in 1880, 10.50% and in 1882, 12% and a trifle over. By the confidence gained by its management, capital was freely supplied for its use in loans on agricultural securities; and, on the other hand, its transactions and the low rate of interest charged made the bank popular among the producers.

The cash actually paid in at the start of the bank, in 1874, was \$25,500. The actual cash kept on hand last July and August, for wheat loans, amounted as high as \$300,000 in the vaults of the bank.

Three-fourths of the assets above mentioned are loaned out to farmers on good security, at six per cent. interest per annum, instead of one and one-fourth and one-half per cent. per month that farmers had to pay a few years ago.

The Grangers' bank was started for the purpose of protecting farming interests; it has constantly worked toward that end, which it has attained, and has, no doubt, proved to be of great benefit to the farming community.

Non-Partisan

Should be a familiar word in every farmer's and Granger's household. Just so long as the farmers allow themselves to be led by the partisans of either party, just so long will they be kept in the background, and instead of doing the thinking and acting for themselves, it will be done by those that have more cheek and assurance, and be done for selfish motives instead of for the greatest good of the greatest number. Assert your manliness, bravery and independence, and allow no party whip to crack its silken threads about your ears and tempt you with being a renegade.

If you are not able to have your influence felt at primaries and conventions yet, take a ticket from each party and make a judicious selection, regardless of party names, and you will soon teach the nominating machinery to put up none but good names, if they expect your support.

It seems to me there never was a time when it was more necessary for the people to look sharply after their interests than at this coming election. There are three or four vital issues that are far more important to the people of this coast than the success of any party organization.

One is the debris or slickens question, by whose damaging and continued practices, is filling our navigable streams, and covering over some of the best acres of God's creating, as silently and steadily as the darkness covers the face of the earth.

And one is land monopoly, and it is hard to satiate the appetite of one that possesses that evil and voracious greed. There should be some restraining power and limit to the ownership of land by individuals and corporations.

It deprives the road fund of its proper revenue. It deprives families of comfortable homes. It is a withering blast to white cottages, school-houses and churches.

The other is railroad monopoly, and the first stage of serfdom, and whose crying evil is only recognized by a smile of contempt for the helpless. Unmindful and ungrateful for the generous gifts from California and the nation, they show their gratitude by employing the best talent in the State to devise schemes to rob the people out of their just dues, the county and State out of their revenue, and boldly assert they will dictate the future revenue which they propose to pay to the counties through which they pass.

By their system of special contracts, they are establishing pernicious and unheard-of rules of mercantile degradation, which either rob him of his just profits in trade, or rob him of that independence and manliness which every legitimate tradesman is entitled to.

The author of this system of special contract, looked not far into the future when the merchant would be compelled to adopt it for his own protection, or abandon his business. When there is no freight to offer the sailing fleet, and they have to come here in ballast for your weight, the freight will be so high, it will make a serious difference in the profits on

your balance sheet at the end of the year. This system of oppression will go on and increase, as the pleasures of ill-gotten gain increase, until the people are so thoroughly aroused, that mob law or revolution will cry out for revenge.

Mutual insurance companies, for life and property, for the benefit of the Patrons of Husbandry, have been discussed a good deal within the last year, and I believe some of the Granges have appointed committees to gather information on the subject, and mature plans, so that it can be taken hold of at an early day, and I hope some of these committees will be present, and give us the benefit of their deliberation. Because one company has been started in this State, and met with a signal failure, it is a poor argument that we must not try again.

A great many secret organizations have been instituted within the last four years, and the secret of their success has been the beneficiary inducements held out to their members. A great many think something of this kind ought to be connected to or under the control of the members of the Order.

Something of a more substantial nature than association, cooperation and education, is required by many. It is a well-known fact, that the percentage of fires in the country is far less than in the city, and therefore, the risks and rate of insurance can be far less. I think each county, or where the number of Granges is limited, say two or three, should have an organization of its own. I would recommend that this suggestion be referred to a committee, and they should report a plan during this session, to be adopted by the counties desiring such an organization. I have a copy of the policy, application, by-laws, etc., of one of these organizations in the State of Pennsylvania, which I will furnish to any person or committee, desiring information in such matters.

In conclusion, patrons, as our objects, aims and final results, which we are seeking are mutual, let this be one of the most harmonious, the most social, elevating and refined meetings, ever held under the auspices of the State Grange.

While I would scorn to detract anything from the high moral tone, social and educational standard that any former Grange, its officers and members have attained, I believe we are living in a progressive age, and the stupid, dull, old-hopping farmer is susceptible of being electrified by the constant sparks thrown toward him in the Grange which is known as the pre-eminent organization of the Patrons of Husbandry.

When we take into consideration that we are American citizens; born and reared under the stars and stripes, and the influence of a republican government, and that fortune has favored us with an inheritance on the Pacific coast, a land that has been kept in reserve for untold ages, and now allows this generation to partake of her bounties, her wealth, her grandeur and sublimity, should we not try and appreciate our condition, and put forward our best efforts to erect monuments, and hand down to future generations, the most noble, generous, enlightened and bravest race of men. There never was a time when the farmer should take more courage than now. His calling is being recognized more than ever, and in the pursuit of his industry, a larger field is acknowledged for the employment of brains, education and experience. Our industry must have greater representation in the county, State and national government. Just so long as we remain quiet, and contented with our condition, just so long may we be allowed to remain. It is only by exertions on our part that we will be ever able to attain our rights, and hold positions that our calling is entitled to.

Grange Leaflets.—No. 10.

[Written for the RURAL PRESS by CLARA DEMING.]

Trip to Stockton

Having been invited by a prominent brother and sister of Stockton Grange to visit them before the meeting of the State Grange, and make the acquaintance of the members of than Grange, three Patrons boarded the Julia at South Vallejo, on Friday evening, bound for the metropolis of the San Joaquin valley. The wind was blowing with considerable velocity, and as the Julia rolled from side to side, in crossing the straits of Carquinez, we felt that we were "rocked in the cradle of the deep," and realized the grandeur and mighty power of the water.

When we were in the train at Vallejo junction some one close by startled us with the inquiry, "Aren't you lost?" and we found ourselves face to face with the Worthy Master of Alhambra Grange. We were whirled over bridge and plain by the great steam horse, and watched with interest the panorama before us until "Night dropped her curtain down and pinned it back with a star," and through the opening the moon's pale rays disclosed a changing scene of beauty.

At Lathrop we waited 20 minutes and changed cars for Stockton. A short space of time brought us to our destination, where we were met by our worthy brother of "cary" fame, and treated to a moonlight ride behind a span of lively horses. Arriving at his home we found other Grange friends and the kind face of his lovely wife to greet us, and bid us welcome to "Oak Home" farm.

The first place we visited in the morning was the fish pond of which we had heard so much. Here we fed the finny beauties from our hands, and were greatly delighted with the carp pond, which more than realized our expectations. We next visited the engine-room and pumps which supply the pond with fresh water. We visited the flower garden, and spent the forenoon in pleasant conversation. In the afternoon, we were invited to accompany them to the Grange hall. Here we found a goodly number of brothers and sisters assembled, some of whom we had met before. This Grange is in a most prosperous condition, having 100 members enrolled. During the last quarter, 15 have been initiated, and 21 have come in from other Granges, and by reinstatement.

Several knocked at their doors on Saturday, and were voted in. A brother and sister having withdrawn some time ago, came and asked to be reinstated—an example many might follow with profit to themselves.

The Grange had a great deal of business to

enact, and the third and fourth degrees to confer upon two sisters. If you do not think Stockton has a working, lively Grange, come and visit them, which you can do at any time, for they have had the good judgment to hold meetings every Saturday. We spent a most enjoyable day with them. Although the rain came down in torrents out of doors, sunshine prevailed within. Only one cloud hung over them—the announcement of the death of their worthy Treasurer. Those who come to the State Grange will be sure to enjoy themselves, for this Grange is doing everything possible for the comfort and entertainment of the visiting members.

The San Jose Fair.

The district fair at San Jose last week had many good points, and would have proved a gratifying success had it not been for the rains which always dampen the ardor of fair-goers. The pavilion display which was held in Market hall included some most excellent exhibits of fruits and vegetables, among which were J. B. J. Portal's collection of grapes, wine and brandy from his "Burgundy vineyard" thirteen different varieties of wine, each made from a single variety of grapes, bottled and neatly labeled; upon the margin of each label the year in which the wine was manufactured is written. Fastened to the shelf and directly under each is the variety of grapes from which each kind is produced. At the top and overhanging all is a vine, four years of age from a cutting of the "Folle Blanche," variety loaded to its utmost capacity. It is estimated that there are at least 75 lbs of grapes on this vine. This vine was raised in the Burgundy vineyard in the warm belt.

The Fruit Growers' Association of the Santa Cruz mountains had a table to themselves and it was well laden with a collection of the choice fruit which that popular region produces.

Dr. S. F. Chapin, who is widely known by his good horticultural works had also a table with a display of pears and apples of signal excellence.

Spencer & Covel had a very interesting exhibit of 50 varieties of grapes from the warm belt. The Santa Clara Viticultural Society had a splendid and comprehensive exhibit of grapes.

In vegetables there were some good things shown. R. Roof, of Santa Clara, produced the "mammoth pumpkin," without which no fair is a success. There were also beets exhibited by Thomas Barkway, San Jose, some of which were two and a half feet in length, and of corresponding thickness. Mr. Barkway had also squashes, Russia sunflowers and a very fine specimen of Blount's "Prolific" corn. Mrs. Carolina Dias, Santa Clara, exhibits a Spanish Calabash squash and vine, a curious and interesting vegetable. D. E. Gish showed a sack of fine red potatoes.

R. D. Fox, now proprietor of the famous Fox nurseries, made a large and beautiful display of plants, which showed that the mantle of the respected B. S. Fox has fallen on fitting shoulders.

At the park there was a very fine show of livestock, a comprehensive display of agricultural implements, and the usual amount of racing, except when the rains interfered. The rains made it necessary to postpone a part of the racing programme until the present week.

The premium list, which we print below, so far as it relates to strictly agricultural exhibits, will be found to contain mention of the leading exhibitors, many of which are worthy of a longer notice than we have space to give at this time.

PREMIUMS AWARDED.

Horses.

Thoroughbred—Stallions—Best four-year-old, J. & H. C. Judson, Santa Clara, Wildside; second best, William Eoots, Milpitas, Kingston; best three-year-old, Wm. Boots, Inauguration. Mares—Best four-year-old, Wm. Boots, Molly H; second best, J. & H. C. Judson, Ella Doane. Families—Sire with five colts, all thoroughbreds, J. & H. C. Judson, Wildside and five colts; thoroughbred dam with three colts, all thoroughbreds, J. & H. C. Judson, Nettie Brown and colts.

Horses for All Work—Best four-year-old, A. T. Hatch, Suison, Admar; second best, A. Barris, San Jose, Dum Pedro; best three-year-old, D. Hellyer, San Jose, Clifford; second best, S. S. Drake, Vallejo, Drake; best two-year-old, Edward Moran, San Jose, Nutwood; second best, J. Weatherford, San Jose, Young St. Lawrence. Mares—Best four-year-old, S. S. Drake, Eve; second best, John Wright, Polly; best three-year-old, A. Barris (no name); best two-year-old, T. Andrews, Minnie; best one-year-old, S. S. Drake, Lena; second best, T. W. Barstow, Beauty. Draft Horses—Stallions—Best four-year-old, J. Garcia, Twelve-Mile House, Ottawa Chief; best three-year-old, Charles Clark, Milpitas, Young Hercules; second best, W. P. Phillips, California, Chief; best two-year-old, James Lendrum, Napoleon; best one-year-old, Thomas Gallagher, George; best sucking colt, S. H. Chase, Paul Revere; second best, George Easton, Gilroy, Prince Albert. Mares—Best four-year-old, S. H. Chase, Kate; second best, James Lendrum, Maggie; best three-year-old, P. H. Doyle, Lady Hercules; best one-year-old, James Lendrum, Fan; best sucking colt, James Lendrum, Bess.

Roadsters—Stallions—Best three-year-old, E. S. Smith, Fleetwood; best two-year-old, E. S. Smith, Fleetwood. Mares—Best four-year-old, E. Topham, Milpitas, Belle; best three-year-old, I. S. Drake, Sister; best two-year-old, E. Topham, Lady Nutwood. Gelding roadster—Best four-year-old, Edward Younger, Whisper. Special premium recommended on T. W. Barstow's Frank.

Jacks and Jennies—Best jack, four-year-old, R. J. Green, San Francisco, Lippincott.

Cattle.

Durham Bulls—Best three-year-old, Mrs. M. E. Bradley, First Duke of Alameda; second best, Wm. Quinn, Santa Clara, Duke of the Valley; best one-year-old, C. Younger, Forest King; second best, Mrs. Bradley, Centerville Duke. Best Bull Calf—Mrs. M. E. Bradley, Royal Bengal; second best, C. Younger, Eighth Duke of Forest Home. Cows—Best cow and calf, Mrs. Bradley, Fanny 3d and calf; second best, Wm. Quinn, Fuchsia 2d and calf; best three-year-old, C. Younger, Jessie Maynard; second best, Wm. Quinn, Fuchsia; best two-year-old, C. Younger, Oxford Rose 3d; second best, Seventh Rose of Forest; best one-year-old, Col. Younger, Red Dolly 11th; second best, Wm. Quinn, Innocence. Best Heifer Calf—Wm. Quinn, Peach Blossom; second best, C. Younger, Red Dolly 14th.

Jerseys—Bulls—Best three year old and over, B. F. Fish, Gen. Grant; best two year and over, C. B. Polhemus, Jersey Boy; best one year old, Mr. C. B. Polhemus, Oscar Wilde; second best, J. T. Hoyt, San Mateo, Banker. Best Bull Calf—C. B. Polhemus, Tom; second best, C. B. Polhemus, Jersey. Best Cow and Calf—C. B. Polhemus, Cherry and calf; second best, Matella and calf; best three year old and over, C. B. Polhemus, Fairy; second best, C. B. Polhemus, Pearl; best two year old, C. B. Polhemus, Matella; best one year old, C. B. Polhemus, Gypsy; second best, C. B. Polhemus, Pearl 3d; second best, C. B. Polhemus, Sunflower. Best heifer calf, C. B. Polhemus, Bessie 4th.

Best Thoroughbred Herd of Jerseys—C. B. Polhemus, Jersey Boy, Cherry, Matella, Pearl, Fairy 2d. Ayrshires—Bulls—Best three year old, George Bement, Redwood City, Archie; same, best one year old, Macbeth; same, best bull calf, Malcolm. Cows—Best three year old, George Bement, Elaine; same, second best, Ethel Brown; same, best two year old, Stellinita; same, best one year old, Sultana; same, best heifer calf, Sybil; same, best cow and calf, Lady Merryton and calf; same, second best, Stellinita and two calves.

Best Thoroughbred Herd—George Bement, bull Archie and cows Lady Merryton, Stellita, Ethel Brown and Elaine. Graded Cattle—Best cow, four years old, J. B. J. Portal, Belle 1st; best one year old, G. P. Beal, Fawn. Sweepstakes—Best bull of any breed or age, C. Younger, Second Duke of Alameda; same, best cow, Jessie Maynard; same, best bull and three calves, Eighth Duke of Alameda.

Sheep.

Merinos—Best ram, A. Agnew, Santa Clara, Longwool; best ewe, A. Agnew, Jennie. Southdowns—Best ram, George Bement, Sonoma; best ewe, J. P. Bubb, Saratoga, Queen.

Cotswolds—Best ram, Wm. Quinn, Prince; best ewe, C. Younger, No Name; same, best three ram lambs; best pen five ewe lambs, Wm. Quinn.

Graded Sheep—Best ram, Wm. Quinn, Fred; same, best ewe, Jane.

Goats.

Angoras—Emile Portal, Billy 3d.

Swine.

Best Berkshire Boar—Tyler Beach, Waldo; same, best sow, Lizzie. Best Essex sow, P. H. Doyle, English Betsey. Best two pigs, any breed, Tyler Beach, Red Berkshire, Thomas H. Laine, premium recommended. Finest and fattest hog, Tyler Beach.

Poultry.

Best Trio Brahmas—T. J. Waite, Brighton; best trio Cochins, same; best trio Hamburgs, same; best trio Leghorns, O. J. Albee, Santa Clara; best trio Plymouth Rocks, T. J. Waite; best trio Bantams, same. Premiums recommended to Mrs. S. Newhall and Mrs. Raynor on Langshans. Best trio Houdans, premium recommended to T. J. Waite. Premium recommended to O. J. Albee on American Sebrights. Best trio Bronze Turkeys, T. Miles. Best trio geese, Louis Verdon, Jr. Best trio ducks, Mrs. S. Newhall.

Agricultural Implements.

Best display of agricultural machines and implements, Farmers' Union; Best horse hay rake, A. S. Babcock & Co.; best cider mill, Farmers' Union; best hand and straw cutter, A. S. Babcock & Co.; best hand corn-sheller, Farmers' Union; best lawn mower, Farmers' Union; best header, Farmers' Union; best grain sowing machine (broad cast), Farmers' Union; best combined self-binder and header, Farmers' Union; best self-raking and reaping machine, Farmers' Union; best reaping machine, Farmers' Union; best mowing machine, E. W. Mills, on Victor mowing machine; best combined reaper and mower, Farmers' Union; best display of reaping and mowing machines, Farmers' Union; best self-binder and harvester, Farmers' Union; best harrow, Farmers' Union; best cultivator, A. S. Babcock & Co.; best horse hoe, Farmers' Union; best double shovel plow, Farmers' Union; best elevator for stacking grain, W. T. Adel; best track cleaner for mower, W. Prindle, Santa Clara; best fanning mill, Farmers' Union; best platform scale, Farmers' Union; best farm or road scraper, A. S. Babcock & Co.; best windmill, George H. McDonald & Co., on Centennial windmill and pump; best fruit drier, Daniel Dempsey, of San Francisco; best gang plow, Farmers' Union; best sulky plow, Farmers' Union; best double plow, Farmers' Union; best side-hill plow, A. S. Babcock & Co.; best sod plow, Farmers' Union; best one-horse plow, Farmers' Union; best plow, all purposes, Farmers' Union; B. F. Wellington, San Francisco, incubator, premium recommended.

Carriages.

Best family carriages, F. Jung; best one-horse family carriage, A. S. Babcock & Co.; best top buggy, A. S. Babcock & Co.; best open buggy, Hatman & Normandin; best two-seated open carriage, same; best farm wagon for general purposes, A. S. Babcock & Co.; best spring market wagon, H. Prindle; best driving cart, W. T. Adel; best ladies' phaeton, A. S. Babcock & Co.; best two-wheel phaeton, F. Gambert; best exhibit of carriage painting, F. Jung.

Grains, Plants and Flowers.

G. V. Bennett, best wheat; Thomas Barkway, best corn; Frank Hamilton, best barley; G. Roop, best pumpkins D. E. Gish, best red potatoes; Thomas Barkway, best squash; same, best beets; Mrs. T. H. Laine, best exhibit of tomatoes; R. D. Fox, best collection of green-house plants; same, best hardy ornamental evergreen plants; same, best display of cut roses and dahlias.

Dairy.

Santa Clara Cheese Manufacturing Co., best cheese; Mrs. T. H. Laine, best butter.

Fruit.

D. E. Gish, best collection quinces; Mrs. C. D. Horne, best collection plums and prunes; also best collection peaches; Dr. S. F. Chapin, best collection apples; also best collection pears; also general display of green fruits of different kinds.

The committee recommended the awarding of a special medal of \$25 value to the Fruit Growers' Association of the Santa Cruz Mountains, as a testimonial of the appreciation of all the citizens of the very fine exhibition of fruits.

The Committee on Grapes recommended that a special medal of the value of \$25 be awarded the Santa Clara County Viticultural Society, as a testimonial of the appreciation of the very meritorious exhibition of grapes.

J. B. J. Portal, Best variety of red wine grapes; same, best variety of white wine grapes; Spencer & Covel, general display of grapes; same, best raisin grapes; same, best table grapes.

The committee recommend a special premium to the Fruit Growers' Association of the Santa Cruz Mountains for the splendid collection of over 30 varieties of table and wine grapes displayed, and especially recommended the Sultana grapes, mostly grown by D. C. Feeley.

Wine.

J. B. J. Portal, best sample of red dry wine; same, best sample of white dry wine; same, best sample of sherry wine; same, best general display of wines; same, best general display of brandy.

The committee also recommended that a special premium be awarded to Captain Merythrew for second best exhibit of red dry wine, white dry wine and for port wine.

Dried Fruits, Etc.

Mrs. C. D. Horne, best exhibit of fruit hermetically sealed in glass; also best exhibit sweet pickles; also best exhibit dried plums; A. C. Penniman, best dried apples; also best dried peaches; also best dried prunes; also best general display of dried fruits; W. Z. Cozzens, best dried apricots; also best dried pears; also best dried cherries; O. J. Albee, dried pears, second premium; Mrs. C. D. Horne, best black walnuts; Dr. S. F. Chapin, best paper-shell almonds; Spencer & Covel, best soft-shell almonds; same, hard-shell almonds.

News in Brief.

THE house of A. T. Stewart & Co., in New York, has closed its doors.

ELECTRICITY displaces oil in forty-two light houses on the French coast.

SIX HUNDRED Jewish families have left Presburg on account of the riot.

THE revenue for 1882 in Russia exceeded the estimate by 9,778,000 roubles.

A GRAND review of the British troops was held Saturday at Cairo, Egypt.

A SOUTH AMERICAN steamer has just taken to England 100,000 beef tongues.

ALL the iron mills in the Wheeling (W. Va.) district will resume operations Monday.

LADIES are candidates for School Superintendent in both Yolo and Shasta counties this year.

THE Khedive has conferred the Grand Cross of the Order of Osmanli upon Admiral Seymour.

PLANS are being matured for lighting the Chicago river tunnels and new City Hall with electricity.

MORE than fifty divorce suits have been commenced in the Superior Court in San Francisco this month.

THE Indian who killed a doctor for not curing his child has been hanged at the Klamath Agency, in Oregon.

A TRAIN was stopped and robbed on the Atchison, Topeka and Santa Fe railroad near Granada Saturday night.

THE steamer R. E. Lee was burned Saturday morning about thirty miles below Vicksburg, with terrible loss of life.

THE number of yellow fever cases at Brownsville since the beginning of the epidemic is 1,900. The number of deaths is 107.

THE shoe manufacturers of Biddeford and Saco, Me., have decided on a general lock out, as they cannot pay the prevailing prices.

THE National Woman Suffrage Association of Omaha elected Elizabeth Cady Stanton President, and a Vice-President from each state.

IN the Philadelphia star route cases the jury found four of the defendants not guilty and one guilty, with a recommendation to mercy.

THE Commissioners of Luzerne county, Pa., are, it is said, feeding the vagrants in jail on mush and molasses to disgust them with prison life.

Important Semi-Tropic Colony Enterprise.

The Redlands in San Bernardino County California.

Superior soil, climate and irrigating improvements. The water system is one of the most perfect in the State. No place in California has sprung into public notice so rapidly and gained so deserving a reputation in so short a time as has the tract of Redlands. Redlands is situated 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. For further information, address, Messrs. Judson & Brown, San Bernardino P. O., California.

DRIED FRUIT.—An interesting instance of combining inventive skill with horticultural wisdom may be seen in the success of the dried fruit of A. C. Penniman at the San Jose fair. Mr. Penniman has a drier of his own device and construction, and the fruit showed that the apparatus was of practical value. Ingenuity is a good thing on a farm, and should be developed by exercise whenever leisure gives opportunity. In this way the farmer may save himself many an outlay, and he stands a good chance of bringing out an invention which will yield him returns by its sale as well as its use. Agriculture and invention are sisters, and there is nothing wrong in courting both of them, providing it is done at proper times and seasons.

DRIVING CART.—At the San Jose fair, Mr. H. Prindle exhibited for J. A. Bilz, of Pleasanton, Alameda Co., two pleasure gigs, or two-wheeled vehicles, that attracted a great deal of attention. The Patent Agency of Dewey & Co. procured his letters patent in August, 1882, and the demand for them has increased each month. The body rests on pivot springs, and is so nicely balanced that they ride quite as easy as a phaeton. Those who have had experience as to their merits, assure us that for ease and comfort they are not to be excelled. They are made with or without top, and the usual jerking motion of two-wheeled vehicles is entirely avoided. A cut of this valuable vehicle will appear in our columns soon.

PUTMAN DRIVING CART.—H. Prindle exhibited at the San Jose fair the Putnam driving cart, which has a movable seat by which one can enter easily from behind the wheel. It is a very pleasing arrangement.

THE VICTOR MOWER.—This home-manufactured mower, made by the Judson Manufacturing Co., gained the first prize at the San Jose fair. The Victor is certainly true to its name in this year's contests.

DRIVING CART.—Capt. W. T. Adel received the first premium for his driving cart at the San Jose fair. It is a very excellent vehicle.

WAGONS.—The exhibit of Studebaker wagons at the San Jose fair attracted much attention.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 4, 1882.

Trade has been somewhat depressed this week by the failure of a large Wheat broking firm and the suspension of another, of which mention is made in another column. Wheat prices are a shade off, as neither shippers nor millers offer more than \$1.67½ for the best. The feeling is aggravated somewhat by foreign advices, which are as follows:

LIVERPOOL, Oct. 4. Wheat: California spot lots are dull, at 9s 1d to 9s 4d. Cargo lots, 43s 6d for just shipped, 43s 6d for nearly due and 43s 6d for off coast.

The Foreign Review.

LONDON, Oct. 3.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The sowing of the 1883 crop is progressing satisfactorily. The tendency of trade has been continually downwards. There was an apparent steadiness at the close, but the varied quality of native offerings of Wheat compares badly with foreign Wheat, which is extremely good. Off cargoes are steadily declining; there were 29 arrivals and 11 sales. Wheat on passage and for shipment is rather firmer. Flour is freely offered and prices are dropping. Foreign Flour is in liberal supply.

Freights and Charters.

Freights during the past week have remained unchanged, with a fair inquiry for tonnage, at, say, £2 5s. Cork for orders, for handy iron ships. Charters drawn during the week number 7 vessels, of a register of 8,959, or an export capacity of 14,438 short tons, or 268,760 cts. The chartered Wheat fleet in port has now a register of £3,419, or an export capacity of 80,128 short tons, or 1,602,560 cts, against 79,523 tons at the same time last year. There is also 1,663 tons engaged at San Diego. The disengaged tonnage in port is again mounting up, being now 67,197, or 1,007,956 short tons, or 2,015,900 cts, against 13,787 at the same time last year. There are also at Wilmington 6 disengaged vessels, of a register of 7,130. Tonnage now on the way to this port has a register of 255,897, against 374,138 at the same time in 1881, and 224,161 in 1880.

Eastern Wool Markets.

BOSTON, Sept. 29.—The Wool market is quiet and firm, with prices well sustained. The sales of the week are 2,700,000 lbs. Fine fleeces are in active request, and coarse and medium are also in demand. Sales of Ohio and Pennsylvania fleeces are made at 41¢@42¢ for X, 42¢@44¢ for XX, and 45¢ for XXX and choice XX. Ohio fleeces are held firm at 44¢ and upward. In Michigan fleeces sales have been made at 39¢@40¢ for X, and 41¢ for XX, but the transactions have not been to any extent. Unwashed fleeces have been in demand, at 19¢@23¢ for low and coarse, and 25¢@35¢ for fine and medium, including choice selections. Combing and delaine selections have been in demand, sales being made at 44¢ and 46¢ for fine delaine, 47¢@50¢ for fine and No. 1 combing. Unwashed combing is selling at 22¢ for coarse, up to 30¢@36¢ for better grades. California Wool continues quiet, sales having been made at 23¢@25¢ for spring, and 90,000 lbs of low fall selling at 11¢. Pulled Wool is firm; choice, easier; superiors have been sold at 45¢@50¢; common and good, 28¢@40¢; foreign Wool, quiet. There have been small sales of Australian, Montevideo and Mediterranean carpet Wool.

The Produce Exchange.

According to the statement of A. Gerberding, Secretary of the Produce Exchange Call Board Association, the sales on call in September were 104,000 cts Wheat, 715,000 do Barley, 39,000 do Oats, 22,000 do Corn, 7,000 do Rye and 58,000 do Bran, valued at \$1,283,690, making a total since the organization of the call, February 27th, of \$6,978,351.57, in 255,243 tons of Produce. Of this amount, \$3,750,248 37 was in Barley, and \$1,696,181.25 in Wheat.

The Grain Exchange.

Philip Gerold, Secretary of the Grain Exchange, has furnished a statement of the sales of cereals by contract, recorded at the Exchange during the first quarter of the present season, as follows: Wheat, 75,220 tons, valued at \$2,471,213; Barley, 6,550 tons, at \$163,132; Oats, Rye, Corn and Grain Sacks, \$49,510; total business, \$2,683,850, of which \$130,000 was done in July, \$548,125 in August, and \$2,005,725 in September. The above does not include the spot sales made in the Exchange, of which there is no record kept. The setting prices for No. 2 Wheat were \$1.66½ for July, \$1.63½ for August, and \$1.61½ for September. For Barley (No. 1 Feed), \$1.26½ for July and August, and \$1.30½ for September.

Eastern Grain and Provision Markets.

CHICAGO, October 2.—Wheat, higher; regular, 94½c October, 94½c November, 93½c year; Spring, 94½c@94½c; Winter, 96c. Corn, higher. 60½c cash, 60½c@60½c October, 60½c November, 54½c year, 50½c January, 52½c May. Oats, higher; 31½c@32c cash, 31½c@32½c November, 34½c May. Barley, steady; 86c. Rye, 58c. Whiskey, \$1.19. Pork, high; \$22.40 cash and October, \$20.95 November, \$19.07½ January, \$19.25 year. Lard, higher; \$12.60 cash and October, \$12.30 November, \$11.45 January.

MILWAUKEE, Oct. 2.—Wheat, inactive and weak; 90½c cash and October; 94½c November. Corn, steady, 60c. Oats, strong, 32c. Rye, tame, 58½c. Barley, lower, 80c.

BAUGS—There has been nothing done in Wheat Bags this week.

BARLEY—Barley has been fairly active, and to-day sales have been quite large. We note sales: On October account, 100 tons No. 1 Feed, \$1.29½, and 100 at \$1.29½. Four lots of 100 tons each were sold, buyer 1882, at \$1.33, \$1.33, \$1.33½ and \$1.33½ cts respectively. In No. 2 deliveries the transfers embraced 100 tons November, \$1.27; 100 do, seller 1882, \$1.24½; 100 do, \$1.24½ cts. The asking price for spot lots of No. 1 Brewing was \$1.37½, but there were no buyers. Sales at the Grain Exchange to-day foot up 500 tons No. 1 Feed, December, \$1.31½ cts.

BEANS—Prices are generally lower, as the new crop is coming, and the immediate demand is not very active.

CORN—Corn is dull and in good supply.

DAIRY PRODUCE—Fancy fresh Butter has gone forward rapidly, and the finest now bring 47½c per lb. Packed Butter is in good supply, and does not change. Cheese has sold better, and California make is quotable ½c higher per lb.

EGGS—Choice ranch Eggs are scarce and the price maintained. Oregon are a shade lower, and railroad Eggs unchanged.

FEED—Hay is about the same, the range being as follows: Alfalfa, \$13.50@14; Wheat, \$15@16; Wild Oat, \$15@16 per ton.

[CONTINUED ON PAGE 265.]



Not Lost.

Fret not because the promise of the buds
The fruit doth not fulfill;
Was not the hope and fragrance which they brought
To us a blessing still?

Nor count as lost the seed we sow in faith
Upon a barren land
And reap not. Doth not God the purpose know,
And bless the sower's hand?

Spurn not the vow the eagle spirit makes
The weak flesh cannot keep;
The ocean bubbles break, but underneath
There flows a current deep.

The buds that blossom not, the withered seed,
The vows we leave undone,
Are germs we drop; yet angels mark their fall,
And raise them to the crown.

Lines for the American Science Association Meeting.

We meet from regions far away.
Like rills from distant mountains streaming;
The sun is on Francisco's bay,
O'er Chesapeake the lighthouse gleaming;
While summer birds the still bayou
In chains of bloom, her bridal token,
Monadnock sees the sky grow blue,
His crystal bracelet yet unbroken.

Yet nature bears the self-same heart,
Beneath the russet, mantled bosom,
As where, with burning lips apart,
She breathes, and white magnolias blossom;
The self-same founts her chalice fill
With showery sunlight running,
On fiery plain and frozen hill,
On myrtle-beds and fields of clover.

Oliver Wendell Holmes.

Bi-Centennial of the Landing of William Penn.

The 200th anniversary of the founding of the Keystone State is to be celebrated in Pennsylvania on October 24th, and the three subsequent days, with parades, scenic displays, historic pageants and other appropriate ceremonies. We have heard of preparations being afoot in Portland, Oregon, San Francisco, Santa Barbara, Los Angeles, etc., for some suitable commemoration of this great event by the Pennsylvanians and the descendants of Quakers; and it would be quite in order to have basket picnics throughout the coast on that day.

Appropos to the occasion, there will be published, in a few days, a book titled "Penn's Treaty," which will embody a thorough research of all the traditions and documentary evidence in relation to this celebrated league, "Never sworn to and never broken." This book will be an authority ("the last word," as the phrase now is) on this notable event. It is well to fix these great events, and stamp these dates in the memories of our children by celebrating them; and to give vividness to the characters of such as William Penn, for,

"The lives of great men all remind us
We can make our lives sublime,
And, dying, leave behind us
Footsteps on the sands of time,
Which some forlorn and shipwrecked brother,
Seeing, may take heart again."

WEBSTER'S WISDOM.—Daniel Webster once said: "Small is the sum that is required to patronize a newspaper, and well rewarded is the patron. I care not how humble and unpretending the gazette which he takes. It is next to impossible to fill a sheet with printed matter without putting something into it that is worth the subscription price. Every parent who has a son away from home at school, should supply him with a newspaper. I well remember what a marked difference there was between those of my schoolmates who had and those who did not have access to newspapers. Other things being equal, the first were always decidedly superior to the last in debate, composition and intelligence."

DRESS.—Of women's dress, the *Christian at Work* says: "It is too elaborate. It is not conceived in the interest of health, cleanliness or comfort, for it contains innumerable tucks, frills and gathers, which are the most perfect dust and dirt collectors known. For all this the sewing machine is mostly responsible. It has done more than any other agency to secure the present elaboration so conspicuous in women's dress. There is no good reason why women should not order their dresses just as gentlemen order their suits; but this will not be done till we come back to an age of simplicity, and when women's dress is confined to as few styles and gathers as characterize gentlemen's suits. Perhaps this will never be."

"BERRY GREEN."—A little San Francisco girl, while eating stewed fruit on a recent visit near Clear Lake, said: "These gooseberries are just as good as they can be, and just as sweet as anything; and when the goose lays them they are sour."

From the Farm House.

[Written for RURAL PRESS by MAID-OF-ALL-WORK.]

My literary duties lately have consisted in writing peaches, plums, tomatoes, etc., dozens of times in rows, with my toilet artistically finished in wax and juice. Such a surfeit of tasting, so much to taste, and a result of no taste for anything. There is not much in the way of planning and thinking to lessen the labor of putting up fruit. It must be done speedily, and without shirking. The library and studio must be closed, the sleeves rolled up and the seige continued through all its lingering sweetness to the end. I do admire the strong, well-made two-quart tin cans. They never leak or break or get misshapen as to their tops; they last for years, and the fruit always turns out in fine condition after six months' imprisonment.

There are ways and ways of bottling fruit, and nearly every housekeeper has her own methods. I will tell you how I used to bottle fruit: I chartered the whole of the day and the whole of the stove for the performance. I first put my fruit to cooking, then washed my jars, leaving the tops wherever it came handy. I put over my largest kettle half full of water, and put in it as many jars as it would hold. Finishing this complication with a cover and weight, I would build up a hot fire and stand over it in agony, lest when the boiling began, the bottles would get into a jam and break each others' necks. When the boiling was successfully accomplished, I would proceed to fish out all the jars but one. How this was done, I know not now, except that it was a hazardous and trying performance, during which everybody fled the kitchen but the operator. Then it was still more trying to balance the boiling jar in the boiling water and fill it with boiling fruit. But the mightiest conflict was to rescue that jar from the water and carry it to the table, everything at boiling point, and my temper gone clear above the thermometer record. Then there was a scramble to find the particular top that fitted that identical bottle, after which I would say, "good," and bathe my head with cold water, and everybody in the house would put their heads in the door and say: "O, there is one bottle filled!" Then a half-cooled jar would be returned to the kettle at the risk of breaking it, and the arm-scalding operation continued at the rate of about 20 minutes to each jar. Now I have grown wiser. Jars do not need boiling, and one only requires fire enough to keep the fruit hot and bubbling. I wash my jars in cold water and place them in a row on the table, with each jar's rubber and top behind it. I wrap a cold, wet towel around each jar, so that the jar will be suspended up right in the towel. Then I carry it to the stove; fill it with a large spoon or cup, and it is carried back to the table and the top screwed on before the towel is hot. There is no burning of fingers or breakage of bottles.

To-morrow is Wash Day.

I think it will not be a worrisome, anxious, tiresome day; at least, I shall eliminate as far as possible every unpleasant feature. I begin wash day by sweeping and putting the house in order. There is no good in making the very books and bedding feel that it is wash day with a pitiful agony of dust and disorder. What if the rubbing does begin late? Then there is nothing to do when it is done. I arrange my clothes in tubs according to the degrees of cleanliness, and pour over each tubful a pail of cold water, having in it a half cupful of good drug-gist's ammonia or common kerosene. When it has soaked into the clothes I cover them with hot, well soaped water, and leave them alone for nearly an hour. When the kerosene is used there is almost no rubbing to do. I rinse them thoroughly in several waters, and they come out clean and white. I do not use a wringer, as it is dirty water that makes clothes streaked, not being hung out wet. Probably I shall lose caste by talking about wash day; but I know plenty of finer ladies than I who wash, and wash; but wouldn't speak of it for the world.

After fruit season, comes a period of peace to the household. And what is more beautiful than the peace of the farm house? The peace of isolation and concentrated purposes; the peace of continuous meditation and regularity of duties; the peace of quiet, shaded rooms; the satisfactory peace of being wholly unfashionable as to hours and habits, and not ashamed of it.

He is to be mourned over who does not love the solitude of the country; the liberty of thought that wafts in with the fresh breezes; the clean, pure, unfiltered air and water that keeps the body young and the soul buoyant and inspired. We labor with our hands, but we are not in continual labor of heart about our plain houses and out-of-style clothes. We do not have regular spasms of agony that our neighbor is stylish, and we are not. What a blessing to be free from fashions, tyranny, and have a free mind and a free soul! And if we all had freer hearts, how much misery we might relieve.

OPINION OF AN EMINENT GERMAN SURGEON. The *Athenaeum* says Prof. Esmarch, an eminent German surgeon, has published a lecture, which he delivered before the Physiological society at Kiel, on the treatment of Gen. Garfield's wound. Prof. Esmarch's lecture was to the effect that Gen. Garfield might have been alive but for the treatment he received.

Halloween.

EDITORS PRESS:—Will you please inform a reader of your paper in regard to the customs and superstitions relating to Halloween? A few of the young people in this valley desire to celebrate Halloween in the old-fashioned way. Knowing but few charms, we will consider it a favor if some of the readers of this paper will inform us of some through your columns.—PHILENA, Bernardo, Cal.

The following, from "Johnson's Universal Cyclopaedia," will, perhaps, serve our correspondents purpose: Halloween, or All Hallows' Eve, the night of Oct. 31st, i. e., the eve of All Saints or All Hallows' day, which is the first day of November. The word hallow is the Anglo-Saxon *halig* and the German *heilige* (holy, sacred, etc.), nearly equivalent to the Latin *sanctus*, from whence comes our word saint. All Saints' (All Hallows' or All Hallow Tide) day, takes its origin from the conversion in the seventh century, of the Patheon at Rome, into a Christian place of worship, and its dedication to the Virgin and all the martyrs. First celebrated on the first of May, the date was subsequently changed to November 1st, and under the designation of "Feast of All Saints," set apart as a general commemoration in their honor, and as such, retained by the Anglican and American Episcopal churches, the collect for which, supplicates for "grace so to follow Thy blessed saints in all virtuous and godly living," etc. On that day it is a custom of Roman Catholic countries (still practiced in Louisiana) to visit the cemeteries for devotions or for laying floral tributes on the graves of relatives. But the "Halloween" has nothing churchly about it, and seems to be a relic of pagan times, or perhaps of mediæval superstitions, which regard it as the time of all others when supernatural influences prevail, and which set apart the night for a universal walking abroad of spirits, both of the visible and invisible world; for on this mystic evening it was believed that even the human spirit might detach itself from the body and wander abroad. Halloween seems clearly allied to the "Walpurgis night," of the Germans, the witch festival, or assembling of evil spirits on the summit of the Brocken, in the Hartz mountains, on the eve of the 1st of May—the day, as already noticed, dedicated to the Christian martyrs or saints. The Walpurgis legend being almost coeval, and early associated with the latter day, it is probable that in England the transference of the festival-day to the 1st of November carried with it the superstitions attributed to its preceding night. Practically, so far as it is recognized at all as it is still in Great Britain and in some of our own states, where church usages and traditions survive (e. g. Maryland and Virginia), it is devoted to sports and practical jokes. Nuts and apples are in requisition, the former giving the name "Nut-crack night" to Halloween in the south of England. They are not only cracked and eaten, but are made the means of vaticination in love affairs.

"The old guldwife's well-hoordit nits
Are round and round divided,
And many lads' and lassies' fates
Are there that night d'ided."

[BURNS: Halloween.]

But the grand sport is that of "ducking" or "bobbing" for apples set afloat in a tub of water. It is believed to be yet practiced in Maryland, and perhaps elsewhere in the U. S.

The foregoing is chiefly historical. Now, if any readers can contribute the methods of the amusing rites, the "charms," etc., we shall be glad to receive them, as they may be useful in many Halloween parties.

FLIES AND THE CASTOR-OIL PLANT.—Observations made by M. Rafford, a member of the Societe de Horticulture at Limoges, show that a castor-oil plant (*Ricinus communis*) having been placed in a room infested with flies, they disappear as by enchantment. Wishing to ascertain the cause, he soon found under the castor-oil plant a number of dead flies, while a large number of bodies remained clinging to the under surface of the leaves. It would therefore appear that the leaves of the castor-oil plant give out an essential oil, or some toxic principle which possesses strong insecticide qualities. Castor-oil plants are, in France, very much used as ornamental plants in rooms, and they resist well variations of atmosphere and temperature. As the castor-oil plant is much grown and cultivated in all gardens, the *Journal d'Agriculture* points out that it would be worth while to try decoctions of the leaves to destroy the green flies and other insects which in summer are so destructive to plants and fruit trees. The plant is also common enough in this country, and readers can therefore test the accuracy of these French reports.

A LUNATIC'S EXPLANATION.—The insane often entertain the most ludicrous idea of their own condition. There is a man in an asylum in one of the neighboring States, who became insane in consequence of a failure in business. He explains the reason of his incarceration as follows: "I am here because of a mere mistake in business. I was engaged during the winter in making mosquitoes' wings, which I expected to sell in the summer. I had 10,000 of them on hand when the season opened, but unfortunately I had forgotten to make them in pairs. They were all left-hand wings, and consequently I lost the sale of them, and was compelled to suspend payment." He relates this story with a gravity and earnestness which testifies to the sincerity of his own belief in the explanation.

Intemperance.

Written for RURAL PRESS by M. J. C.

Where are the masses of our youth tending, and what are the causes? I think the accursed drink is doing more harm to our country than all other evils combined. Indeed, we may justly assign almost all evils to it as the first great cause. You cannot enter the smallest town, but what you will, in bold letters, see, "Saloon" with some other appellation attached to it, with every inducement put out to catch the weak and young boys from 8 or 9 and upwards, fearing to be snubbed if they do not treat and drink. What is the good of our laws if they are not enforced? You will see posted up "No one admitted here under such an age," yet you will see children drunk on the streets every day, at least in our small towns. Now the question is, where do they get it? Are there not enough good men in this fair land of ours (at least if it were not for drink) to enforce the Sunday law? It seems to me when men get so lost to manhood as to wish to sell liquor on the Sabbath, they should be punished for it. Intellect may stand in the pulpit and talk of its evil influence; temperance societies may do what they can, yet until the law comes down with a heavy hand, and the causes are removed, nothing will be done. How many bright and shining stars has liquor dimmed? The insatiate thirst is being handed down. Children unborn are only waiting for development to become miserable drunkards. Mother's prayers, wife's pleadings, sister's tears, have no effect so long as the tempter is so bold. There was a time when men drank, and yet reason was not entirely dethroned, at least not at so early an age. Now boys are wrought up to such a frenzy, that murder is put into their hearts, and vices and crimes of every description are brought about. We hear the world is improving intellectually. Does it seem so? Not to me. Where we have one bright light in the world's firmament, how many are lost sight of in drink? Some will argue a man is not much that will let such a passion master him, yet many a noble and true heart has sunk beneath its weight, crying that the curse might be overcome. Yet there stands the man, so called, with smiling face and jewelry glittering on his fingers, saying in his vile heart what a fool he was. I think man does not feel the bad effects of drunkenness as women do, or they would use greater means to prevent it. I think the time is not far distant when women will cast a vote, and I am very sure not many will vote in favor of liquor. I think the law that permits a man to vote who takes the last bit of bread from a hungry child, and can boldly watch the reeling father go from his den to beat and abuse mother, wife and child, and will refuse a good and noble woman the vote, must be defective somewhere. It has been argued that women are intellectually unfit. I will admit of that reasoning, yet who will dare say such an one as described above is better fitted?

Drink is destroying our social life, as well as political. It is entering our palaces as well as hovels. What can be more offensive to a truly refined lady than to converse with a gentleman, and at the same time catch the fumes of liquor? Let our true men, the women doing what they can, rise up in their might and say, "the 'League of Freedom,' as they call themselves, shall not rule our next Legislature," for truly our Government has had much to do with the present state of things, and I think the time has come when it may most assuredly see the mistake, thinking to raise a revenue from the whisky tax. Let us open our eyes, and look and see if it has not cost us more than it has come to. Let us see if we are not degrading ourselves as a nation, morally, physically and spiritually. We boast to-day of a mighty nation. What may we not attain when prohibition stands at the head of every State, and the liquor traffic is gone into oblivion? This, I predict, is not very far off, and men will be made to feel that their support must come from a better source, and that financial gain must not come at the expense of their fellow men's bread, clothes and brains.

Hollister, Cal.

HEROISM AT HOME.—How useless our lives seem to us sometimes! How we long for an opportunity to perform some great action! We become tired of the daily routine of home-life, and imagine we would be far happier in other scenes. We think of life's great battle-field, and wish to be heroes. We think of the good we might do if our lot had been cast in different scenes. We forget that the world bestows no titles as noble as father, mother, sister or brother. In the sacred precincts of home we have many chances for heroism. The daily acts of self-denial for the love of a good one, the gentle word of soothing for another's trouble, the care for sick may all seem as nothing; yet who can tell the good they accomplish? Our slightest word may have an influence over another for good or evil. We are daily sowing the seed which will bring forth some sort of harvest. Well will it be for us if the harvest is one we will be proud to garner. If some one in that dear home-circle can look back in after years, and as they tenderly utter our names, say:—"Her words and example prepared me for a life of usefulness—to her I owe my present happiness," we may well say, I have not lived in vain.

Need of Reformatory Schools.

The engrossing topics appear to be the railroads and Sunday, but it would be well to give a passing thought to our criminal boys. Our city, township and Superior judges unite in saying that boys are frequently brought before them guilty of various crimes, yet they hesitate to brand them as criminals by committing them to where their associates would be only felons. On the other hand, parents do not wish these boys turned loose to contaminate respectable children. In the District of Columbia, and many Eastern States, there are reform schools or industrial farms. If a ten-year-old boy proves to be a thief, instead of being branded a felon or allowed to run at large and corrupt others, he is committed for a stated number of years to one of these reform schools. There he is given a practical education and kept at work on the farm or in the shop, and finally turned out an industrious, respectable young man. Governor Perkins says there are 72 boys, from 12 to 18 years of age, in the State penitentiary. This one fact proves the necessity of a reform school. Talk with the ladies who have charge of the Orphans' Home, and you will learn that there is scarcely a week passes but they are requested to admit boys guilty of crimes. Of course, such an institution cannot admit them, and the consequence is, they run at large. This fact proves the necessity of a reform school. Talk with our judges, our teachers, our police authorities, and I believe, without exception, all will urge the necessity of a school and farm, to which criminal boys may be committed. The next Legislature should establish such an institution in southern California. The Normal school was an important acquisition; a reform school is fully as necessary.—*Walter Lindley, M. D., in Los Angeles Express.*

This subject is of the greatest importance. In a State where neglected youths so quickly grow up into hoodlums, there should be some carefully organized effort to counteract the tendency. The proper way to reform the youth who have taken the first step in crime should be generally discussed, and the means provided by the State.—*EDS. PRESS.*

Kiss Me Good-Bye, Dear.

That is a phrase heard in the hallway of many a home as the man of the house is hurrying away to exchange daily labor for daily bread in the mart of commerce. Sometimes it is the wife who says it, sometimes infant lips prattle the caressing words, holding up a sweet flower face for the kiss that is its warm sunshine of life, and the strong man waits a moment to clasp his treasure and is gone; and all day he wonders at the peace in his heart; at the nerve with which he meets business losses and bears business crosses. The wife's kiss did it, the baby's kiss did it, and he realizes that it is not wealth or position or luck that makes our happiness, but the influence we bear with us from the presence of those we love.

Kiss me good-bye! Oh, lips that have said it for the last time, would you ever ask again in those pleading tones for the kiss so tardily given? Would we not remember that the relation the flower bears to the universe is as carefully provided for as that of the brightest star; that the little action of a loving heart goes side-by-side with the deed of heroic worth; that love is the dew of life; that the parting for a day may be the parting of a lifetime.

"How many go forth in the morning
That never come home at night?
And hearts have broken
For kind words spoken
That sorrow can ne'er set right."

Make the air vocal with kisses! Many tears have been shed over unkind kisses—over those "dear as remembered kisses after death," but the time to kiss is the present. Kiss your children, man of business, before you leave home; kiss the mother of your children, and that dear old mother who sits in the chair by the window—no matter if her cheek is wrinkled, her heart is young, and then go about your day's work with a "thank God" in your soul that you have some one at home to kiss.

"For though in the quiet evening
You give us the kiss of peace,
Yet it might be
That never for thee
The pain of the heart should cease."

Chaff.

A CITIZEN of Dakota took a Turkish bath in Omaha a few days ago, and died within an hour. The verdict of the jury was: "He hadn't ought to have got so much mud off him all at one time."

"No," he said, as they congratulated him on his engagement, "I'm not so particularly charmed with the girl, but I expect to be happy. Her mother is about the best-tempered woman I know of."

"MAN and wife are one, are they?" said she. "Yes; what of it?" said he suspiciously. "Why, in that case," said his wife, "I came home awfully tipsy last night, and feel terribly ashamed of myself this morning." He never said a word.

EPITAPH said to be copied from a tombstone in the cemetery Montmartre: "Here lies Joseph X., who, for 20 years after the death of his wife, lived in the society of his mother-in-law, and died in the certain hope of a better world beyond."

YOUNG FOLKS' COLUMN.

The Baby Mysteries.

Where did you come from, baby dear?
Out of the everywhere into here.

Where did you get your eyes of blue?
Out of the skies as I came through.

What makes the light in them sparkle and spin?
Some of the starry spikes left in.

Where did you get that little tear?
I found it waiting when I got here.

What makes your forehead so smooth and high?
A soft hand stroked it as I went by.

What makes your cheeks like a warm white rose?
I saw something better than anyone knows.

Whence that three-cornered smile of bliss?
Three angels gave me at once a kiss.

Where did you get this pearly ear?
God spoke, and it came out to hear.

Where did you get those arms and hands?
Love made itself into books and bands.

Feet, whence did you come, you darling things?
From the same box as the cherubs' wings.

How did they all come just to be you?
God thought about me, and so I grew.

But how did you come to us, you dear?
God thought about you, and so I am here.

—*George Macdonald.*

Be Courteous.

[The following letter from Rev. Dr. Snowden, of San Jose, to a friend, is sent for publication in the RURAL PRESS.]

DEAR FRIEND LUTIE:—On our return home we found your message awaiting us. We were pleased to receive it, for it shows that you possess courtesy, a trait of character which is indeed commendable and praiseworthy. Such and similar traits make the highest type of man. After Peter became a Christian, he said, "be courteous."

We have sent many books, cards and Sunday-school papers, besides written many letters that we have never heard from. On hearing of the death of friends and acquaintances, we have written letters of regret and sympathy to the bereaved; and, as far as receiving letters in return was concerned, we might as well have addressed the man in the moon, or the Arabs in Egypt.

In olden times the people paid much attention to courtesy. If a person did them a favor, or in any way showed them kindness, they either thanked them in person, or sent a written message, however brief it might be.

The salutations of the ancient Jews when they met, or parted, were expressive and significant, and frequently partook of the nature of a prayer, such as, "be thou blessed of Jehovah;" "the blessing of Jehovah be upon thee;" "God be with thee."

A few weeks ago we went to Paraiso Springs (a healthy and delightful sanitarium on the mountain near Soledad), and organized a Union Sunday-school. Between San Jose and Gilroy we resolved to test the matter of courtesy, and so we saluted all we met, and of the many strangers addressed, but one responded to our salutation. Some looked cross; others seemed to say, "what does that fellow mean?" and passed by in silence, if not in contempt.

The want of courtesy shows that man's nature is deranged; his moral faculties are perverted, and that he is lacking in the common amenities of life. A few days ago a gentleman met an old acquaintance who was on his way to church, and gave him a cordial salute; but his friend was too busy talking and laughing with the ladies in his carriage to notice the courtesy. That same evening, at a praise meeting, the former was compelled to listen to an address by the latter, in which he dwelt at length on the beauties of the Christian religion, and the joys that await the true believer in Heaven. Of course the gentleman was much edified(?) after the impolite, uncivil, and unchristian treatment of the morning.

Now we would not have you, or any other noble boy, servile and mean, having respect for silver and gold; but hope you will aim at the highest excellence in life; cultivating the head and heart; making Christ, the grand pattern of humanity, your exemplar and friend, and the Bible your compass and guide; then courtesy will be a gem of great beauty, and shine with resplendent luster all along your pathway to Heaven. I am your friend, and the friend of all the youth of our land. J. W. SNOWDEN.

San Jose, Cal., September 25, 1882.

PROVE IT BY MOTHER.—While driving along the street one day last winter in my sleigh, a little boy, six or seven years old, asked me the usual question, "Please may I ride?" I answered him, "Yes, if you are a good boy." He climbed into the sleigh, and when I again asked, "Are you a good boy?" he looked up pleasantly and said, "Yes, sir." "Can you prove it?" "Yes, sir." "By whom?" "Why, my ma," said he promptly. I thought to myself, here is a lesson for boys and girls. When a child feels and knows that mother not only loves, but has confidence in him or her, and can prove their obedience, truthfulness and honesty by mother, they are

pretty safe. That boy will be a joy to his mother while she lives. She can trust him out of her sight, feeling that he will not run into evil. I do not think he will go to the saloon, the theater, or the gambling house. Children who have praying mothers, and mothers who have children they can trust, are blessed indeed. Boys and girls, can you "prove by mother" that you are good? Try to deserve the confidence of your parents, and everyone else. —*Children's Friend.*

GOOD HEALTH.

KEEPING THE PORES OPEN.—The importance of the breathing function of the skin can be easily shown by experiment, for if we varnish over the skin, the subject so varnished often dies of nothing more or less than suffocation. Insects breathe entirely through their skin. The skin does about one-thirtieth of the work performed by the lungs, and in disease of the latter it is very likely much more active in purifying the blood. Then, fourthly, the skin carries off by the sweat much solid matter that would be, if retained in the body, very injurious. Under ordinary circumstances, about a pound and a half of sweat is given off by a man in a day. The body is also kept at a proper temperature by the evaporation of the sweat; hence the importance of keeping the skin clean in order that nature may regulate the heat of the body. Inattention to these points gives rise to various disorders of the system, especially colds, coughs and the like. The fluid which is sweated out of the body comes from the blood-vessels in the deeper part of the skin. A word more about the little fatty glands, and this part of the subject may be left. These little structures give exit to fatty matter, that, by inducing a slight greasy state of skin, prevents too great evaporation; it acts as a protection to the skin against irritants, and it often carries off certain fatty acids from the body. In an irritative skin these glands get choked up by the retained fatty matter, and we then have pimples, as about the face.

REMEDIES FOR VEGETABLE POISONS.—The most dangerous of the vegetable poisons at this season of the year are the hemlocks (including the hemlock dropwort, water hemlock and the common hemlock), fool's parsley, monkshood, foxglove, black hellebore or Christmas rose, buckbram, henbane, thorn apple, and deadly nightshade. In a case of vegetable poisoning, says *Knowledge*, "emetics (the sulphate of zinc, if procurable) should be used at once, the back of the throat tickled with a feather and copious drafts of tepid water taken to excite and promote vomiting. Where these measures fail the stomach pump must be used. Neither ipecacuanha nor tartar emetic should be used to cause vomiting, as during the nausea they produce before vomiting is excited, the poison is more readily absorbed. Vinegar must not be given until the poisonous matter has been removed; but afterward it may be given in doses of a wineglassful, one part vinegar to two parts water, once every two hours in mild cases, but oftener—two half-hourly doses—in cases of greater severity. Where there is stupor the patient should be kept walking about, and if the stupor is great, cold water may be dashed over the head and chest. Strong coffee may be used where the narcotic effect of the poisoning is very marked. It is all-important that in cases of vegetable poisoning a medical man should be sent for at once.

THE MYSTERIES OF A HAIR BRUSH.—A writer in the American *Journal of Microscopy*, has been exploring the forests of bristles in a hair brush, surreptitiously purloined from a lady's toilet-stand, and, though it contained nothing which we are accustomed to regard with unqualified horror, the results of his investigation prove that there are mysteries ordinarily undreamed of in simple appliances of the toilet. There are concealed in the damp lint of hair-brushes, unless kept clean by the use of bicarbonate of potassa or carbonate of soda, many living things, too small for detection by the naked eye, some of which, we are told, are of more than suspicious character, being known as the originators of scald-headed and other diseases of the scalp. The author concludes his article by a caution against wetting the head, recommending dry brushing instead. He also recommends the use of a weak solution of carbolic acid or sulphate of soda, as a cleansing material for hair brushes.

MEDICAL CONSULTATION.—The practice of calling in an additional doctor, when the one already in attendance feels the case becoming grave, has, if the latter is a skillful and experienced man, somewhat the same reasons in its favor as Parliamentary government. The appearance of doctor the second strengthens the nerves of the patient's family, and sometimes, though not always, those of the attendant physician. The patient himself is generally startled and alarmed by it. In 99 cases out of 100 it has not, as everybody knows, any influence whatever on the management of the case. The consulting doctor almost always approves of what the other doctor has done; seldom or never does he suggest anything new. But he makes the other doctor decidedly more comfortable in his relations with the family, and makes the family comfortable in the feeling that they have left nothing in reason untried. —*Nation.*

DOMESTIC ECONOMY

PEACH SHORTCAKE.—Take two heaping teaspoonsful of baking powder sifted into one quart of flour, a scant half teaspoon of butter, two tablespoonfuls of sugar, a little salt, enough sweet milk (or water) to make a soft dough; roll out almost as thin as pie-crust; place one layer in a baking pan, and spread with a very little butter, upon which sprinkle some flour; then add another layer of crust and spread as before, and so on until the crust is all used. This makes four layers in a pan 14 inches by 7. Bake about 15 minutes in a quick oven; turn out upside down, take off the top layer (the bottom when baking); place on a dish; spread bountifully with soft ripe peaches previously sweetened with pulverized sugar; place layer upon layer, treating each one in the same way, and when done you will have a handsome cake, to be served warm with sugar and cream. The secret of having light dough is to handle as little, and mix as quickly as possible. Shortcake is delicious served with Charlotte-russe or whipped cream.

FRENCH PUDDING.—Slice small pieces very thin from your bread, enough to fill a quart dish half full, buttering each piece lightly before cutting. Lay them loosely in the dish, sprinkle on one-half cup of sugar and a little grated nutmeg; then heat one quart of milk; beat the yolks of four eggs, add them just before boiling, and immediately pour over the bread. Beat the whites, add a little sugar and spread them over the pudding; set it in the oven five minutes to brown lightly, and it is ready for the table. This dessert can be made in 20 minutes ready for use.

STEWED QUINCES.—A dish which is suitable for dessert or for tea is made of quinces, peeled, sliced, and stewed till they are very soft. Rub them through a colander, sweeten them well, and put them in a berry dish. While the quince is cooling, make a custard of one pint of milk, the yolks of three eggs, and half a cup of sugar. When it is cool pour it over the stewed quinces. Make a meringue of the whites of the three eggs, and into it beat half a cup of sugar; spread this smoothly over the top.

POTATO PUFF.—Potato puff with the addition of a little cold meat makes an excellent breakfast dish. To two cups of cold mashed potatoes allow two well-beaten eggs, two tablespoonfuls of melted butter, and one cup of sweet milk; beat all together until very light, then add the cold meat, chopped very fine. After mixing it thoroughly, put it in a shallow pudding-dish, and bake for from twenty minutes to half an hour. If preferred, you can bake in well-buttered gem pans.

PRESERVED TOMATOES.—Take of the yellow plum-shaped tomatoes those that are ripe but not the least soft. Pour boiling water on them to take off the skins; allow one pound of sugar to one of fruit, and make the syrup with as little water as will dissolve the sugar; use three lemons to seven pounds of fruit; remove the seeds from the lemons and put the slices in the syrup. When boiled clear, lay in the tomatoes. Boil very gently three-quarters of an hour.

PEACH PIE.—One of the best ways to make a peach pie is to put whole peaches in the crust. Remove the skin, of course, and scatter sugar over the peaches just as if you were making pie in the usual way. The flavor of the peach is thus preserved in a surprising manner, and the presence of the pit is not so objectionable as one would suppose. It is a common practice to put a few whole peaches in each can when putting up this fruit.

PLUM MARMALADE.—Simmer the plums in water until they become soft, and then strain them and pass the pulp through a sieve. Put it in a pan over a slow fire, together with an equal quantity of powdered loaf sugar; mix the whole well together, and let it simmer for some time until it becomes of the proper consistence. Then pour it into jelly-pots and cover the surface with powdered loaf sugar.

RYE CAKES.—Rye tea cakes or breakfast cakes are made of one pint of sweet milk, two eggs, one tablespoonful of brown sugar, half a teaspoonful of salt; stir in this enough flour to make a batter about like griddle-cake batter (rye flour sifted is to be used). Bake in well-buttered gem pans for half an hour. If the cook prefer to do so, she can use part rye and part wheat flour.

TO KEEP DAMSONS.—Put them in small stone jars or wide-mouth bottles, and set them up to their necks in a kettle of cold water; set it over the fire to become boiling hot; then take it off, and let the bottles remain until the water is cold; the next day fill the bottles with cold water and cork and seal them. These may be used the same as fresh fruit. Green gages may be done in this way.

TO PRESERVE SWEET CORN.—Boil the corn on the ear from three to five minutes, then slice off, being careful not to cut too close to the cob, pack down in a stone jar, allowing three pints of corn to one of salt; put in layers. When wanted for use, soak over night to freshen. Corn put up in this way late in the season will keep nice and fresh all winter.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. R. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES 1 week. 1 month. 3 mos. 12 mos.
Per line25 .80 \$2.20 \$5.00
Half line (1 square) .15 .50 1.00 2.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. R. EWER. G. H. STRONG

SAN FRANCISCO:
Saturday, October 7, 1882.

TABLE OF CONTENTS.

EDITORIALS—A Curious Marine Animal; Nostroms Exposed; Failure of the Eastern Apple Crop, 257.
The Week; Cultivation and Evaporation, 264.
The San Mateo Calf Disease—Hoose or Husk; The Victoria Swine; Meeting of the Horticultural Commission; The State Fair, 265.
ILLUSTRATIONS—The Argonauta Argo, 257.
Sow, "Queen Victoria," bred by Scheidt & Davis, Dyer, Indiana, 265.
HORTICULTURE—State Horticultural Society Meeting, 253 9.
THE DAIRY—Notes on Mountain Dairy Farms, 259.
FORESTRY—Forest Trees of California, 259.
PATRONS OF HUSBANDRY—Annual Meeting of the California State Grange; Grange Leaflets—No. 10, 260.
HOME CIRCLE—Not Lost; Lines for the American Science Association Meeting; Bi-Centennial of the Landing of William Penn. (Poetry); From the Farm House; Halloween; Intemperance, 262. Need of Reformatory Schools; Kiss Me Good-Bye, Dear; Chaff, 263.
YOUNG FOLKS' COLUMN—The Baby Mysteries (Poetry); Be Courteous, 263.
GOOD HEALTH—Keeping the Pores Open; Remedies for Vegetable Poisons; The Mysteries of a Hair Brush; Medical Consultation, 263.
DOMESTIC ECONOMY—Peach Shortcake; French Pudding; Stewed Quinces; Potato Puff; Preserved Tomatoes; Peach Pie; Plum Marmalade; Rye Cakes; To Keep Damsons; To Preserve Sweet Corn, 263.
ENTOMOLOGICAL—Woolly Aphis on Apple and Pear Trees; The Phylloxera in France, 264.
QUERIES AND REPLIES—A Pioneer Seedling Peach; The Growth of Mulberry Trees; Alfalfa and Morning Glories, 264.

Business Announcements.

Drills and Harrows, Baker & Hamilton, S. F.
Three-Plow Gang, George Bull & Co., S. F.
Buck Thorn Barbed Fence, J. A. Roebeling Son's Co. S. F.
Physicians, D. C. Moore and Mrs. E. D. Moore, S. F.
Sewing Machines, H. P. Andrews, S. F.
Trout Trees, C. W. Reed, Sacramento, Cal.
Carbon Bisulphide, John H. Wheeler, S. F.
Napa Valley Nurseries, Leonard Coates, Napa, Cal.
Cattle and Hogs, Mrs. M. E. Bradley, San Jose, Cal.
Poultry, Mrs. M. E. Newhall, San Jose, Cal.
Poultry, O. J. Albee, Santa Clara, Cal.
Poultry, Thos. Waite, Brighton, Cal.

The Week.

The absorbing topic is the storm, which has drenched the central areas of the State from the coast to the mountain tops. Along the northern and eastern limits of the storm there were fierce features—the pelting of the hailstones and furious gusts of wind—and over the whole of its extent the storm had more the method of a winter's visitation than the wonted gentleness of the early rains. According to the Signal Service report, which we print in another column, it appears that the heaviest downpour was at Sacramento rather than near the coast. This is more unfortunate, because in the interior there is most property exposed; the grain, the raisins, the dried fruit, and the unplucked grapes all would have been better served by a continuance of the drouth for a month or so. According to present reports, there has been considerable loss to farmers from exposed crops. There should be less of this each year, for no provident man will leave his wealth uncovered if he can do otherwise. We are all learning to be more provident in California, and the sheltering of crops is a point to remember.

Rain in October of so wet a nature strikes most people as unusual, and it is true it has some surprising works; but there is on record probably as great a rainfall as we shall have

this month. To show this, we have collected the following figures:

October Rainfall for 33 Years.

Year.	Inches.	Year.	Inches.
1849	3.14	1866	...
1850	...	1867	...
1851	21	1868	...
1852	80	1869	1.29
1853	12	1870	...
1854	2.41	1871	...
1855	...	1872	...
1856	45	1873	...
1857	93	1874	2.73
1858	2.74	1875	...
1859	...	1876	2.69
1860	91	1877	...
1861	...	1878	1.19
1862	40	1879	...
1863	...	1880	...
1864	13	1881	...
1865	26		...

In an examination of the records to discover whether light or heavy rain in October could be made to indicate the annual total, we find no concord of results. Both wet and dry years have followed a heavy October rain, and they have followed a dry October also.

Cultivation and Evaporation.

Almost every one in this State knows that if you wish to preserve moisture in the soil during the dry season, you must cultivate the surface as finely as possible. By doing this the capillarity of the soil is destroyed and the evaporation from the surface prevented. The fact is so well understood in this State that it lies at the foundation of all the most successful practice in orchard, vineyard, field and garden. Application is made on a thousand-acre wheat field, and a thousand-feet flower garden, and in each case the result is the same—a profitable conservation of moisture for the use of the growing plant.

A few years ago we had some correspondence with Dr. E. L. Sturtevant, then of South Farmington, Mass., concerning the amount of evaporation of moisture from soils under various conditions. At that time he expressed an idea of the need of careful experiments to measure the loss of moisture by evaporation, but he was then unable to make them. Now Dr. Sturtevant is director of the New York State Experiment Station, at Geneva, and has abundant facilities for conducting all kinds of useful investigations. We are not surprised to learn that one of his earliest endeavors was in the direction of measuring evaporation from the soil. He has issued a preliminary announcement of his results, from which we shall quote as follows:

That cultivation, by forming a loose soil upon the surface which acts as a mulch, conserves the water to the soil is a fact which is well established, and should be more commonly appreciated. For the purpose of offering numerical values which shall express the influence of cultivation, we have tried the following experiment: Oak boxes of one cubic foot capacity were made of half-inch stuff, and thoroughly soaked with oil. The bottoms being removed, the frame was forced down into the earth in the corn-field, and the bottoms afterward put in position. We thus had a foot cube of soil in its natural position. The surface of the earth in one box was left undisturbed, while the surfaces of two boxes were kept cultivated. By weighing these boxes, the gain or loss in weight is assumed to measure the evaporation which has taken place from each. From July 26th to August 1st, six days, the cultivated soil evaporated at the rate of 606 gallons per acre less than the undisturbed soil, or less 151 gallons daily per acre. From August 1st to August 10th, nine days, the cultivated soil evaporated 2,367 gallons per acre less than did the undisturbed soil, or less 263 gallons daily per acre. During the whole period from July 26th to August 10th, 15 days, the saving of water effected through cultivation figured up 212 gallons daily per acre, or, expressing these facts in another form, the undisturbed soil lost per acre, from July 26th to August 10th, 4,243 gallons, the cultivated soil 1,069 gallons.

In calculating our results to the acre by multiplying the evaporation which has taken place from a square foot of surface by 43,560, the unavoidable errors are correspondingly multiplied, and while duplicate series can never be expected to give precisely the same numerical results, yet the one fact becomes unquestionable, that through cultivation we are enabled to conserve to the soil a large amount of water during a drouth. Indeed, observation through extended periods of drouth, also plainly shows the superiority of fields that have been well cultivated over those where cultivation has been neglected.

CALIFORNIA COTTON.—The latest news about the cotton crop of this State comes in the *Bakersfield Californian* which says that one hundred acres were planted with cotton this season at the Bellevue ranch, of Messrs. Haggins & Carr, and it has done well as usual. Picking is now in progress, and the yield is a fine one. Those who are well informed in these matters express the opinion that were it not for the charge-all-the-freight-will-bear policy of the railroad it would be the most profitable crop that could be grown in this vicinity. The crop is experimental like those which have preceded, the seed of every variety known to commerce having been planted with the view of determining which is the most prolific and profitable. But little difference can be discovered between one variety and another, and the point is not yet decided.

ENTOMOLOGICAL.

Woolly Aphis on Apple and Pear Trees.

At the quarterly meeting of the Board of State Horticultural Commissioners, Pres. C. H. Dwinnelle made a statement of observations and experiments upon the woolly aphis to the following effect: Some months ago at a meeting of the State Horticultural Society I called attention to the woolly aphis as the most threatening enemy to apple culture on this coast. While the codlin moth thins out the fruit, this aphis stunts or destroys the whole tree. On the limbs it causes unsightly swellings and distortions; checks the growth of wood and fruit; encourages the growth of the leaf fungus (*Fumago salicina*), and makes the tree a foul and disgusting object. Where it attacks the roots they too show excrecences, and eventually become decayed and useless. The similarity of the insect to the phylloxera of the vine, suggested to me the search for a resistant stock on which to work apples, and thus render them proof against the pest. In answer to my inquiries, Mr. John Lewelling stated that he had found seedlings of the Golden Russet and Rawle's Jennet to be free from the attacks of the woolly aphis, and that in selecting young stocks he found those with deep straight roots to be better than such as had fibrous roots near the surface. He also recommended placing lime and wood ashes about the crown of the tree as a remedy for the aphis.

Afterwards Mr. John Rock, of San Jose, presented to the University two trees of a local seedling stock, which, as far as he had observed, was free from woolly aphis. They were planted in an infested orchard, and repeated attempts have been made to colonize them by placing twigs covered with the insects about them in the soil. Thus far, none have been observed upon them. If they withstand for another year, we shall think that a very valuable stock has been discovered.

Spray for Tops.

In fighting this insect on the tops of trees, admirable results have been obtained in the University orchard by spraying in summer and early autumn with a hot decoction of tobacco.

One pound of tobacco to one gallon of water is the strength when first made, but from one to three times as much water is added before use. The tobacco used is the refuse stems and sweepings from the San Francisco factories.

To secure efficiency the greater strength is preferred. The liquid is strained and applied by means of a Merigot force pump and bug spray.

The wire gauze is removed from the nozzle, and the diaphragm having the largest opening is used to secure a free passage for the fluid. The nozzle is held within a few inches of the infested limbs, so that the process is more a washing than a spraying one. The leaves are also drenched as far as practicable, both on the upper and under sides. The temperature of the liquid in the barrel from which it is pumped is maintained as nearly as practicable at 130° F. This is not very difficult to do, by adding a pailful hot from the boiler occasionally.

This is the same remedy recommended by Mr. Elwood Cooper, of this board, after using it with success against the black scale of the olive (*Lecanium oleæ*).

Trees that were languishing under myriads of the aphis were vastly improved by the washing. The destruction of the aphis allowed the sap to nourish the apples, and they increased very rapidly in size.

Applications for the Roots.

We have not, as yet, had satisfactory results in treating the roots of the infested trees. Gas lime destroyed the insects, but injured the roots badly, where drainage was imperfect. It may prove to be safe on deep well-drained soils, in small quantities, say a spoonful on a circle of six feet in diameter. Experiments should be tried cautiously, and at first on trees of little value; the effect on the insects and trees cannot be judged of until there has been a good deal of rain or irrigation to carry the solvent parts of the gas lime down through the soil.

Carbon bisulphide is on trial, and may prove to be the remedy sought when we know just how to apply it.

Danger Ahead.

The season's experience has shown a wonderful increase in this pest in its old haunts, and its appearance in new ones. An active campaign against it should be begun at once. The owners of some of the oldest, and heretofore most productive apple orchards in the State tell me that unless a remedy is found, there will be no profit in apple culture in the future.

The Chilean Consul says that at one time this pest swept off the wild apple trees in Chili. This season the pest has been observed in Alameda county, on the pear as well as the apple. Further observation as to resistant stocks should be made by those who have opportunity. The winged form of the woolly aphis will appear within the next few weeks, and it is important that as many of them as possible should be destroyed before that time. Infested trees that are not worth fighting for should be destroyed at once.

Grub them out with at least two feet of the roots and burn them. An old stump with a few suckers about it will breed enough of it to keep up the stock of the neighborhood. The pest is well established in many of our nurseries, and the greatest care should be exercised to insure

the disinfection of trees brought this winter. The roots as well as tops should be dipped in weak lye, one pound of the commercial article to one gallon of water, or soaked in soapsuds or tobacco decoction, after cutting off and burning all roots that have been injured by the aphis.

The Phylloxera in France.

The *Vigne Francaise* (French Vine) announces that the year 1882 will be remarkable for the increase of the ravages of phylloxera. The scourge has destroyed from 50,000 to 60,000 hectares of French vineyard every year, but this year the average will be surpassed. From all parts are signaled new spots of the disease, and in the vineyards already affected, but not properly attended to, the plague is spreading very rapidly. In the departments of Gironde, Haute Garonne, Tarn, Oude, Oriental Pyrenees, and in the vineyards left in Herault, people are more than before alarmed by the progress of the terrible insect.

QUERIES AND REPLIES.

A Pioneer Seedling Peach.

EDITORS PRESS:—I send you, by express to-day, a sample of a peach. It was raised by an old pioneer who purchased one gallon of pits, for \$5, brought from Virginia in early days. The pits had been saved and selected with great care from Virginia orchards and brought to California about 25 years ago. Most of the trees have either died or have been lost sight of, but I have discovered that an orchard of this same lot of pits was planted in Contra Costa county, and will try to trace them up, as some may be valuable. The sample sent seems to meet the requirements of the canners or driers. I understand it usually ripens in the orchard in this valley, from whence I obtained it, about the second week in September. This year it is later. The leaves are large, with reniform, often four glands.—LEONARD COATES, Napa City, Cal.

The peach is good sized, pale yellow, sparsely dotted with small, bright red spots. It is good size, free from red at the pit and well flavored, the only objection we can see to it being a somewhat irregular form. The search after desirable seedling fruits is a promising one, and should be encouraged.

The Growth of Mulberry Trees.

EDITORS PRESS:—In your issue of Sept. 23d, a correspondent says the mulberry grows as fast in California as the eucalyptus, and stands frost, and the wood makes the best of fence posts. Are these facts? If so, I will put out several acres. How large will they grow, and how tall? I want them for a forest. We have some frost—22°. What is the easiest and best tree?—G. W. FROST, San Miguel, San Luis Obispo county.

Personally, we know too little of the growth of the mulberry in this State, but our contributors have all the facts, and should let no misstatement go uncorrected. We never heard that the wood was regarded as very durable if exposed to decaying influences. We have another interesting letter on the mulberry awaiting publication, and we trust all will send forward their facts.

Alfalfa and Morning Glories.

EDITORS PRESS:—Is alfalfa a remedy against morning glory (a weed very plentiful in this district)? And, if so, how slow the same.—G. K., San Jose.

Has anyone succeeded or failed with this treatment of the pest?

Floating Matter in the Air.

Prof. Tyndall has collected in a volume under the above title his well-known lectures and monographs on "Dust and Disease," "Optical Department of the Atmosphere in Relation to Putrefaction and Infection," "Further Researches on the Department and Vitality of Putrefactive Organisms," "Fermentation and its Bearings on Surgery and Medicine" and "Spontaneous Generation," adding to each such notes as bring the latest results in each topic, down to the time of publication. Whatever Tyndall finds worthy of his investigation and exposition, the public has long known to be most worthy of its own study. And few men, especially scientists, are so capable of refreshing the most arid subjects by the charm of diction and even splendor of style.

But these subjects are in themselves startlingly important. They include the question of spontaneous generation, and may, in one contingency, cast more than a doubt upon all special creation. They exhibit a method of searching for organisms which are too minute, even, for the microscope. They restore dying industries by exhibiting and destroying the parasitical disease. They indicate such new surgical treatment that gangrene and mortification have lost their chief terrors. Certain forms of human and other animal disease, notably the dreadful splenic fever, they ward off by a preventive, as effectual as vaccination itself, and they promise, under the strongest probabilities of success, that they will soon similarly withdraw the venom from diphtheria, all the malignant fevers, cholera and the plague itself.

Nothing can be more fascinating than the history of the experiments thus far made. The shining, mote-tossing bar of light revealed in a dark room by letting in a ray of the sun, is shown to be the atmospheric play of the potential germs of disease and death. This laden air we must breathe. If, from whatever cause the morbid germs find in us anywhere an appropriate nidus, we are at the mercy of these invisible and terrific powers of the air. No larger subject has appealed to any of us for many a day.

DURING September the public debt was decreased \$14,805,948.

The San Mateo Calf Disease—Hoose or Husk.

[Written for RURAL PRESS by ROBERT ASHBURNER.]

Judging from what we have read in the RURAL PRESS, the hoose or husk seems to have assumed an epidemic form among calves in San Mateo county. Turpentine and oil is an old remedy for the disease, and, I believe, the only effectual one yet discovered for expelling the worms from the system.

As the malady appears to be unknown in its true character in this country, the following extracts from Prof. Law's recent work, "The Farmers' Veterinary Adviser," which should be in the hands of every stock man, may help to explain the nature and treatment of the disease, and also the dangerous nature of the malady. Under the head of "Parasites in the Lower Air Passages," he says: "The most common are different forms of round worms, which, in certain animals (lambs, calves, pigs and birds), may assume the dimensions of a plague and cause enormous yearly losses to a country.

"The *strongyli* (*S. micrurus* in calves), in their mature condition, inhabit the air passages within the lungs, but they may be reproduced either in or out of the body. In the first mode, the female worm creeps into an air cell, and there encysts herself and produces eggs, or young worms already hatched, or she dies and the myriad eggs, hatching out amid the debris, the young worms finally migrate into the adjacent air passages grow to maturity and reproduce their kind.

"In the second mode the impregnated female worm is expelled by coughing, and perishes in water or in moist earth, or on vegetables, and the eggs, escaping from her decomposing remains, may lie unhatched for months or even a year, or, in genial weather, may rapidly open and allow the escape of the almost microscopic embryo worms. These, in their turn, may live an indefinite length of time in the water, or moist soil, or on vegetables, and only begin to grow to their mature condition when taken in by a suitable host with food or water.

"The symptoms in calves are essentially those of bronchitis, with the difference that the whole herd is affected and mucus coughed up, containing worms either singly or rolled up in bundles. There is at first only a slight, rather husky cough, repeated at irregular intervals. There follows dry staring coat, embarrassed breathing and advancing emaciation. Soon the cough becomes frequent, paroxysmal and suffocating, with expectoration of mucus and worms.

"In the worst cases death may result in 10 or 15 days after the onset, though more commonly it is delayed two or three months and recovery may take place.

"Prevention.—In localities and countries to which the disease is new, the parasites should be killed out by the continuous medical treatment of the diseased animals, or if necessary their destruction, and the separation of all horses, asses, mules and cattle from the infested pasture or its vicinity, and from any stream of water running through or close to it, as well as from all fodder, roots, grain, etc., grown on such land, for several years after.

"In infested localities calves and foals should never be pastured on land recently occupied by older stock of the same kind, or allowed access to water used by such stock.

"Sheep, goats or pigs may be safely fed on such land. Avoid overstocking. Drain the land to clear off pools or wet spots. Keep the young stock from infested or suspected pastures while wet with dew and rain, and from clover and allied plants which, by their moisture, are liable to harbor the worm. Suspected beasts should be kept apart from the healthy, and from healthy pastures until subjected to thorough and continuous treatment. The carcasses of the dead should be very deeply buried, or better, the lungs and windpipe removed and burnt to ashes. All exposed animals should be well fed on a diet including dry grain, and should be allowed salt to lick at will, this being destructive to the young worms.

"Treatment.—Feed liberally on linseed cake, roots, oats, or other nutritious diet, to which may be added a mixture, in equal parts of sulphate of iron, gentian and ginger, in proportion of four ounces to every 10 calves of three months. To destroy the intestinal worms, give every morning fasting, a tablespoonful of table salt, or an equal amount of oil of turpentine, shaken up with milk.

"For the lung parasites, place the affected animals in a close building, and burn pinch after pinch of flowers of sulphur on a piece of paper, laid on an iron shovel, until the air is as much charged with the fumes as they can bear without coughing violently. The administrator must stay with them in the building to avoid accidents, and keep up the application for half an hour at a time.

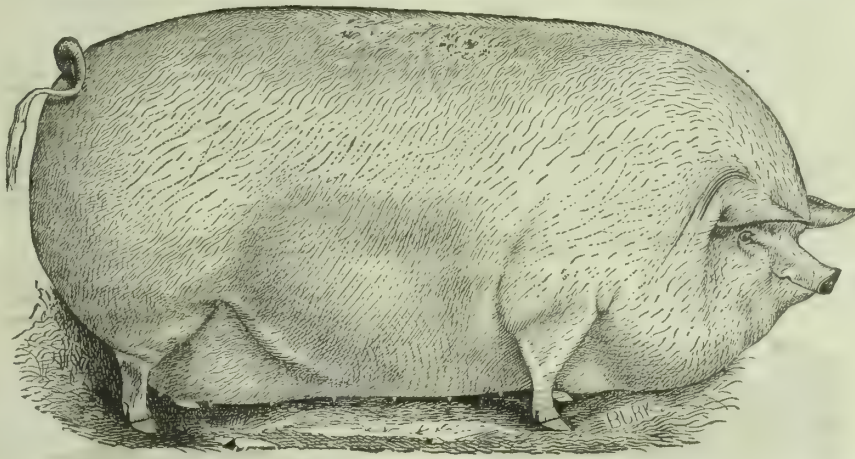
"It should be repeated several days in succession, and at intervals of a week for several weeks, so as to kill the young worms as they are hatched out in successive broods, and not until all cough and excitement of breathing have passed should the animal be considered as safe to mix with others, or to go on a healthy pasture."

W. C. Spooner, V. S., says, in "Morton's Cyclopedia of Agriculture": "The disease has been successfully treated by giving an ounce of oil of turpentine in four ounces of linseed oil, and repeating the dose once a week for several

times. The worms are produced by eggs supposed to be taken with the water, and it has been caused by keeping the calves on a very bare pasture during the summer months."

Youatt says: "Turpentine is peculiarly destructive to worms. It most effectually expels the tape worm from the human being, and it often produces the expulsion of vast quantities of the round worm from the horse. It also enters into every part of the circulation. It is recognizable in the urine and in the breath. Can it, through the medium of the circulation, be brought into contact with these worms? It is worth the trial."

We have given the above rather lengthy extracts in order to cover the whole ground, and to show that wherever the disease has got a foothold it will require vigorous action on the part of the owner of the herd and land to exterminate it therefrom. Though turpentine does not appear to have been known as a remedy for this disease in the time of Youatt, about 50 years ago. I can remember it as the only one that was considered effectual some 30 years ago, about which time the disease assumed an epidemic form in a district in the north of England; but, as far as my memory serves me, it only attacked calves kept on rather cold and bare pastures. I never knew it to originate in a well fed and carefully kept herd. It appears to be one of the many evils that result from over stocking pastures. When will farmers wake up to the fact that understocked pastures will grow more grass than overstocked lands, consequently, in the long run produce more milk, butter and flesh. Cows will, it is true, produce a very limited supply of milk and butter on bare pastures; but the carcasses of cattle so kept, whether intended for the production of beef or milk, are seldom or never better than mere bags of bones, ready to drop off at the first outbreak of any disease in the neighborhood. Those who keep their land heavily stocked should make ample provision for winter feeding, and begin to feed early in the season while the cattle are



SOW "QUEEN VICTORIA," BRED BY SCHEIDT & DAVIS DYER, INDIANA.

in good condition, not waiting, as many do, till the cattle have lost most of their flesh.

Flesh lost is not easily regained; better keep it on while it is there to keep. Beasts in good condition are more easily kept, and with less risk, than cattle that are thin and poorly kept.

At all events, keep the calves in a growing and thrifty state, by supplying them with plenty of nutritious food, and some kind of a shelter—it does not matter much what it is, so that it keeps off the coldest of the winter rains, and there will be fewer complaints and sickness to combat in proportion to the extra care given them when they most need it.

Baden Station, San Mateo Co., Sept. 29, '82.

TIMBER ON MINERAL LANDS.—Secretary Teller has rendered a decision in respect to the right of mill owners and residents upon mineral lands to cut timber from such lands within the lines of mining claims regularly located, and possessed under local land laws and customs, subject to the United States laws governing such claims. The Commissioner-General of the Land Office in a recent letter, expressed the opinion that a locator upon such lands was unable to protect himself in the courts or otherwise, as he has only a possessory right to said lands, subject to certain subsequent conditions; but that he can obtain a patent, and although the title to the land is still in the United States court, the Government cannot protect him. He based this opinion on the ground that the act of June 1879, now in force authorizes settlers and residents in mineral districts to cut and remove lumber from public mineral lands for any purpose except for export. He indicated, however, that a reservation might be made by the Department, making a regulation in favor of mining locators to timber growing upon their claims. In this opinion the Secretary does not concur. He says the locators of mining claims; so long as they comply with the law governing their possession, are invested by Congress with the exclusive right of the possession and enjoyment of all the surface included within the lines of their location. This ought, he says, to amount to a property capable of being enjoyed and transferred, and may be protected in the courts, and it is the duty of the possessor to care for his own if trespass be attempted; but, he adds, the duty is not imposed upon the Government of intervening to protect an individual occupant.

The Victoria Swine.

Black hogs are found best for California climate, as a rule; but it is to be presumed that our stock-growing readers are pleased to learn of all new breeds of animals, and for this reason we have secured an engraving of a sow of the Victoria breed which is coming into prominence in the Western States. It may be remarked that there are two breeds known as Victoria, one having originated in New York State, and the other in Indiana. The breeders of each of these races seems to have developed his animals from different factors, and without knowledge that both had chosen the same name, Victoria.

The sow shown on this page was bred by Scheidt and Davis, of Dyer, Indiana. Her name is Queen Victoria, and the engraving represents the animal at 15 months old. She is a famous prize winner, as her record is as follows: Winner of first premium at Chicago fair, Sept. 12, 1881, for best sow under two years old; first premium and sweepstakes at Lake County (Ind.) fair, October 4th; first premium at Chicago fat stock show, Nov. 7, 1881, and was one of the five that took the special premium of \$125, given by Mr. Field at that show, for the best five fat hogs, any age or breed.

Mr. G. F. Davis, the junior member of the firm Scheidt & Davis, originated the Victoria breed of swine from the crossing of four distinct breeds of hogs, viz: Poland China, Chester White, Berkshire and Suffolk. The hogs are described as of very fine bone and quality and are excellent for crossing on the large breeds, or natives. They possess great power of transmitting their color and fine quality when bred to other breeds. Their average weight at 10 to 12 months old is 300 to 400 lbs., and by heavy feeding have been made to weigh nearly 500 lbs at one year old. As breeders they are unsurpassed, raising almost every pig they breed.

One of the sows, "Pretty Duchess," dropped six litters in two years, and raised 54 out of 55 pigs.

The Victorias are white in color, and have a good coat of hair; stand very firm on their feet, and have an excellent constitution. They mature at a very early age, and are claimed to give more pork for a given amount of feed than any other breed. The large amount of prime meat to weight of carcass, make them the favorite of shippers and packers. They have short legs, broad straight backs, and deep sides. Their disposition is said to be very kind and their behavior quiet.

A LARGE FAILURE OF WHEAT DEALERS.—One result, perhaps, of the present disposition to encourage wheat speculation or grain gambling, may be seen in the ignominious collapse of the firm of Helmrigh & Hansen, wheat brokers, the latter of whom is now in jail in default of bail. The charge on which Mr. Hansen has made himself criminally liable was the withdrawal of some securities from the Pacific Bank under pretense of speedily returning them, and then otherwise disposing of them. The failure of Helmrigh & Hansen has led to the embarrassment of Degener & Co., but it is believed that affairs can be arranged so that the firm may continue business. A meeting of the creditors of Helmrigh & Hansen was held Monday afternoon. Representatives from the Nevada Bank, the Comptoir d'Escompte, the Pacific Bank, and the bank of P. Berton & Co., successors to the Swiss Bank, were present. Mr. Helmrigh related his connection with the trouble and his utter ignorance of the doings of his partner. He avowed his intention of doing all in his power to make good the liabilities of the firm. Charles Dresbach, who had been garnished in connection with the affair, was present. He stated that some small amounts were due him on account of the firm. F. Burton & Co. are involved £1,000; the Comptoir d'Escompte about \$75,000. The entire indebtedness is estimated at about \$200,000.

Four million four hundred thousand dollars of the new gold certificates have been sent to New York. They are of the denomination of \$100.

Meeting of the Horticultural Commission.

The regular quarterly meeting was held in this city on Thursday Sept. 28, C. H. Dwinelle presiding—Present Commissioners Chapin, Smith, West, Cooke and Shinn and the Secretary John H. Wheeler. The minutes of the preceding meeting were read and approved. An election of officers resulted as follows: C. H. Dwinelle, President; Dr. S. F. Chapin, Vice-President; M. T. Brewer, Treasurer, and John H. Wheeler, Secretary.

Charles H. Shinn announced his intention of resigning from the Commission before another meeting, as he intended to leave for an extended trip East, during which trip he expected to contribute to the Commission whatever experience he might meet with concerning horticulture.

A communication from the Viticultural Commission was read by the Secretary recommending the Chief Executive Horticultural Officer to enforce the necessary rules for the protection of our trees from curculio and other noxious insects which may be introduced on nursery stock.

Mr. Cooke reported that he had decided to enforce the horticulture laws, and to have inspectors appointed at Sacramento, Stockton, Los Angeles, Oakland and San Francisco to attend to and enforce the disinfection of all fruit trees imported during the ensuing year.

The Secretary read a report on the codlin moth by Felix Gillet, of Nevada City in which was detailed his successful conquest against this insect by the use of bands of cloth about the trees, to be removed and cleaned of insects lodging therein at stated periods, besides scraping and cleaning the trees well to destroy larvae and eggs. Mr. Gillet further reported on the successful use of sulpho-carbide of potassium in fighting the apple-tree root louse on young trees or nursery stock.

Some discussion arose as to how often bands or traps set for the larvae or codlin moth should be cleaned. Gillet's experience was that the worm developed in 15 days; Cooke's, 8 days; Dr. Chapin's, 19 days.

Mr. Cooke exhibited a parasite of the codlin moth, of great interest to all. He further reported that, after extended conference with commissioners and silk growers throughout the State, and personal investigation, he could find no insect injurious to the mulberry tree.

Mr. Dwinelle reported that efficient work was being done by Colonel Hollister, of Santa Barbara, in fighting the *Icerya purchasi*, or cottony cushion scale, with hot water. Mr. Dwinelle further produced a communication from Albert White, of Riverside, which reported that the people of Los Angeles district had become fully alive to the necessity of washing their trees and fighting insect pests generally, and that much washing with soap solutions had been done on the citrus trees about Los Angeles.

The second annual convention of California fruit growers, to be held at San Jose on the 14th of November, was next considered. Committees were appointed to secure low rates from transportation companies for horticulturists coming from different parts of the State, and to indicate a proper programme to regulate notices, expenses, etc., the Horticultural Society of Santa Clara county volunteering to supply the money necessary for the conducting of the convention.

The State Fair.

We feel some delicacy in expressing our opinions freely in regard to the management of our State fairs, for the reason that some may think we are prejudiced, and others that we are trying to write them down instead of up. Our only aim and desire is to contribute our mite to make our State fairs great financial successes and beneficial institutions to the whole State; but we cannot do this by approving the policy pursued by the society. The fair last year, as a financial success, was far behind the one of the previous year, yet the receipts of the fair just closed were over \$550 less than the receipts of last year. Why this falling off? The Sacramento Bee, which didn't believe what we stated in regard to the management some weeks since was true, attributes the falling off this year to the little shower of rain they had one afternoon, and says that it will be seen that the entire difference in the receipts of this and last year can be attributed to that day alone. Now the fact is, the receipts were less every day this year, with the single exception of Thursday, than they were last. Indeed, but for the great turn out of the Sacramento people on Thursday of this year, running the receipts up nearly \$1,000 above those of the same date last year, the total amount taken in would have fallen nearly \$2,000 behind the miserable failure of last year. And what does this prove? Just what we stated, namely, that the farmers are losing interest in these State fairs, because, too much attention is paid to horse racing and not enough to agricultural exhibits. The meager attendance five days in the week and the large turn out on Thursday, shows clearly that the farmers were not there to attend, but that the city people did manage to get to the fair one day in the week. We have no fault to find with any particular person; on the contrary, we believe the society generally did what they thought best, and all did their duty individually. Especially do we believe much credit is due Secretary Smith for the able and efficient services he has rendered the society.—Galt Gazette.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAKS & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

M. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

OAK GROVE POULTRY YARDS, O. J. Albee, Santa Clara, Cal. Breeder of high-class standard Poultry: American, English, Langshans and Brown Leghorns. Choice birds for sale in pairs, trios, or breeding pens. Eggs for hatching in season. Satisfaction guaranteed. Write for prices.

TOULOUSE GESESE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address: T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

T. WAITE, Brighton, Sacramento Co., Importer and Breeder of Thoroughbred Poultry. Took Premiums at State Fair, 1880 and 1881, of Leghorns, Brown and White, S. S. Hamburg, Plymouth Rocks and Pekin Ducks Eggs \$3 per dozen.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. K. Game Bantams. Eggs and Fowls for sale.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

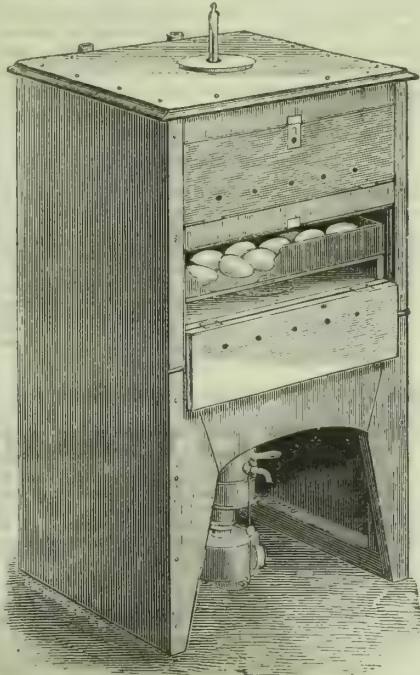
BAGS. TENTS. HOSE, TWINES.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAKS & SON

GEORGE B. BAYLEY.

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to GEO. B. BAYLEY, Box 1771, San Francisco.

LANGSHANS.

My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR, 1416 Folsom St., S. F.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. L. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address PACIFIC RURAL PRESS, Of fice, San Francisco. January, 1882.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872. In lots to suit. Address J. A. POPPE, Sonoma, Cal.

S.los Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Bess, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office. For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.

LITTLE'S SHEEP DIP.



Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco

FOR SALE.

17 Half Spanish, Half Saxony Bucks. 1 Leicester Buck. 8 Leicester Ewes. Apply to

ASHTON & HOLCOMB,

413 Montgomery Street, SAN FRANCISCO.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast

The American Driven WELL WATER SUPPLY SYSTEM

FOR MINING, IRRIGATION, MECHANICAL DOMESTIC & MUNICIPAL PURPOSES

Send for Circulars.

BABCOCK & CO.,

40 Merchants' Exchange San Francisco, Cal.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast Inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. O. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TEEM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

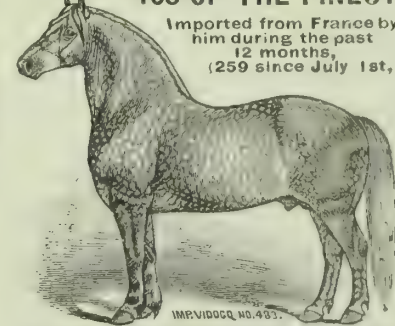
OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. R'y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Birds, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food: 1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25. Sold by the trade generally, or address G. G. WICKSON, 319 Market St., S. F.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.

Circulars furnished on application.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,

STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

SAN FRANCISCO MARKET REPORT.

(Continued from Page 261.)

FRESH MEAT—Pork has dropped off another fraction. Other Meats are unchanged.

FRUIT—Prices are about the same as before. Tahiti oranges are now coming in larger amounts.

HOPS—Choice Hops of all kinds have advanced to 60c. There are reports of injury to Hops by the rain, but no definite information at hand.

OATS—Oats are selling better this week, and prices have advanced to \$1.05 per cwt for the best.

ONIONS—Onions are dull at 55c for the best Silver-skins.

POTATOES—Nearly all kinds have shaded off a little, as shown in our list.

PROVISIONS—Trade is fair and rates unchanged.

POULTRY AND GAME—Poultry has been a little weaker, and is quotable at a slight reduction—about 50c per dozen. Game is selling well.

VEGETABLES—Marrows and Squash is now \$5.00 per ton.

WHEAT—Wheat is just now a little depressed, but, with the moderate amount on hand, cheap freights, etc., the outlook cannot be regarded bad. Just now speculation is at a low ebb. We note sales at 3 o'clock of 200 tons No. 1 White, buyer \$2, \$1.72. Sales on the Grain Exchange of 500 tons No. 2, January, \$1.64.

WOOL—There is rather more doing, but rates are low, as shown in our table.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Oct. 4, 1882.

BEANS & PEAS.	
Bayo, cal.	3 25 @ 30
Butter	3 50 @ 35
Cashew	3 50 @ 30
Peas	2 50 @ 25
Red	2 12 @ 10
Pink	2 12 @ 10
Large White	2 50 @ 25
Small White	2 50 @ 25
Lima	2 50 @ 25
Field Peas, blk eye	2 50 @ 25
do, green	2 50 @ 25

BROOM CORN.

Southern	3 @ 30
Northern	3 @ 30

CIGARETTES.

California	4 @ 40
German	4 @ 40

DAIRY PRODUCE, ETC.

Cal. Fresh Roll, lb.	40 @ 45
do, Fancy Brands	40 @ 45
French Roll	40 @ 45
Firkin, new	23 @ 30
Eastern	18 @ 20
New York	18 @ 20

CHEESE.

Cheddar, Cal.	12 @ 13
do, Swiss	12 @ 13
Cheddar, doz.	35 @ 40
Ducks	35 @ 40
Oregon	35 @ 40
Eastern, by express	25 @ 30
Picked here	25 @ 30
1 lb.	25 @ 30

FEED.

Brant, ton	17 25 @ 17 50
Corn Meal	12 00 @ 12 50
Hay	12 00 @ 12 50
Middlings	23 00 @ 23 50
Oil Cake Meal	23 00 @ 23 50
Straw, bale	55 @ 60

HIDE.

Extra, City Mills	5 25 @ 5 50
do, Country Mills	4 75 @ 5 00
do, Oregon	4 75 @ 5 00
do, Walla Walla	4 50 @ 5 00
Superior	3 50 @ 4 00

FRESH MEAT.

Beef, 1st quality, lb.	7 50 @ 8 00
Second	6 50 @ 7 00
Third	5 50 @ 6 00
Mutton	4 50 @ 5 00
Spring Lamb	6 50 @ 7 00
Pork, undressed	6 50 @ 7 00
Dressed	6 50 @ 7 00
Veal	8 50 @ 9 00
Milk Calves	7 50 @ 8 00
do, choice	8 50 @ 9 00

GRAIN, ETC.

Barley, feed, cal.	1 27 @ 1 30
do, brewing	1 30 @ 1 35
Chevalier	1 35 @ 1 40
Buckwheat	1 35 @ 1 40
Corn, White	1 70 @ 1 75
Yellow	1 70 @ 1 75
Small Round	1 70 @ 1 75
Oats	1 50 @ 1 55
Milling	1 50 @ 1 55
Rye	2 00 @ 2 05
Wheat, No. 1	1 02 @ 1 05
do, No. 2	1 02 @ 1 05
do, No. 3	1 02 @ 1 05
Choice Milling	1 02 @ 1 05

HIDES.

Hides, dry	19 @ 19 1/2
Wet-salted	19 @ 19 1/2

HONEY, ETC.

Raw Honey, lb.	23 @ 25
Honey in comb	12 @ 14
Extracted, light	9 @ 11
do, dark	8 @ 10

HOPS.

Oregon	55 @ 60
California	55 @ 60
Wash. Ter.	55 @ 60
Old Hops	55 @ 60

NITS Jobbing.

Walnuts, Cal.	10 @ 11
do, Chile	10 @ 11
Almonds, Ed. sh. lb.	10 @ 11
Soft shell	10 @ 11
Brazil	10 @ 11
Peanuts	14 @ 15
Philberts	14 @ 15

ONIONS.

Red	30 @ 40
Silver-skin	30 @ 40

POTATOES.

New, cal.	50 @ 75
-----------	---------

Lumber.

WEDNESDAY M., Oct. 4, 1882.

It dwood.

Rough	18 @ 20
Smooth	20 @ 22
Floor and step	22 @ 25
RETAIL	
Smooth	22 @ 25
Surfaced, No. 1	22 @ 25
1 inch	22 @ 25
Pickets, rough	22 @ 25
do, fancy	22 @ 25
do, square	22 @ 25

Pine.

Rough	18 @ 20
Smooth	20 @ 22
Floor and step	22 @ 25
RETAIL	
Smooth	22 @ 25
Surfaced, No. 1	22 @ 25
1 inch	22 @ 25
Pickets, rough	22 @ 25
do, fancy	22 @ 25
do, square	22 @ 25

Gold, Legal Tenders, Exchange, Etc.

(Corrected Weekly by SUTRO & Co.)

SAN FRANCISCO, Oct. 4, 3 P. M.

SILVER, 4.

GOLD BARS, 890 @ 910. SILVER BARS, 10 @ 11 3/4 cent. discount.

EXCHANGE on New York 5 premium; London, 49 1/2 @ 49 1/2.

Paris, 5.15 francs @ 5.15 dollar; Mexican dollars, 91 @ 92.

New York (4 per cent), 112 1/2.

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Oct. 4, 1882.

FRUIT MARKET.	
Apples, bx.	35 @ 100
do, Basket	40 @ 60
Apricots, bx.	50 @ 75
Bananas, bunch	2 50 @ 4 00
Blackberries	2 @ 8 00
Cantaloupes, each	23 @ 30
Cherries, each	12 @ 12 1/2
Cherry Plum, bx.	25 @ 75
Cocoanuts, 100	6 00 @ 7 00
Crabapples, bx.	30 @ 70
Cranberries, chbl.	12 50 @ 14 00
Currants, doz.	4 00 @ 5 00
Figs, bx.	25 @ 30
Gooseberries	23 @ 30
Grapes, bx.	40 @ 50
do, Rose Peru	50 @ 60
do, Muscat	50 @ 60
do, B. Hamb'g	50 @ 60
do, Tokay	50 @ 60
do, Isabella	70 @ 80
Limes, Mex.	8 00 @ 9 00
do, Cal. box	75 @ 80
Lemons, Cal. bx.	50 @ 60
Sicily, box	3 @ 8 00
Australian	3 @ 8 00
Nectarines	3 @ 8 00
Oranges, Cal. bx.	4 50 @ 5 00
do, Tahiti M	35 00 @ 40 00
do, Mexican	15 00 @ 17 00
do, Loretto	15 00 @ 17 00
Peaches, box	50 @ 1 25
do, Smocks	50 @ 1 25
Pears, Cal. bx.	1 00 @ 1 25
do, Bartlett	1 00 @ 1 25
do, do, bk. 1 00 @ 1 25	
Pineapples, doz	6 00 @ 8 00
Plums	40 @ 60
Quinces, bx.	40 @ 60
do, box	50 @ 75
Prunes	10 @ 12 00
Raspberries	10 @ 12 00
Strawb'rs, chbl.	8 00 @ 10 00
Watermelon	100 4 00 @ 6 00
DRIED FRUIT.	
Apples, sliced, lb.	4 @ 6
do, evaporated	9 @ 11
do, quartered	5 @ 6
Apricots	13 @ 14
Blackberries	14 @ 16
Oranges	28 @ 30
Uates	9 @ 10
Figs, pressed	4 @ 7
do, loose	3 @ 4
Nectarines	11 @ 12 1/2
Peaches	6 @ 12 1/2
do, pared	13 @ 15
Pears, sliced	7 @ 9
do, whole	7 @ 9
Plums	5 @ 6
Pitted	10 @ 12 1/2
Pineapples	30 @ 45
Raisins, Cal. bx.	2 25 @ 2 50
do, Halves	2 @ 2
do, Quarters	2 @ 2
do, Eighths	2 @ 2
Zante Currants	8 @ 10
VEGETABLES.	
Artichokes, bx.	25 @ 30
Asparagus	2 @ 3
Beets, chl.	7 @ 7 1/2
Cabbage, 100 lb.	37 1/2 @ 1 00
Carrots	2 @ 3
Cauliflower, doz	1 00 @ 1 25
Corn, green, bk.	1 00 @ 1 25
Cucumbers	30 @ 45
Eggplant, box	2 @ 50
Garlic, lb.	1 1/2 @ 2
do, poor	1 @ 1 1/2
Lettuce, doz.	10 @ 12
Mushrooms, bx.	2 @ 3
Onions, green, lb.	2 @ 4
Parsnips	2 @ 3
Peppers, sk	50 @ 75
do, Chile	2 @ 7
Rhubarb, bx.	25 @ 75
Squash, Marrow	5 00 @ 8 00
Spinach	2 @ 4
do, waxy	2 @ 4
do, Lima	2 @ 4
Summer Squash	40 @ 50
Tomatoes, box	10 @ 25
Turnips, chl.	75 @ 1 00

Pacific Coast Weather for the Week.

(Furnished for publication in the PRESS by NELSON GORUM, Sergt. Signal Service Corps, U. S. A.)

The following is a summary of the rainfall for each day of the week ending 11:58 A.M. Wednesday, Oct. 4th, for the stations named:

Date.	Thurs.	Fri.	Sat.	Sun.	Totals.
Olympia.	.00	.00	.00	.00	.00
Portland.	.00	.00	.00	.00	.00
Roseburg	.00	.00	.00	.00	.00
Cape Mendocino.	.00	.00	.00	.00	.00
Red Bluff	.00	.00	.00	.00	.00
Sacram'to	.00	.00	.00	.00	.00
San Francisco	.00	.00	.00	.00	.00
Visalia.	.00	.00	.00	.00	.00
Los Angeles.	.00	.00	.00	.00	.00
San Diego	.00	.00	.00	.00	.00
Winnemucca.	.00	.00	.00	.00	.00
Pioche.	.00	.00	.00	.00	.00
Salt Lake.	.00	.00	.00	.00	.00

I. J. Truman

In noticing the dissolution of the co-partnership of Jackson & Truman, manufacturers of bay and all other kinds of presses, we are glad to know that Mr. Truman contemplates entering the merchandise business again. He is perhaps, the best known man on the coast to merchants and farmers, having been in a leading position in a prominent agricultural house for 18 years, both in Sacramento and this city. He is a man well liked by all who have dealings with him, and retains all old customers and makes many new friends by his energy, and is bound to build up a large business in any line he may engage in. He has an office at 327 Market street, and continues the manufacture and sale of presses, and other goods, and fills orders for all kinds of goods sold in this city, at the lowest prices. He believes in advertising, and always was a liberal supporter of the RURAL, and we hope his name will long continue to appear in our columns. Should the numerous readers of the RURAL need any information from this city, we beg to assure them that a letter to I. J. Truman, San Francisco, will be promptly and satisfactorily answered.

A Good School for Girls.

The next half-term of the Harmon Seminary, Berkeley, Cal., will begin October 16th. The school has a good patronage, the farming counties having a good share of the attendance. The beginning of the next half-term will be a good time to commence the course, although pupils are received at any time and assigned to classes for which they may be prepared. We are assured that the school is praiseworthy in every respect.

OVER 180,000 Howe Scales sold—Hawley Bros. Hardware Co., General Agents, San Francisco.

PERFECT FITTING CORSET.—Mrs. C. V. Turner received much admiration for her patent corset at the San Jose fair.

FARMER'S FRIEND PLOW.—We call attention to the advertisement of the new plow, called the "Farmer's Friend," imported by Geo. Bull & Co., 31 Market street. Prominent farmers who have used these plows, among whom are Mr. Elwood Cooper and Col. W. W. Hollister, of Santa Barbara, have given testimonials as to their merit and desirability.

FARM GATE HINGE.—At the San Jose fair, Mr. Wm. B. Williams, of Oakland, exhibited his combined hinge and roller for farm gates. It costs but little more than the common hinge, while it has many advantages over it, and is described as one of the best devices ever invented for hanging common board or farm gates.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McJannet—Santa Clara county.
M. P. Owen—Santa Cruz county.
J. W. A. Wright—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
H. H. McDONALD—Solano and Yolo counties.
L. L. WOODMANSEE—Napa county.
Wm. S. TAYLOR—State of Nevada.
L. WALKER—Butte, Sierra, Plumas and Lassen counties.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Sewing Machines.

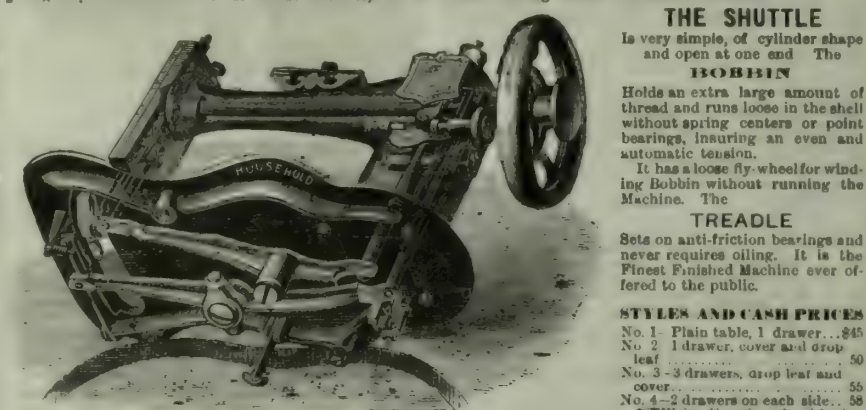
Several first-class styles, good as new, will be sold at a bargain. Call on or address H. F. D., at this office.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

THE
Easy Running, Simple and Beautiful

"HOUSEHOLD."

Delivered upon receipt of price, freight paid, to any B. R. station or steamboat landing in California or Nevada. This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm, giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



HOUSEHOLD HEAD.
MARK SHELDON, Wholesale Agent,
9, 11 & 13 First St., S. F. Agents Wanted.



WHEELER'S CARBON BISULPHIDE.

FOR KILLING SQUIRRELS, GOPHERS, PHYLLOXERA, Etc.

Should be Used After the First Rains.

Sold by Druggists and Dealers in General Merchandise. May also be obtained direct from the Manufacturer,

JOHN H. WHEELER,
Manufacturer, also, of

Sulpho-carbonate of Potassium and other Disinfectants for Vines and Trees.

ALL KINDS OF FERTILIZERS AND VINEYARD SUPPLIES FURNISHED.

OFFICE: 111 Leidesdorff Street, - - - SAN FRANCISCO.

It has Worked Wonders.

A lady writing from Racine, Wis., makes this gratifying report: "We finished taking our second supply of Compound Oxygen last month. It has worked wonders for my mother. When she began treating with the Oxygen she was extremely low and prostrate in her bed, with a variety of complaints. I had no hope of her recovery. She is now able to go about the house and do many pieces of work, and is a continual testimony before me of the wonderful power of Compound Oxygen." Our treatise on Compound Oxygen, containing large reports of cases and full information, sent free. Address DR. STARKY & PALER, 1109 and 1111 Girard Street, Philadelphia, Pa.

All orders for the Compound Oxygen Home Treatment directed to H. E. Matthews, 608 Montgomery Street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

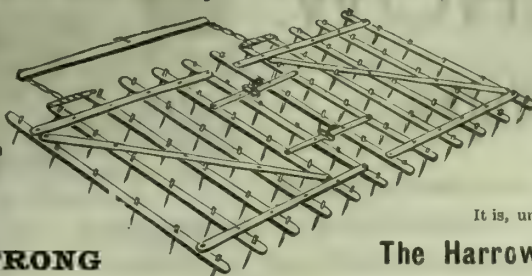
DEWEY & CO., Publishers,

No. 252 Market St., S. F.

REMARKABLE TESTIMONY.—July 16, 1881, the Chicago Tribune published three columns of interviews with leading and most extensive horse dealers of New York and Chicago, in which there is an almost unanimous agreement that the grade Percheron-Normans have short backs, deep bodies, broad chests, and are more compactly built than any other breed. That they have best feet for standing the hard work on pavements more endurance, style and action, best dispositions, giving better satisfaction generally to those buying horses, to wear out, and sell for more money in the horse markets of the United States than any other breed of heavy horses. Pure bred Percheron-Normans are sold in large numbers by M. W. Dunham, of Wayne, Ill., and who, to date, has imported from France and bred nearly 1,000 of this magnificent breed. He has about 400 on hand.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

BY TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

BYRON JACKSON,Successor to
JACKSON & TRUMAN,
Manufacturer of**Agricultural Machinery, Windmills, Harrows, Etc.**THE
V-Shaped
SOLID STEEL
TOOTH HARROW
CHEAP!
STRONGWill Last Longer
AND
Do Better Work
Than any other
Wooden Harrow.

It is, undoubtedly,

The Harrow of the Age

I believe the above to be the best wooden frame Harrow made. The teeth are made of solid steel, V-shaped, which form is found to give greater strength, last longer and cut better than any other shape. The frame is strong and well braced, and they will do the work.

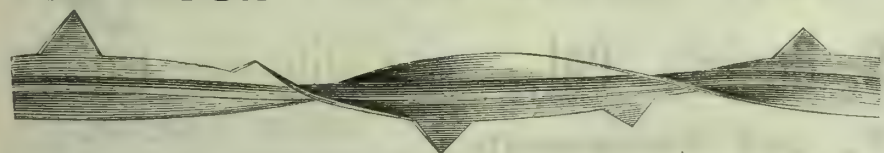
I am also making the **IRON HARROW**, which was introduced last year with such good results. Send me your orders for Harrows and I will guarantee satisfaction.

AWARDED**FIRST****PREMIUM**

At the

STOCKTON FAIR,**1882.**

Address

BYRON JACKSON.625 to 631 Sixth St.,
149 to 169 Bluxome St., }**SAN FRANCISCO CAL.****THE BUCK THORN BARBED FENCE.**

One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.**Commission Merchants.****Grangers Business Association,**
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

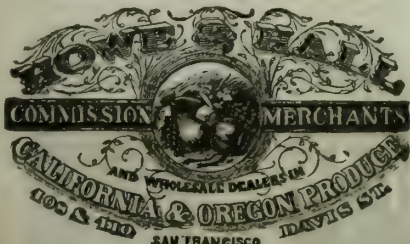
Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

SEND YOUR CONSIGNMENTS TO

**DAVIS & SUTTON,**

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,
(Successors to J. W. GALE & CO.)**Fruit and General Commission Merchants,**

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F.
Prompt Returns. Advances Liberally on Consignments.

Commission Merchants.

PETER MEYER. LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET.

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders. P. O. Box 1940.

DALTON & GRAY,**Commission Merchants**

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,
P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED

JAS. P. HULME,
Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.,)

Wool, Grain,

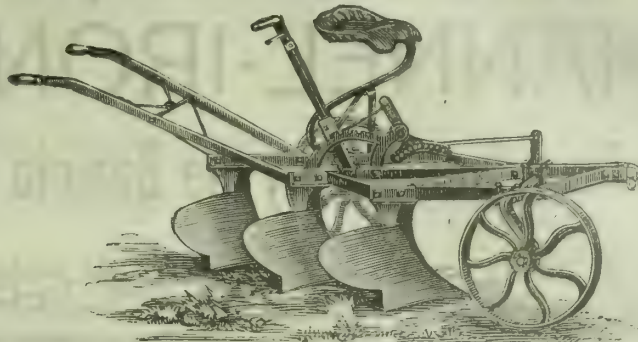
AND GENERAL

Commission Merchants.10 Davis Street, near Market,
SAN FRANCISCO.**MOORE, FERGUSON & CO.,****COMMISSION MERCHANTS****Grain, Flour, Wool, Etc.**

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

The "Farmers' Friend" 3-Plow Gang.**Ranchers, Farmers, Orchardists and Vineyardists,**
ATTENTION!

The millennium has come and a new era in plowing, owing to the introduction of the "FARMER'S FRIEND." This Plow, or combination of three 9-inch Plows, we first brought to the notice of the Agriculturists of this State last fall, importing and distributing about 40 of them through the different counties, testing them thoroughly in all kinds of soils and under all conditions, and what has been the result? Not a single plow failed to give the best satisfaction, and to far surpass, in its economy and work, every other Plow yet tried in California.

These Gangs will skin sod two to four inches deep. Plow corn, wheat or oat stubble two to seven inches deep, and in working summer-fallow once over are most effective in killing weeds and preparing the ground for seed. For side-hill plowing they far surpass either single or double Plows, as the use of a pole is dispensed with, allowing the Plow to follow the beam. This point alone is invaluable to ranchers who farm hills, as it enables them to use Gangs where, in the past, they have been confined to the use of single Plows. Being built low, in orchard work they do not interfere with the branches overhead, the shape and construction of the Plow thus adapting itself for orchard and vineyard work.

The mold-boards are made of steel, and owing to their shape, turn the soil completely over, covering all trash and weeds. The shares are of either steel or chilled iron, as desired.

The celebrated agriculturist and economist, Ellwood Cooper, Esq., who has purchased several of these Gangs for his orchards at Elwood, Santa Barbara county, writes us that he considers them the most economical Plows he ever used for orchard work, and for putting in grain they supersede all others in his experience. Col. W. W. Hollister, also of Santa Barbara, and one of the largest ranchers in the State, who has used heretofore Two-Plow Sulky Gangs, says, after a thorough trial of the "FARMER'S FRIEND," that it does better work and requires less horseflesh, cutting 27 inches, than his Two-Plow Gangs, cutting 24 inches.

Also, Mr. J. S. Sherman, Superintendent of the late Mark Hopkins' estate, at Redwood City, who has bought three of these Plows, writes us that, with one Gang and three horses, he can plow five acres a day and leave the ground in better condition than with any other single or double Plow he ever used.

We have received many other praiseworthy notices from prominent Californians, which lack of space will not admit of publishing, but to anyone sending us their address, we will mail the names of farmers who are using the "FARMER'S FRIEND," and by writing direct to them reliable information can be obtained.

To make it perfectly safe for these desirous of buying Plows, we will give the following written guarantee with every Plow sold, viz.: That the "FARMER'S FRIEND" GANG will do better work and more of it with less horseflesh than any other Plow sold in California.

Price, \$75; including an extra set of shares, with seat, \$5 additional. Try the "FARMER'S FRIEND" before buying Plows.

GEORGE BULL & CO.,

Sole Agents for the Pacific Coast.

Office and Salesrooms, 31 Market Street,

SAN FRANCISCO.

Also, agent for the J. L. CASE FLOW CO.'S CELEBRATED CENTER DRAFT SULKY AND WALKING PLOWS. RACINE CHILLED IRON PLOWS. WM. HARRISON'S FARM, FREIGHT, HEADER AND SPRING WAGONS. Send for Catalogue.

FRUIT TREES.**100,000 Fruit Trees**

IN DORMANT BUD

For sale at low prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES.

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at 50 cts. each. Send for Catalogue and prices to

C. W. REED & CO.,

Sacramento, Cal.

LADIES

Why pay such enormous prices for Sewing Machines when you can buy as good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. **H. P. ANDREW,** Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.

D. G. MOORE, M. D.,

AND

MRS. E. D. MOORE, M. D.,

OF THE

Trall Hygienic Medical and Surgical Sanitarium
Have returned from a tour in the States and resumed Chronic and general family practice, including rheumatism, at 1023 Market St. 447 Cancer, Consumption, Bright's Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion and all Chronic and desperate cases a specialty.

Napa Valley Nu series.

FRUIT TREES, GRAPE CUTTINGS, \$3.50 per 1,000
Rooted Vines, Riparia and other stock. Unirrigated and healthy. For particulars and prices, address, **LEONARD COATES,** Napa City, Cal.

GILES H. GRAY,**JAMES HAVEN.****GRAY & HAVEN,****Attorneys and Counsellors-at-Law,**

530 California St. SAN FRANCISCO

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorety, 527 Commercial St., S. F.

DISSOLUTION OF CO-PARTNERSHIP.

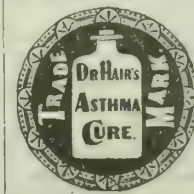
OFFICE OF

JACKSON & TRUMAN.

Notice is hereby given that the partnership heretofore existing between us is dissolved by mutual consent. Mr. Byron Jackson will continue his business in the same place, No. 625 Sixth street manufacturing his Self Feeders, Elevators, Derricks, Engines, Windmills, Harrows, etc.

Mr. I. J. Truman will be found at 327 Market street, and will continue the manufacture and sale of Hay, Hide, Hop and all kinds of Baling Presses, Excavators, Baling Ties, Wire, etc.

Mr. Byron Jackson is authorized to collect all accounts owing the late firm, and to receipt in full for the same.

BYRON JACKSON,
I. J. TRUMAN.

ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hairs' Asthma Cure, proves most conclusively that it is all that it is represented to be. Dr. Hairs' Treatment of Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. B. W. HAIR & SON, Cincinnati, Ohio.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$8 to \$10; Gaiters from \$3 to \$5; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Mens' Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

LAND

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to **EDWARD FRISBIE,** Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

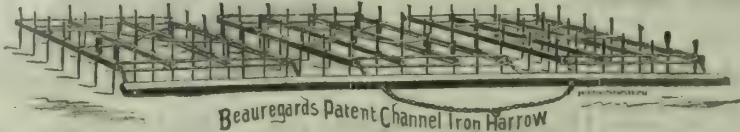
THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$4.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$5.00 per dozen.

Dewey & Co. { 252 Market St. } Patent Agt's

BEAUREGARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to
Break off,
or Nuts to get Loose.



Beauregard's Patent Channel Iron Harrow

Is the Boss of the Field.
It combines Strength,
Lightness of Draft and
Durability.

Light, Strong, Durable, Cheap, and Indestructible, Best Iron Harrow Made.

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and, like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator in thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW is the Best, Cheapest and Lightest Draft.**

PRICES:

1 Section, with 24 Teeth.....	\$14 00	3 Sections, with 72 Teeth and Draft Bar.....	\$42 00
2 Sections, with 48 Teeth and Draft Bar.....	28 00	4 Sections, with 96 Teeth and Draft Bar.....	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide.
For further particulars, Address:

BENICIA AGRICULTURAL WORKS, Benicia Cal.,

Or BAKER & HAMILTON, Agents, S. F. and Sacramento.



A Rapid and Permanent cure for
DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.
N. B.—Correspondence solicited from Wholesale Drug-ists and Liquor Dealers. Agents wanted for Pacific States.

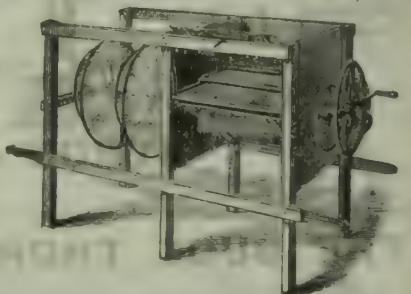
WILLIAMS & CO.,

Sole Proprietors and Manufacturers,
295 Cutter Street, CINCINNATI, OHIO.

NEW INVENTION!

Patented July 25, 1882

Awarded Bronze Medal, Mechanics' Fair, 1882.



"California Chief"

GRAIN CLEANER.

Office, 409 California St. San Francisco

U.S.★ WINDMILL.

First Premium at the State
Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out.

It does its work with less loss of power from friction than any other mill.

It is easily regulated to do as little or as much work as may be required of it.

It is self-governing, and very sensitive to the least change in the wind.

It will run with less wind than any other mill of the same size, doing the same amount of work.

It is simpler and more compact in construction than any other first-class mill.

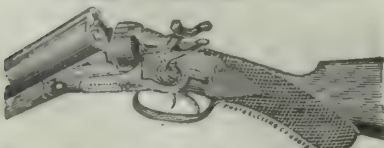
It is the most durable wind-mill known.

It is offered at as low a price as any other first-class mill.

D. G. PAUL, General Agent,
Livermore, Cal.

CANCER Scientifically Treated and Radically Cured. No knife, no cauter, no pain. Book sent free, containing convincing testimony from responsible persons. Address, DR. J. McLEISH, No 215 West Fourth Street, Cincinnati, O.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistols, Revolvers, Remington-Union Guns. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12 Gauge, \$32, 10 gauge, \$35, Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.
201 AND 203 EL DORADO STREET, STOCKTON, CAL.

CHEAPEST.

BOOTH'S SURE DEATH

BEST.

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS.



ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call.
Address L. P. McCarty, 502 Taylor St. Price, \$4.

Agents can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. O. RIDGWAY & Co., 10 Barclay St., N. Y.

FOR

MUSICAL SOCIETIES.

Glee and Chorus, easy and difficult, are found in Emerson's CHORUS BOOK (\$1.00), Perkins' AMERICAN GLEE BOOK (\$1.50), Cobbs' FESTIVAL CHORUS BOOK (\$1.25), Perkins' GLEE AND CHORUS BOOK (\$1.), GERMAN FOUR-PART SONGS (\$1.50), and Zerrahn's INDEX (\$1.)

Easy Glee and Part Songs are found in abundance in Perkins' new CHORAL CHOIR (\$1.) and his new PEERLESS (75 cts.), also in Emerson's HERALD OF PRAISE (\$1.) and IDEAL (75 cts.)

1,000 or more separate Octavo Choruses, Glee and Anthems, each 6 to 10 cents.

First rate Anthems are found in Perkins' ANTHEM HARP (\$1.25), Emerson's BOOK OF ANTHEM (\$1.25), AMERICAN ANTHEM BOOK (\$1.25), and GEM GLEANER (\$1.), by Chadwick.

Serious Cantatas, as JOSEPH'S BONDAGE (\$1.00), by Chadwick, BEA-HAZZAR (\$1.), by Butterfield, and the classic DON MUNIO (\$1.50), COMALA (50 cts.) and CHRISTMAS (50 cts.), by Gutter-son

Send for lists and descriptions.
Any book mailed for retail price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & CO., 843 Broadway, New York

HEAR YE DEAF. Garmore's Artificial Ear Drum. Invented and worn by him perfectly restoring the hearing. Em-braced for thirty years. It is worth more than its cost. It is not observable, and cannot be per-ceived without aid. Descriptive Circular free. CAUTION: Beware of cheap imitations. JOHN GARMORE, 414 & 436 Sts., Cincinnati, O.

Attention, Housekeepers!!

The immense stock of

Furniture, Carpets, Crockery and House-
hold Goods of

A. EASTON,

Will be offered at cost from OCTOBER 1st until JAN-
UARY 1st. Bargains for all.

El Dorado Street, One Door South of Main,
STOCKTON, CAL.

RANDALL PULVERIZING HARROW.

Descriptive Price List of the Different Sizes of Randall Harrow.

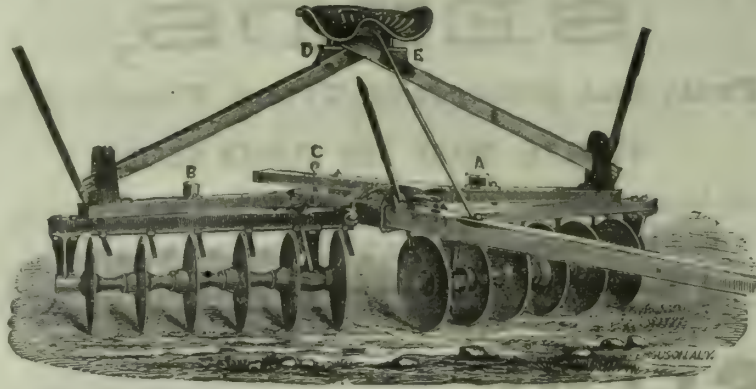
NUMBER	WIDTH OF CUT, FT.	LENGTH OF FRAME, FT.	SIZE OF WHEELS, INCHES	WEIGHT, LBS.	PRICE, DOLLARS
No. 7	8 feet	12	16 inch	250 lbs.	\$ 60.00
No. 8	8 feet	14	16 inch	280 lbs.	75.00
No. 9	10 feet	20	16 inch	350 lbs.	110.00
No. 10	12 feet	24	16 inch	400 lbs.	120.00

The Randall Pulverizing Harrow.

The most Convenient, Effective, Durable and Reliable Harrow made. A Cultivator Guided by another. Economizes Time, Saves Labor and Money. Secures the greatest results by the most perfect tillage.

A COMPLETE SUCCESS.

Unrivalled for its power, incomparable rapidity, and effectiveness for surface tillage of all rough and tough soils. Is often a substitute for the plow. Five different sizes, cutting from 6 to 12 ft. in breadth.



WHAT IT WILL DO:

Save Time, Save Labor,

Save Money, Save Seed Grain,

Thoroughly Pulverize the Soil,

Thoroughly Cover up Your Seed Grain.

Thoroughly Cover up Your Surface Manure.

Thoroughly Satisfy You in every Respect,

Increase Your Crops,

Increase Your Purse,

Increase Your Happiness,

Increase the Value of Your Land.

Every operation in tillage should refer directly to securing the largest crop results, and to an increase in the after value of the land.

Because a new or an old toothed drag will scratch its "mark" over a field, it does not prove that the owner has not lost the best part of the wages and cost of the driver and team whilst hauling it.

If the farmer discovers, when measuring his grain, or weighing it, that the land was poorly tilled, the crop light and the purse empty, it will then be too late to apply the remedy.

Should he neglect to provide himself with THE RANDALL PULVERIZING HARROW, he may expect to repeat his experience and his loss next year.

I. THE RANDALL PULVERIZING HARROW, in field work, can be turned about as readily as a cart.

II. Its Double Gang arrangement makes all the wheels or discs equally effective when in motion.

III. Its combination of mutually-acting, vertical plate wheel gangs is attached to a horizontal frame, and the harrow is guided, when in motion, by a pole, in such a way as to secure a complete and effective forward and horizontal action of both gangs, as well as the lateral or side-wise lifting and crushing action of all the plate-wheels.

IV. Its concave Plate-wheels are best quality STEEL, and are self sharpening by use.

V. Each steel wheel or disc, makes a groove for its passage through the soil, by clearing,

crushing and lifting from the groove all the soil, and rolling it in a furrow to one side.

VI. All rootlets are cut off or torn from the groove and exposed to air and sun, or are buried below the surface.

VII. Instead of a dead draft by impact against heavy and inert soil, it cuts it like a knife and splits it like a wedge.

VIII. It loosens, crumbles and lightens the soil, but does not harden it.

IX. It rolls and covers seed grain deeply and uniformly beneath the surface, and ensures germination and growth by preparing a perfect seed-bed.

X. It covers broadcast grain so effectually and perfectly, as to save from a tenth to a fifth part of seed commonly lost when scratched in with a toothed drag. Grain growers have given high praise to the RANDALL HARROW, for "covering in" seed grain as it should be.

XI. It turns below the surface, top manure, old stubble and straw, and rolls under and buries the small stones, which the "old drag" hauls to the top.

XII. Every inch of it does full, honest work, and don't need a "lap" or a "skip" to make it work "good," like the corner-going drag. And the best of all among its good deeds is, it does what no toothed drag can do, to-wit: It takes the soil from below, and rolls it upward to the surface, pulverizing and exposing it to the enriching sun and air. Good tillage requires this, and this is what no other harrow can accomplish so effectually and speedily as the RANDALL PULVERIZING HARROW, with its double solid gangs of plate-wheels.

TRIUMPH GRAIN DRILL.

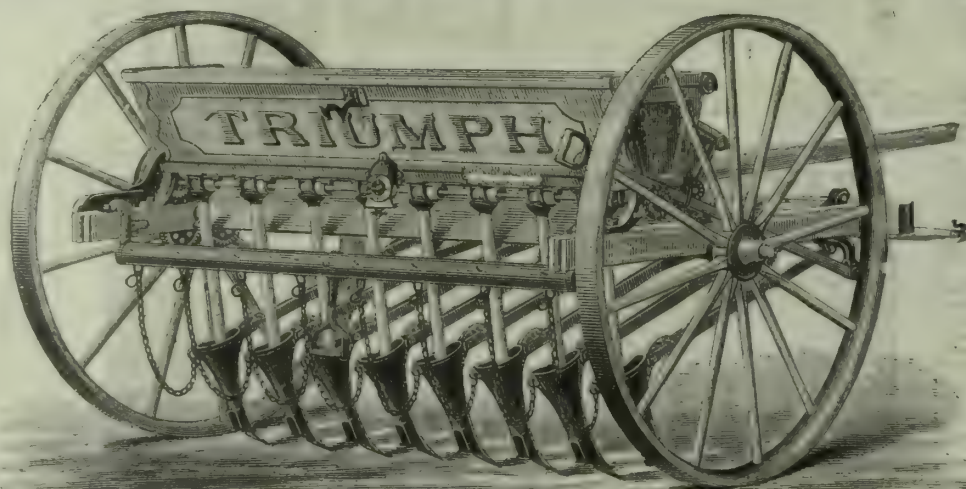
PRICE, WEIGHT, ETC.,

Triumph Drill.

9 Hops	8 bush.	weight 1,000 lbs.	\$140.00
10 "	8 "	" " " "	150.00
11 "	8 "	" " " "	160.00
12 "	8 "	" " " "	170.00
13 "	8 "	" " " "	180.00
14 "	8 "	" " " "	190.00
15 "	8 "	" " " "	200.00
16 "	8 "	" " " "	210.00
17 "	8 "	" " " "	220.00
18 "	8 "	" " " "	230.00
19 "	8 "	" " " "	240.00
20 "	8 "	" " " "	250.00

THE TRIUMPH Grain Drill

Possesses many features of merit peculiar to it alone, to which we invite the careful attention and consideration of every farmer contemplating the purchase of a Grain Drill.



THE TRIUMPH GRAIN DRILL

IMPROVED OVER THE BUCKEYE AND ALL OTHERS.

The Best Force Feed Grain Drill in the World!!

DRILLS FROM ONE PECK TO ANY QUANTITY PER ACRE. DOES NOT CRACK THE GRAIN.

In the TRIUMPH we accomplish all that can be done by any other Drill, with all their combinations of gear wheels; and that too, without any change of gearing whatever. There is no need of changing to pecks or half-pecks at a time in the TRIUMPH; it can be regulated to quarts or pints, and will sow any kind and any quantity of seed per acre—from one-half bushel of flax seed to three bushels of oats—and will sow beans and corn in any desired quantity.

THE FEED.

The feed of a Grain Drill is its most important feature. Many drills still use the old foggy and unreliable mode of regulating the quantity by change of gear-wheels, in which they vary the speed of the feed-wheel for every change of quantity seeded. To sow a small quantity to the acre, the feed-wheel revolves so slowly that the grain is fed from the feed cup, not in a steady, flowing stream, but in bunches, so that the grain is not drilled in, but dropped, leaving unseeded spaces between the bunches. Others, again, called "adjustable force-feed," regulate the quantity by moving the feed-shaft, to which the feed-wheel is attached, to increase or diminish the quantity desired to be sown. As this shaft has but one bearing, by means of which it is moved, this bearing in a short time becomes worn, and thus permitting the feed-wheels to have lateral motion, which causes the feed-wheel to be constantly changing its position while the Drill is seeding; especially this is the case on hilly ground, as the shaft will always move towards the lowest point on a side hill, and, consequently, the Drill, in going one direction, will sow too little, and returning sow too much.

These objections are entirely obviated in the TRIUMPH. The feed-wheels of the TRIUMPH are fastened permanently to the feed-shaft, and are held firmly against the end of the seed-cups, so that the shaft or wheels cannot have the slightest lateral motion. The regulating cylinders are attached to a separate iron bar, that extends through all the seed cups, and is moved by a screw at the end of the hopper, and can be moved either much or little, as desired, and then firmly locked in position, thus making a perfect feed-wheel, either large or small, to suit the quantity desired to be sown. There is no possible chance of lateral motion, thus insuring a uniformity of quantity sown, whether the ground be hilly or level.

UNIFORMITY OF SPEED.

Much complaint is justly made against Grain Drills that regulate by change of gearing, on account of their bunching and skipping—a serious fault that manufacturers of that class of Drills have not been able to overcome, although they have resorted to all kinds of devices in their feed-wheels; using zigzag, spiral, and double spiral, etc., and all claiming their particular device as being just the one needed. Yet they have the same old complaint. The cause of their trouble is readily explained, as it is impossible to sow a constant stream with any Drill that varies the quantity seeded, by a change in the speed of the feed-wheel. The same principle applies to Grain Drills as to other machinery—a principle well understood by all mechanicians—there is always a certain uniformity of speed required to do the work successfully. We have kept this fact in view in the TRIUMPH, and, consequently, its remarkable success as the most regular grain sower in the market. Examine the TRIUMPH before you buy any of the old foggy cog-wheel Drills, and you will be convinced that is the Drill to buy.

HOW REGULATED.

The quantity is regulated by simply turning a screw at the end of the seed hopper, which enlarges or diminishes the feed-wheel. The regulating cylinders being attached to an iron bar extending through all the seed-cups, all the feed-wheels are enlarged or diminished simultaneously; and, as the feed-wheel always carries out all the seed the wheel will hold, it will be readily seen that, by increasing or diminishing the size of the wheel, any desired quantity can be sown.

The gauge-plate on the back of the hopper indicates the quantity to be sown to the acre; it always sows the quantity indicated; there is no guess-work, as is the case with many other Drills.

Sacramento. BAKER & HAMILTON, San Francisco.

PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, OCTOBER 14, 1882.

Number 16

Cultivation and Rainfall.

Dr. O. H. Congar, of Pasadena, who has been put forward as the apostle of cultivation as a substitute for irrigation, has found reason this year to modify his practice and belief somewhat, and as an honest truth seeker, he freely sets forth wherein his former belief may have been, in part, in error. In the *Semi-Tropic Californian* we find a letter from Dr. Congar, stating in what particular his former theory may need to be modified. Six years ago to-day, he writes, my orange trees were irrigated for the last time, except alongside of a rapid-growing Monterey cypress hedge. To-day, however, the unfavorable appearance of 46 out of the 400 upon the ridge fronting our main avenue (orange grove) caused me to partially repent of the course pursued during the interim mentioned, by treating said number to a moderate draft of temperate water in the usual way of surface irrigating. The experiment is to test the value of water in developing size of fruit, as well, also, to improve a pinched and dry appearance of the foliage. The present season is a severe test of the non-irrigating practice I have pursued the last six years, especially in the development of the size of the fruit.

Not in the past eight years has the dry and heated term made the marked impression upon fruit trees and vines of all kinds that is noticeable this season, and more especially at this time. However, the growth of wood is not only entirely satisfactory, but is also, I believe, pronounced equal to that of neighboring trees of the same age that have received the usual and old treatment, irrigation at short intervals. The lack of water must be the assignable cause of the non-development of the deciduous fruits, as well as the retarded development of the orange upon the trees mentioned, as it is a well known and accepted fact that a certain degree of moisture is quite as objectionable and damaging, in other ways, as the absence of it.

Probably the most valuable lesson, therefore, taught by the present dry season is, that whereas trees and vines develop quite satisfactorily in proper soils and by proper cultivation, during the first two years, and until the fruiting stage and large size is reached, when it seems necessary, for profit, to judiciously apply water. If we are depending on fruit culture for subsistence, and the market makes certain demands as to size of fruit, etc., the producer is left no choice in the matter. It, therefore, follows that non-irrigable lands become unsafe for fruit culture. And both the tree and the vine become involved in this consideration. The grape is suffering, perhaps, more seriously than other fruits this season.

Were I to start again anew, I should, as in the past, adopt the practice of non-irrigation until size of tree and fruit stage were reached, simply from the advantage this course affords an observing person at that stage of tree development. The old or even modified practice of too frequent irrigation, as is well known, develops the roots at or near the surface, whereas the more conservative practice of non-irrigation causes the roots to strike deep into the soil. These facts are fully demonstrated; hence, it has passed the limits of theory. It must be quite plain to all that a tree whose entire root mass is limited to mere surface soil becomes almost as much a thing of special care as a caged animal. Its aliment must be regularly

supplied, or an arrest of development will follow; whereas, almost the converse of the above is the result to the tree whose roots strike deep and ramify the soil in all directions. One great advantage the latter has over the former, is the application of water when required. The tree thus conditioned is almost as much under control as the engine in the hands of a skillful engineer. Water applied to the latter class of trees is for the purpose of developing the fruit, and not a necessity for the preservation of their existence.

A Quartz Mill Cheese Factory.

Agriculture heals many sores and covers many industrial scars. The latest instance of honey coming out of the carcass is announced from Nevada, where the ruins of a defunct mining establishment are to be elevated into the

A Handsome Jersey Bull.

We give on this page an engraving of the Jersey bull Lord Bacon, No. 4334 of the Herd Book of the American Jersey Cattle Club, owned by S. C. Kent, of West Grove, Chester county, Pennsylvania, who is a well-known importer and breeder of Channel Island cattle. Lord Bacon is a praiseworthy animal in many respects, and presents well the form of his breed.

We have been interested in a letter from a Jersey islander concerning the supply of cattle for export on that island. One would think that such large shipments as are being continually made would exhaust the supply in so small a territory as Jersey island; but the islanders manage to keep up the numbers. In fact, the outside world is making Jersey island richer and

Our Lumber Interests.

We have frequently alluded to the results of the census investigations into the extent and condition of Pacific coast forests. The subject is an interesting one, and there is now transmitted from Washington another forecast of results, somewhat different from those we have described before. Concerning California timber it says that the chief trees of the State are redwood, red fir, tide-water spruce, chestnut and red oak on the Coast range; and sugar pine, yellow pine and red fir on the Sierra Nevada. Any estimate of the actual amount of lumber standing in the State, except redwood, is not possible with the existing knowledge of the country. The principal lumber industry is confined to the redwood belt, on the line of the Central Pacific railroad, on both slopes of the Sierra Nevada, to points in Butte, Tehama and Mono counties, and in the San Bernardino mountains. The total product of the State for the census year was 304,795,000 ft. of lumber, 242,400,000 ft. of laths, 138,718,000 shingles, 2,063,000 staves, and 1,303,000 sets of barrel headings.

In Oregon the most valuable trees are in the order as set down: red fir, tide-water spruce, red cedar, hemlock, Port Orford cedar, white oak, sugar pine, chestnut, oak, larch and scrub pine. The principal lumber industry centers near Portland and Empire city. The product of the coast region for the census year was 151,443,000 ft. of lumber, 17,950,000 laths and 2,745,000 shingles. The product of the State east of the Cascade range was 25,798,000 ft. of lumber, 295,000 laths and 2,295,000 shingles.

Washington Territory, according to the *Bulletin*, is covered, west of the Cascade mountains by the heaviest belt of forest growth in the United States. The most valuable trees in this region are red or yellow fir, covering about seven-tenths of the forest growth, red cedar, hemlock and tide-water spruce. East of the Cascade mountains the most valuable trees are red fir, yellow and white pine, larch, red cedar and hemlock. The principal lumber region is confined to the shores of Puget sound. The product of this

region for the census year was 144,387,000 ft. of lumber, 6,550,000 laths, 710,000 shingles and 2,366,000 staves. The product of the coast outside of Puget sound region was 9,599,000 ft. of lumber and 200,000 shingles, and of the territory east of the Cascade range 6,190,000 ft. of lumber and 2,700,000 shingles.

SATURDAY night the white men employed on the Northern Pacific construction in Montana were notified by the boarding masters that on account of the increased price of beef and other supplies board would be raised 50 cents per week, viz., from \$4.50 to \$5. The boarding masters claim that they were losing money at the old rates. The entire force, numbering about 2,500, struck. Supervising Engineer Thielson telegraphed to the front that board would be kept at the old rates, and it is thought the men will resume work. The Chinese, numbering 5,000, are not in the strike.

THE Oregon Legislature has passed a resolution submitting to the people an amendment to the Constitution conferring the right of suffrage upon women.

A CINCINNATI milkman was arrested the other day for biting off the tips of his balky horse's ears.



JERSEY BULL "LORD BACON," OWNED BY S. C. KENT, OF WEST GROVE, PA.

form of a cheese factory. We find the account in the *Reno Gazette*, telling that Theodore Winters owns the ground at Ophir, 20 miles south of Reno, where the old ruins stand that once were the great mill and reduction works, the first cost of which was over a million. Mr. Winters will cover the old walls with roofs, and make a vast cheese factory of them. He is now milking 70 cows on his ranch, a mile away, and the number will be increased to 100. In addition, 150 cows will be kept on the Ophir ranch. He is now making butter which sells readily at Virginia City; but butter making will cease, and all the milk will be hauled to Ophir as soon as the vats are ready for cheese making. If any of his neighbors have milk to spare, the dairy will buy it, or make cheese on shares. Three buildings will be covered in to store cheese, and contain cheese vats heated by steam. Mr. Winters has secured the services of a Swiss cheese maker, who has a high reputation. He says there is no better place in any country than Washoe valley for cheese making. The climate and soil are peculiarly adapted to it. The grass grown is sweet and strong, and the milk pure and rich.

THE cases of cholera at Manila average 30 to 40 daily.

richer by the vast prices which it is now paying for its best animals. We read in the letter to which we have referred: "Large purchases are being made by American buyers at stiff prices. Some animals have been bought at nearly \$1,500 each. This certainly looks as if the 'Jersey boom' was continuing. We hear of other intending purchasers coming over, and they will find as fine a lot of animals as ever the island possessed. We have had a great abundance of grass, and cattle are looking wonderfully well," etc.

Thus it appears that the Jerseymen know when they are doing a good business, and do not propose to slacken it off. They had better gather in their rewards as rapidly as possible, for it is already claimed that we have now, in America, better Jerseys than the island retains, and no one can tell how soon the fashion will set it firmly toward home-made Jerseys.

PIUTES in Nevada complain that the pine nut crop was this season a very light one. Formerly pine nuts were a principal article of food with the Indians; but now when they get any they generally sell them to the whites and buy beef with the money. In this way they can get about three times as much food as the nuts would afford.

ARBORICULTURE.

The Præparturiens, or Early-Bearing Walnut.—No. 1.

Its History, Description, Propagation and Culture.

Written for the Press by FELIX GILLET.

As this paper is a direct reply to former communications to the Press from Mr. John Rock, of San Jose, with whom I had, at that time, quite a controversy in regard to the Præparturiens walnut, I will, by way of introduction, and to refresh the memory of your readers, give them, at first, a few extracts of Mr. Rock's letters to the Press.

My attention having been called last spring to the description of the Præparturiens walnut under the name of Dwarf Prolific, as given in a Santa Clara nurseryman's catalogue, who described the Præparturiens as a dwarf-growing, early-bearing variety, and which bore full crops at six feet. I remonstrated with the said description in the Press, claiming that the Præparturiens walnut was a regular, standard tree, and that if the gentleman from Santa Clara had a dwarf sub-variety of that species in full bearing when six feet high, he had better say so, and not let people infer, from the way that walnut was described, that "the" Præparturiens was a dwarf kind. In reply to the above, the Santa Clara nurseryman, in a communication to the Press, and to show from what sources he had derived his information regarding the said Dwarf Prolific, or Præparturiens walnut, cited Charles Downing, Robert Hogg, and others, adding, by way of a kick:

The walnut Præparturiens is precocious, sure enough, but it has evidently needed a "barren hill" in California—a country wonderfully adapted to development—and the fostering care of a Mr. Gillet to develop our precocious, lovely little dwarf into a magnificent standard. This wonderful development of this particular tree on that "barren hill" would incline one to suspect that Mr. Gillet has not now, or ever had, the Præparturiens walnut, but has been whiling away his time on a walnut of another name. If this be true, and, considering the authorities quoted, who would doubt it, who will enumerate the many mistakes made by Mr. Gillet these many years? Will not Mr. Gillet furnish some notes as to the habit of the Præparturiens walnut, grown by others? His own trees must have "taken a departure." It would be valuable information to know whether others had done the same.

In a subsequent letter to the Press, and in reply to that of Mr. Rock, I mentioned, as authorities, Andre Leroy, whom I claimed, had "originated" that new species of walnut and named it Præparturiens; and referred Mr. Rock to Leroy's "Dictionary of Pomology," to "Le Bon Jardinier," and "Le Noyer," a standard work on the walnut; and finally to my own authority as having grown Præparturiens trees in California for the last 12 years. In reply to that reply of mine, Mr. Rock, under the head of Præparturiens, viz., "Dwarf Prolific Walnut," said:

"The Præparturiens is a dwarf, and unhesitatingly say, if Mr. Gillet has a standard walnut, it is not a Præparturiens. We make this positive statement, and call upon Mr. Gillet to disprove it. We should be as much pleased as any other to learn his authority. This gentleman has written often for your widely-circulated paper, and we have no doubt many of your readers take a deep interest in his writings and will be glad to see another article from his fertile pen on this subject. * * * Who, Mr. Gillet, if you please, calls a walnut that attains even the moderate height of 25 ft. Præparturiens? Give his name, and, whether he be French, Italian, English, or American, or whatever his nationality; if he be of recognized standing, we will gracefully and fully award him the credit. But I do want the facts now that this walnut is under discussion."

In quoting one of the authorities given by me, the "Bon Jardinier," Mr. Rock gives the French with his own translation, as follows:

"Juglans Præparturiens; new variety; *very precocious*, introduced in commerce in 1837; bears fruit at the age of two years, and reproduces itself from seed; the nut is good to eat."

"It will be observed," adds Mr. Rock, "that there is not in this famous book the slightest intimation given that the Præparturiens is a 'standard,' but on the contrary that it is a dwarf; 'precocious,' fruiting when two years old, implies that it is a dwarf; it cannot imply anything else."

As to Andre Leroy's "Dictionary of Pomology," which I mentioned as another of my authorities, Mr. Rock produced that very work itself, showing that it dwelt only on pears, apples, apricots, cherries, peaches and nectarines, adding:

"But where is the Præparturiens walnut? There is not the slightest reference to it in the great voluminous work. Would it have been possible for Mr. Leroy, the so-called 'originator' of this walnut, to omit it? It is to have overlooked? Will Mr. Gillet be kind enough to cite one or more other authorities, or name the volume and page of the 'Pomological Dictionary' of Andre Leroy where the lengthy history, description, form and size and habits of the Præparturiens walnut are given?"

I will first comment on the description given of the Præparturiens by Chas. Downing, Vol. II, page 573, and under the head of "European Walnut:"

"Dwarf, prolific, early bearing, fertile, precocious. This is a dwarf-growing and very early bearing variety, very desirable for small fruit gardens, as it may, in our Northern States, be easily protected in winter. The trees commence bearing when not more than three feet high, and, like the common walnut, it reproduces itself always from seed."

In the first place, the common walnut does not always reproduce itself from seed, by far, and the Præparturiens walnut only partly; and, as far as the precociousness and lateness in budding and blooming out of the variety are concerned, the nut varying a good deal in size and

shape, Mr. Chas. Downing to the contrary, notwithstanding.

The Præparturiens, says Mr. Downing, is a dwarf-growing variety. What does he mean by dwarf-growing? The common walnut, of which the Præparturiens is a variety, being a tree that attains at 100 years from 70 to 90 ft., it seems to me that dwarf-growing ought to mean a tree that attains one-third to one-half that size; but a tree which, like the Buckeye walnut of Mr. Rock, to use the latter's own words, is in full bearing at six feet, is nothing else but a dwarf, and not a dwarf-growing tree.

Now, as to the extract of the "Bon Jardinier," regarding the Præparturiens walnut, it reads as follows, in French: "*Nouvelle variété, tres precieuse*," etc.; or, new variety, very valuable, etc., which Mr. Rock translates as, "New variety, very precocious," etc. Shall I call it another mistake of yours, Mr. Rock, or shall I put it on the printer's back? Just as you say! But *tres precieuse* never in the world meant *very precocious*. Still Mr. Rock is of the opinion that it does, and adds, triumphantly: "Precocious, fruiting when two years old, implies that it is a dwarf; it cannot imply anything else."

Well, let me say that there is as much sense in that proposition of the Santa Clara nurseryman, that a tree is a dwarf for being very precocious, than there is in this other one: White is a color; black is a color—therefore, black is white.

The "Bon Jardinier," in describing the Præparturiens among other standard varieties, and not mentioning whether it was a dwarf, anybody would infer that it was like the others, a standard tree. It is certain that if the Præparturiens, in the eyes of the authors of the "Bon Jardinier," had been regarded as a dwarf walnut, in full bearing when six feet high, as claimed by the Santa Clara horticulturist, they surely had said so, for it had been a too apparent and important characteristic to be left out. Well, let us pass on.

Now as to my own mistakes: In naming Mr. Andre Leroy, of Angers, France, as the "originator" of the Præparturiens, and the man that gave the new walnut that terrible Latin name, I was wrong, and I have to take it back. Then in referring Mr. Rock to Leroy's great work on pomology as a work where a full description of the Præparturiens could be found, I was wrong again, and I have to take that back, also.

A Reference to Authorities.

Messrs. Henry Chateau, of Dune; Baptiste Desportes, of Angers; Jacquemet Bonnefont, of Annonay; J. Jamin, of Bourg-la-Reine, near Paris; Vilmoren Andrieux & Co., of Paris; Cronx & Son, of Sceaux; Ch. Jolly, Secretary of the National Society of Horticulture of France; E. A. Carriere, editor of *La Revue Horticole*, of Paris; Charles Lemaire—all these men, leading nurserymen and horticulturists of France—are the authorities that I will have the pleasure to introduce to the readers of the Press, to whom I had promised to give all the facts in regard to that Præparturiens walnut, and I would have done it sooner, if my occupations had permitted me to write such a lengthy paper before this day.

But, as I do set myself up as an authority, too, concerning the Præparturiens walnut, which I have been cultivating and propagating for the last 12 years in this State, I will, before producing those French authorities, produce mine first, for theirs is more to corroborate mine than mine theirs.

How the Walnut Came to California.

In the fall of 1870, I imported from France, among lots of other fruit trees, and from the well-known nurseries of Jacquemet Bonnefont, two five-year-old Præparturiens trees, which, like all such standard trees when leaving French nurseries, were six feet in height and already branched; they are now 17 years old, and are the oldest and largest trees of that kind to be found in California. I planted one at a northern exposure and the other at a southern exposure; gave them a little water on the first year, just enough to make them root, but afterwards was unable to give them but little, though the tree at the northern exposure had, those late years, the benefit of water given to trees below it, its roots spreading that far. On close measurement of the trees on the 21st of September of this year (1882), I found them to stand as follows: The tree at the southern exposure measured a little over 23 ft. in height, 28 inches in circumference, the top spreading out at its widest point from 15 to 18 ft. The tree at the northern exposure measured 25 ft. and 6 inches in height, its girth being exactly that of the other tree. Those two trees I first propagated through budding, using the American black walnut for stock, and afterwards from seed, as soon as the trees commenced to bear.

A chestnut tree (*Marron combale*) which was imported from France at the same time, and which is also 17 years old, measures 22 ft. in height, 30 inches in circumference and the top 15 ft. at its widest point. The chestnut, let us bear in mind, is a tree growing to still larger dimensions than the common walnut.

An eight-year-old Præparturiens budded on black walnut measures 13 ft. in height and 10 inches round. (That tree has been bearing these last three years, 43 nuts last year, but only 20 this year, on account of a very heavy frost on the night of the 3d of April.)

Four-year-old trees in nursery rows measure from 6 to 12 ft., some of them having made as much as 7 ft. growth this year (of course with irrigation).

Four-year-old trees transplanted and en-

tirely of my own raising, have attained already a height of 12 ft. and 6 inches, and are well branched. Will probably go to fruit next year.

Some two-year-old trees, not transplanted, from seed grown on my large trees, measure 8 ft. in height. As to the veracity of the above, I will refer the readers of the Press to Messrs. Elliott and Adams, of Newcastle, Placer county, W. D. Dean, of Colusa, Mrs. D. B. Lawrie, of the same place, Mr. Meyer, of Fox's nurseries, San Jose, Messrs. Watson and Bliss, of Camp-tonville, Sierra county, all readers of the Press, I believe, and also to every man, woman and child that visited my place this summer and fall. All those persons will certify as to the truth of my statement, and tell what a nice crop of nuts I had on the trees, including a three-year-old little chap, which made a three-foot growth, nevertheless, above the nut it was so proud to bear.

As to Mr. Rock making fun at my "barren hill," I will simply say that I ought to be entitled to more credit for growing the Præparturiens on my barren hill, in our mountains' yellow loam, a nice standard tree, than Mr. Rock for growing the same tree in the rich, black loam of Santa Clara county, a mere dwarf, a pot walnut, in full bearing when six feet high.

Now about the

Præparturiens Reproducing Itself

Always from seed, I have this to say: My large bearing tree at the northern exposure buds out two weeks later, at least, than the English walnut, and bears a large, beautiful nut, of which the above engraving is a good representation, the wood having been engraved from the "original" by Mr. Van Vleck, of San Francisco. That tree produces nuts even larger than the one represented in cut. All others of my bearing trees budded from that kind bear alike. My other large bearing tree is yet later in budding out, fully four weeks later than the English walnut. The nuts are smaller and more pointed. Trees budded with this kind bear exactly the same fruit. That tree has a very fair crop this year, with clusters of four nuts already on. Other trees, in nursery rows, have produced nuts, some of a more oblong shape, but generally of a fair size. To this day, as I was desirous of obtaining nuts at once, and in as large a quantity as the trees would bear, I let them spread out as much as they pleased, thus the reason why their tops are so broad—16 ft. to 20 ft.

Mr. G. P. Rixford, of the San Francisco Bulletin, to whom I sent, two years ago, samples of Præparturiens nuts from my oldest trees, wrote to me as follows in regard to those nuts: "The nuts you send do not resemble ours very much, yours having thicker shell and being rougher."

Mr. Rixford was referring to some nuts procured from France for seed purposes.

Thus it is plainly shown that the Præparturiens, if reproducing itself from seed, as far as its precociousness and lateness in budding out is concerned, as in fact it generally does, do not reproduce always the same type of fruit. I am positive on that point.

Nevada City, Cal.

(TO BE CONTINUED.)

HORTICULTURE.

Mulberries.

EDITORS PRESS:—In a recent number of the RURAL I saw an article commending the Russian mulberry. I have tried it, so hear my experience: Last February I obtained 50 fine, thrifty, year-old Russian mulberry trees; planted them beside a ditch of water in nursery row, as they were quite small. All but two are dead. In March I obtained 209 cuttings; planted and cared for them in the best possible manner—not one grew. At the same time I received a pound of the seed of these trees—well-cleaned, fresh seed. Possibly 1,000 of them germinated; but all succumbed, notwithstanding they were well watered, to the dry, hot, summer atmosphere, though they were planted in the shade, where the sun never shone upon them. The trees and cuttings I did not plant in the shade. Next year I will try trees and cuttings, under shade of other trees, and will report results. I think I can safely say the Russian mulberry will not stand 100° Fahr., and is, therefore, worthless in the hot interior valleys of our State, except as an undergrowth in forests, and there they are yet to be tried.

Black and Red Fruited Mulberries.

These grow here most vigorously. I have a hundred thousand trees growing on what was a treeless plain—three miles from the nearest tree—six years ago, and the beauty of all the forest grove is the black mulberry, growing 6 to 8 ft. yearly, most luxuriant bright green foliage, and a capability of being trimmed to any desired form, or cut back to give any required density of shade. The red (*Morus rubra*) grows equally well, but has less desirable foliage. The wood of both is quickly and cheaply grown; is valuable for many economic purposes, anywhere where a moderately hard and durable wood is required. The chief value of these trees, however, is their enormous yield of fruit, most valuable food for hogs and poultry, but more than all for depredating birds—to keep them away from more valuable fruit. Birds will not molest even your cherries if you will only give them a supply of mulberries.

Persian Mulberry.

This mulberry was introduced into the South-

ern States many years ago by Mr. Berckmans, of Augusta, Georgia, and into our own State by your able contributor, Felix Gillet, Nevada City. Its native home is Persia, a hot dry country like our own. One of my trees, five years old, from the cutting, bore about two quarts of berries; some of them were two inches long, and as large around as one's thumb; they are sour, but of very fine flavor. The tree is of slow growth, but it is perfectly adapted to our climate. When of mature age, a single tree will produce a daily supply of fruit for a large family from June till frosts stop its bearing in early winter. These cuttings must be handled carefully. I examine the buds to see that they are out off evenly; then beside my ditch, not more than six inches from the water, I dig a narrow trench; into this I set the cuttings so that the water shall never stand above the top of it; around the cuttings I now tramp the earth as I fill it in, so as to leave only a single top bud above the surface of the ground. Treated in this way I do not lose three per cent.

W. A. SANDERS.

Sanders, Cal.

FORESTRY.

Forest Trees of California—No. 15*

Pacific Silver Spruce.

(From Patterson's *Atlas Williamsons*.)

"Far off, indistinct, as of wave or wind in the forest."—L.

The silver spruce,† as its common name *par excellence* suggests, is by far the most cheerily silvery of all the conifers of the Pacific. The early growth of this species, as seen in the high Sierras, say from 7,500 ft. to 10,000 ft. altitude in California, or 6,000 ft. in Oregon, is elegantly spire, branching broadest from the base, often in a decumbent ascending direction, at length outwardly pending tips, and so tapering aloft to the plummy top. The crowded wealth of fascicled foliage, waves and surges the spray with such wonderful variety, that its outline reflects the silvery lights and shadows to the greatest possible advantage. The weight of wintry snows often gracefully curve the base adown the steep where they cling, thence righting up their recoil, the top compensates by an opposite curve, thus giving this impress of an early life-struggle for existence by another charm—a crowning wreath on the brow of victory.

The middle-sized cones are perfectly symmetrical and smooth, subelliptically cylindroid, from two to three inches long, about three-quarters of an inch broad, purple and softly bloom-tinted. They tip singly or in clusters, the slender twigs, thus bowing to their weighty burden, they strike you as exquisitely ornamental. These slender branchlets are pubescent, leaves from one-half to an inch long, convex or keeled, i. e., angled above, rather sharp pointed, narrowed at base and curved, stomata on both sides; male flowers about two lines long on slender thready stems; pollen grains bilobed, blooming in September and October; seeds two and one-half lines long, wing about one-quarter of an inch or less than twice the seed, obliquely obovate and widest above. Many of these trees in the closer forests are tall and slender, from 75 ft. to 100 ft. or more in height, often irregularly branched, but they are always graceful and never formal. On open borders, with greater freedom for development, they are both grand and graceful—the finest of all the spruces. The sturdy, elegant trunk, of rather even reddish brown bark, reminds one of the sugar pine. Column often clean from 50 ft. to 100 ft., and 6 to 8 ft. or more in diameter, thence above branching into a broadened conic top, duly balanced to lines of beauty up to 150 ft. or even 200 ft. The best types we have witnessed are at the summit of the Sierra Nevada mountains, which certainly seemed, to our enchanted view, as though they must be, for their style of beauty, equal to any spruce in the known world.

The special form and analytic illustrative figures in Vol. VI of the U. S. R. R. reports, are our own paintings. That portion, however, showing the reflexed condition of the scales, is superadded to the original drawing, and is not characteristic. This condition of the old castoff cones exposed to a burning sun, is also common to other conifers, and is eminently conspicuous in the cones of the Western Mountain Weymouth pine (*P. monticola*), etc.—we simply note the fact in passing. Typically, this tree is pyramidal, 100 ft. to 150 ft. high, and from 2 to 4 ft. through; but in high altitudes of California, say 8,000 to 10,000 ft., is often only a shrub. In the north latitude of the Cascades to near Crescent city, it comes down almost to the coast in due form.

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

† The name "spruce," as contradistinguished from "fir," in common parlance, implies that the cones pend gracefully down from the tips of the twigs, and are distributed over all parts of the tree, instead of the top only, and that the scales and their appendages persistently hold together and fall off at once, when ripe like many pine cones, also that when the flat two-ribbed and two-rowed leaves fall off they leave the sharp woody like base or foot stalk prominent, and no spirally arranged bark scars as in firs and pines and as the cones do not stand upright like birds upon the upper boughs near the top, and fall to pieces at maturity, of course they leave no naked, spine-shaped, woody axis and the bark never distends in fissures. In thus setting these common names, as they are and should be used by us, only a few strong points of contrast can be wisely noted, others more technical are intentionally omitted.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

(Continued from Last Week.)

Tuesday P. M.

Additional to our last issue we report: G. W. Davis, Lecturer; J. V. Webster, Secretary; G. W. Hancock, of the Executive Committee, and I. C. Steele, Treasurer, read their annual reports, which were duly referred. District Lecturer Ford, of Amador county, made a verbal report on the conditions of the Granges in his jurisdiction, showing an increase in agricultural and Grange interests. He advocated education as the best means of success in our work.

Reports Received and Filed.

STATE LECTURER, E. W. DAVIS' REPORT.

The autumnal, falling leaves remind us that another year has passed in to the past, and that this is the season for our annual council. Winter came, with its share of rain, spring, with her bounty of flowers, summer, with golden harvests and groaning orchard, and fall, with its mixed crop of pleasure and work. Or pleasure, because we are once more permitted to meet those whose face is familiar, whose grip is known, and whose friendship is more than ordinary friendship—those whose fortune is our pleasure and whose misfortune is our sorrow. Work, because there is much of it for us to do. Many mental fields are uncultivated, and fraud, extortion and arrogance are unchecked.

Since our last annual meeting, the Grange cause in California has made some considerable improvement and (I think) permanent advancement. For the first time, in the work of the Order in this State, the Lecturer of the State Grange has been almost entirely relieved of the work of his office.

As you well know, the Worthy Master of this Grange has, by virtue of his authority, appointed in each county of the State, a District Lecturer. The duty of this officer is to visit each Grange in his jurisdiction, and to superintend the field. To see that there is plenty of work assigned the laborers, and, to see further, that the laborers are able and willing, and that they do the work assigned. I am sorry to have to say that the District Lecturers, with but one exception, have failed to file their reports with me. To the credit of Bro. George Rich, of Sacramento county, be it said, that full and complete returns have been received. From his report I am able to say that the Order in Sacramento county is in a much healthier condition than for years past. Enthusiasm is enlisted, interest is increased, and membership is multiplying in that portion of the field.

The question has been frequently asked of me, by well-informed persons, "Will the Grange live?" In reply I sometimes say, "Will the sun shine?" The answer to the one is as easy as to the other, and is, "Yes." The Grange will live. Any organization having for its foundation such principles as we have in the Grange, any people who are bound together by the tender obligations which bind us, any community which feels that to grow wiser is to grow richer, will testify "yes" to what I say.

The immediate advancement of the Order in this great golden State has been, and is now, somewhat retarded by the inability of the Executive Committee to secure the sinews of war. With the Grange, as with other organizations, "Money makes the mare go." If there were sufficient funds at hand, to pay the actual expenses of two or three competent, honest Lecturers, it seems to me that great good might be done, not only to the Order, but as well to the farmers of the State.

Again, it seems to me that no man or woman should be induced to join the Grange for mercenary benefits. If a person thinks more of coin, than of humanity, if the aim of life is money, rather than the good money will get, then the Grange will prove a failure. But if, to do good, to get knowledge, to impart it, and to relieve oppression of any sort, from any section, is the uppermost idea of the mind, then I do freely commend the Grange, and can promise it long life and great usefulness. I do not undervalue money, and its uses, but it must be the secondary and not the primary object. What the Grange has done, in the cause of education, is enough to pay well for all it has cost. What it has done in purifying politics, society and individuals will never be fully appreciated nor fully known. In bringing this report to a close, I must not omit to say that we need work, work, work. With a little help from each one—and each one has promised to help—we will surely win. Join then, in the work before you; ask for wisdom to direct you; seek for help to assist you; knock at the door of the Grange, and it shall be opened unto you. * * *

During the coming year let the good work of organization and reorganization go on. Let some provision be made by this body to make an aggressive spring campaign. Have the State divided into three or four districts and, if possible, secure a live and vigorous speaker for each district. There are so many secret societies, with so many ardent workers, that if we hope to have our share of success, labor must not be spared. A few men do not make an army, nor a few drops of water an ocean. Aggregation, consolidation and accumulation make the mighty mass. Bodies have a striking force commensurate with their weight and their velocity—

"Let us then be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

Brothers and sisters,

"Come, labor on;
Who dares stand idle on the harvest plain,
Where all around him waves the golden grain,
And every servant hears the Master say,
Go, work, to-day."

Extracts from Secretary J. V. Webster's Report.

The report says: "While the increase of membership in our Order for the past year has not been great, nevertheless, the improvement has been manifest and substantial. Several Granges have largely increased in membership, and nearly every one has done some progressive work during the year. There have been three Granges reorganized and brought into full fellowship, namely, Merced, San Jose and Galt Granges. Sunol is the only Grange that has during the year surrendered its charter.

In the statistical footings made, it was shown that the number of initiations reported during the year was 284; number admitted by card, 51; number withdrawals, 84; number expulsions, 154; number demitted, 36; number of deaths, 20.

Report of N. Mertes, District Lecturer, of Placer County.

I have visited the Granges in my district three times each, and am satisfied that my labor has been rewarded.

Lincoln Grange was, at its beginning, one of these really live Granges, and its membership

ran up above 100 in a short time; but, alas, the reaction soon came, and with such force that, had it not been for a few leading spirits, it would now cease to be in existence. But, I am proud to say that they have weathered the storm, and are now on the high road to success. Their present membership is 57, and constantly increasing.

New Castle Grange was always noted for its live members. Of course they had their ups and downs, but always managed to keep up, and whenever they lost any members they were bound to have new ones to take their places. They have changed their place of meeting from New Castle to Penryn, a place far more central. Its present membership is about 40, and I am glad to say that this Grange is doing well and is in the best of spirits.

Roseville Grange, No. 161, of which I have the honor to be a member, was once classed among the first in the State, having had at one time a membership of 116; but we, also, were not an exception to the usual down-fall, but I think we also sailed through the rough, and are once more in smooth waters. Our present membership is 84, with a fair prospect for more.

In summing up, we cannot brag of such great live Granges as are in Sacramento and San Joaquin counties, but, in my opinion, we are a good average, and a little more, take it all over the State.

Tuesday Evening.

Jeanne C. Carr responded eloquently and touchingly to a well-timed address of welcome to the State Grange by Jas. Marsh, W. M. of Stockton Grange, reported in our last issue.

Sister Carr's Response.

This is not the first time that we have experienced the warmth of a Stockton welcome, and that the breadth of the great San Joaquin valley is needed as a fitting environment for the large-hearted and generous-handed Patrons who have clung so tenaciously to our beloved Order through all its vicissitudes.

Why you, honored sir, should have called upon me to answer to these glowing words of welcome, I cannot guess, unless, looking over your flock, you selected the leanest and most starveling just to illustrate what three years' complete deprivation of Grange privileges may lead to.

All these years, dear brothers and sisters, I have lived over the memories of the California State Grange, in its beginnings, before adversity had tempered it. Do you remember that, when we met here in 1874, the membership had in a single year gone up from 3,168 to 18,000, not counting that of Nevada, then under this jurisdiction?

No wonder that this blind, young giant blundered sometimes, that the winning process should have been needed in this as in all other institutions which have proved of lasting benefit to mankind. *Tried as by fire*, each meeting of the National Grange has proved that an organization which embodies the before-unspoken cry of the great agricultural class for social, intellectual and political equality *must stand*. I tell you, brothers and sisters, when that canny Scotchman, Wm. Saunders, and the two ministers who held clerkships in the departments at Washington, with Thompson and Ireland and Kelley, got themselves together in that upper chamber to create the Order of Patrons of Husbandry, they builded better than they knew a structure that is founded upon the rock of necessity and justice. I never read the declaration of purposes adopted in 1874, the year of our first meeting in Stockton, without the same feeling of admiration which is inspired by that other declaration which made a nation out of a colony. The day is not far distant when our Great Charter will burst its bigness through the mass of toiling men and women who have so long permitted other classes to do their thinking, make their laws, and administer their estates.

I rejoice to see so many familiar faces of our Stockton brothers and sisters here to-day—that the eloquence of a Grattan, the word paintings of Bro. West of vineyards and vintages in sunny Spain are included in our intellectual bill of fare. Nor shall any carping criticism dull our ears when Bro. Overhiser is persuaded to tell us how to make a wholesome addition to the matron's hospitable store.

I rejoice, too, that there are other than the old familiar faces—new recruits to be welcomed, fresh hands to take up the labors we of the first decade will soon lay down. We know you, our younger brothers and sisters, through the columns of the *Patron*, our paper, which is like a common fireside around which we all gather once a week.

There are dear faces that we miss to-day, dear hands which lie folded in everlasting rest. The graceful and gentle sister who presided more than once over our feast of Pomona, our ever beloved Sister Baxter, remembers us to-day in her Florida home. At the meeting of our State Grange in Oakland, the last it was my privilege to attend, Bro. Steele brought us a greeting from the dying bed of our brightest and best Sister Colby. We drop fresh tears upon those graves on the Benicia hill—the strong man, the active, earnest-souled woman—for all the loved and lost, whom we sadly miss to-day, if we do not call them by name.

We remember all who have in any capacity loved and served our Order, and desire to include in a warm fraternal greeting even the waifs and the strays, who, like your speaker, are forced by circumstances to dwell afar from the cheering glow of a common fireside. Our

next meeting, the tenth anniversary of our organization, should witness an ingathering of all these, with a considerable accession of those bred, if not born, under the Patron's star. Remembering that our strength lies in our principles, rather than in our numbers, we shall go out from this meeting prepared to make these more widely known, more potent in the improvement of society, and the progress of the State.

After the Worthy Master read his annual address (reported in our last), J. V. Webster read his report as manager of the *California Patron*.

Wednesday A. M.

N. Mertes' report, as District Lecturer of Placer county, was read and duly referred.

The motion of Christian Bagge for the appointment of a committee of three on Life Benefit Department was adopted.

During the past year, the Worthy Master requested several sisters belonging to different Granges in the State to prepare papers upon different subjects of interest, to be delivered at the session of the State Grange. It was a happy thought, as the result will show to all intelligent Patrons.

The following, by Sister W. Ashley, of Stockton, was heartily received:

Welcome to the State Grange.

We greet you Patrons and meet you with smiles,
In our grain city, fair, of four square miles,
Which sends wealth by rail and by San Joaquin,
Of this great valley the emporium and queen,
Pride of the Channel! city of the plains!
Here Ceres sends her stores of golden grains,
Pomona, fruit, nuts and rich vintage shows,
And Flora, oleander proud, and rose,
Invention, foremost, neat in work and turn,
Extortion, idleness, here tries to turn,
By making headers, thrashers so combined,
As to grandly harvest, leave no waste behind,
Flour, paper, leather help enrich the State,
In buildings grand, dwell her unfortunate,
Here progress, skill and art make healthy strides,
Religion—love of work with us abides,
And from here to far-off Sierra's hills,
The hum of toil the thriving valley fills,
To our good city, our farms with their oaks,
We welcome you, with your wise words and jokes,
In our homes on the plains—everywhere,
We proffer you each our best homely fare,
Oh, soldiers of the soil! Oh, workers bold!
Oh, gentle sisters from home's loving fold!
With noble aims you've toiled in life's great field,
Together worked that right should bud and yield,
That agriculture should meet its reward,
That labor should be blessed by the Lord,
That temperance should over rum prevail,
That man lost manhood should no more bewail.
Nine years our State Grange has, with purpose just,
Upheld the weak, checked wrong, allayed distrust,
For rights, old as the golden rule, they've fought,
For truths, new as the rising sun, they've wrought,
For sovereign law—universal good—
For woman as man's equal firmly stood;
Endeavor, faithfulness—each have worked well,
To break, monopoly, greed, avarice's spell,
To equalize gains—give toil his part,
Our "Declaration" for their guide, their chart.
With these bright, bright days, and good work to be done,
May memory of lost ones softly run,
May blessings consecrate on each repose,
And shed their power o'er your labor's close.

Sister Flora C. Kimball, of National Grange, followed with an essay, eloquent and full of advanced thoughts, on "Woman's Influence on Society Through the Influence of the Grange."

[This and other interesting papers read during the session will appear in our Grange department from week to week hereafter.]

[The following reports read later in the session are inserted here for convenience of the type.]

Grangers' Union.

The Grangers' Union of San Joaquin Valley, duly incorporated under the laws of the State of California, was organized May 14, 1874, with the following-named gentlemen as Directors:

T. J. Brooke, John Wasley, H. M. Fanning, W. H. Snow, Ezra Fiske, Fred Brownell, Andrew Wolf, Jno. N. Woods and W. L. Overhiser, with a capital stock of 10,000 shares at the par value of \$25 each, of which there were subscribed 968 shares with 10% or \$2,420 paid up.

This constituted the capital on which the corporation commenced operations.

At the end of the first year, the directors declared a stock dividend of 484 shares, adding same to the original subscription, increasing the subscribed stock to 3,058 shares, representing a cash capital of \$15,290, during which time the board of directors had declared two dividends from the profits, payable in cash, amounting to \$3,923.98. They also, the following year, declared a dividend of \$1,546.25, making the cash dividend paid out to date \$5,470.23. The board of directors, seeing the rapid increase of the business, and realizing the importance of an increase of capital, resolved, at this time, they would reduce the authorized capital stock to 4,000 shares, threw the same on the market, and sold the remaining unsubscribed stock at \$12.50 per share, and that they would discontinue declaring annual cash dividends, and retain the profits in the business, add the same in the way of stock dividends, until the capital stock was fully paid up.

We deem it almost unnecessary to state that the business of the corporation has been a success. Such, however is the fact.

Referring to our annual report of January 1st last, I found that 80% of the capital stock had been paid up, with a balance of upwards of 16% to the credit of reserve fund account subject to dividend.

At the close of the business transactions of this year, the profits will justify the declaring of another dividend that will pay the capital stock up in full, giving us a working capital of \$100,000, after which it is the intention of the board of directors to resume the payment of cash dividends from the earnings of the corporation.

The business of the corporation has varied, ranging from \$75,000 to \$225,000 per annum, and is under the control and supervision of the following-named gentlemen, who now compose the board of directors: Andrew Wolf, Ezra Fiske, W. D. Langford, H. W. Cowell, W. L. Overhiser, B. F. Langford, James Marsh, Chas. Grupe and Jno. N. Woods,

The employees are, Messrs. H. S. Sargent and W. T. Smith, managers; W. L. Williams, book-keeper; F. A. Trefren, Geo. T. Munson and Geo. L. Wolf, salesmen; E. A. Howell, drayman.

Mr. H. S. Sargent is East at the present time, looking after the business interests of the corporation, making arrangements for the importation of agricultural implements, and other goods, direct from various factories.

The Union has been importing heavily of almost everything they handle the past two years, and are determined to keep pace with all competition in the great San Joaquin valley. It has been a recognized and undisputed fact, from the date of organization, that the Grangers always took the lead in establishing prices, and other competitors had to follow.

We could enumerate many leading articles in the line of agricultural implements that were reduced from 20% to 30% immediately on the organization of the Grangers.

Our motto has been, always, to take the lead and keep it, make our own prices, and enter into no combinations. We have always kept this in view, and never deviated from it. Yours respectfully,

ANDREW WOLF, President.

Grangers' C. Business Association of Sacramento.

Mr. Wm. Johnston, President of this association, after making some remarks regarding the usefulness and success of this popular institution, read the following statistics:

This association was incorporated May 12, 1877, with a capital stock of \$50,000, and commenced business December 28, 1877, with a paid up cash capital of \$2,918.90.

Amount of sales for the year 1878.....	\$91,581.06
Interest paid for the year 1878.....	420.09
Amount of sales for the year 1879.....	91,692.34
Interest paid for the year 1879.....	1,130.89
Amount of sales for the year 1880.....	92,814.44
Interest paid for the year 1880.....	1,492.87
Amount of sales for the year 1881.....	92,146.29
Interest paid for the year 1881.....	1,647.80
Sales for 1882, up to Sept. 1, 1882.....	65,918.87
Capital stock paid up to Jan. 1, 1882.....	12,755.57
Amount paid on real estate up to Sept. 1, 1882.....	7,547.50

[The reports of the various other business associations will be found in the W. M.'s address, published last week. Bro. Ohleyer, of Yuba City, and Bro. Allen, of Healdsburg, gave verbal reports of the progress of the Grangers' Business organizations in their respective localities, concerning which we may be able to give further information hereafter.]

Report of Dr. J. Strentzel.

As an introduction to the quarterly report of September, Dr. J. Strentzel, of Alhambra Grange, read the following:

The life of Alhambra Grange, No. 230, began with the 12th of September, 1875. We have enjoyed since many pleasant reunions and harvest feasts. Our band of charter members remains firm in the faith—our increase in members was slow but constant. Our membership is now 81 strong. The increase is mainly of young brothers and sisters, grown up within Grange influence promising a long life and augmented activity to our Order. During our life our losses were by migration; dropped others for inattention to their duties as Patrons. Death claimed some of our brightest as his own, to augment the Grange on high—bright remains the memory of their good deeds. Peace to their ashes!

Our Grange owns now a valuable nucleus for a library, consisting of over 60 volumes of choice works of the best authors, comprising biography, history, popular science, miscellaneous agriculture in the different branches, by a systematic and judicious investment of our surplus funds in treasury, this library can be easily increased to any desirable proportions.

The co-operation efforts of the Grange in our county, were all for good, and eminently successful. The organization of the Contra Costa county Grangers Warehousing and Business Association was the first practical effort to call public attention to the Straits of Carquinez as the natural center of the grain trade of the Sacramento and San Joaquin valleys, we modestly claim as the fruits of our efforts to have benefited every farmer in the county, securing to them through competition, a material reduction in the price of grain sacks, freights and commissions—the full control and disposal of their grain in warehouse, and the time of sale, making obsolete the former impositions of middlemen, by which the farmers of a single township were robbed of about \$60,000 during one season. Gold can now be as freely raised on grain warehouse certificates as on U. S. bonds.

More persistent efforts are advisable to work through the Grange the spread of information regarding agriculture, stock raising, poultry, silk, fruit and the culture of the vine points to be our most promising resources to make money from, if you please.

As Grangers, let us extend our sympathy and helping hands to our brothers, whose fields and homes are being destroyed by the avalanche of debris of the hydraulic mines under control of foreign and alien companies, under whose auspices the most fruitful soil, once a promising inheritance of coming generations, is wantonly destroyed, or wasted away to clothe the channels of our navigable rivers, increasing the damage by winter freshets to overwhelming proportions, obliterating the grand highways of nature in their outlet to the ocean.

The coming Farmers Convention offers us an opportunity to unite all classes of taxpayers, against a horde of tax eaters, wasting our substance by inordinate taxation, abstracting the fruits of our labors, under the most frivolous pretences.

The remedy is in our hands, and has to be applied at home, by the selection of true, honest, sober, responsible boards of supervisors in each county. In this field an energetic co-operation will bear early fruits. Pledge them to strict observance of a golden rule, to keep the county expenditures within the income; to hold the county officers to their appointed work. Set your faces against all deputies in general. If a county official is unable to do all the work, let him resign his place to be filled by a worker. Extravagance in the administration of our county governments is the foundation of mismanagement and corruption of the whole body politic of the State,

Wednesday, A. M.

Worthy Master Flint called the attention of the Grange to the fact that a Stockton photographer had taken a fancy to the Grangers, and desired the members to gather in front of the hall at 5 P. M., as he desired to photograph the Grange as a body. So when the hour arrived, the Grangers assembled in front of the building, and had their benign countenances represented on paper, and those who wish, may have a souvenir of this meeting.

Bro. Geo. Ohleyer exhibited a diagram of the Sacramento river as it was in early days, before the deposit of silt; also, of the Yuba as it was, and as it is now; also, of the Sacramento and Feather rivers—explaining them with appropriate remarks.

Wednesday Evening.

The order of business was the election of a number of the Executive Committee, for the term of three years. Brother Chas. Wood, of Danville Grange, was elected upon the second ballot. Bro. Wood is District Lecturer of Contra Costa county, and a very excellent man, and we have no doubt, will fill the position with honor to himself and the Order.

Thursday, A. M.

Bro. Overhiser was the bearer of an invitation from Dr. Shurtleff, Superintendent and Resident Physician of the Insane Asylum, to the Grange, to visit the asylum and grounds.

Thursday, P. M.

The order of business being the lecture of Matthew Cooke, Chief Horticultural Officer of the State, the gentleman was introduced by the Worthy Master, in open session, and gave a very instructive lecture which was an evidence of how study and science should go hand in hand. After the lecture, his microscope and specimens were placed in an adjoining room, examined by many, and many questions asked; and we would suggest that the subject of entomology be made one of the subjects in the Grange, by reading from the best authors on the subject, and personal observations, discussions of remedies for the injurious insects, etc. The hall was crowded that afternoon. A vote of thanks, offered by Amos Adams, was tendered by the Grange, to Mr. Cooke, for his kindness in spending an afternoon, out of his very busy life, for the entertainment and instruction of the Grange.

Bro. C. Bagge, of the Committee on Insurance, presented the report of the Committee, which was adopted.

Bro. C. S. Elliott, of the Committee on Memorial, presented resolutions on the death of Bro. Edwards, of St. Helena, and Bro. Kerr, of Watsonville, which were adopted by a rising vote.

Bro. Kimball, of the Finance and Account Committee, presented a report which was adopted.

A report was read from S. F. Porter, W. M., of Lompoc Grange, regretting his inability to attend, and wishing the Grange the best success imaginable.

Bro. C. S. Elliott made a report of the Grangers' Business Association, of Lodi, conducted very nearly on the Rochdale plan. The Association has met with such decided success that farmers outside of the Grange have lately invested in it. They have purchased a store, which is now filled with an increased stock of goods. A verbal report only was given in the session, with the promise of a more complete one for publication in the proceedings. Their business is located in one of the most uniformly profitable farming districts of the State. There is a peculiar degree of progress among the Grangers in the surrounding districts, they seeming to be the most active and thrifty in the State. And we are glad to know that the first effort on the Rochdale plan in the State is in such good hands.

We would recommend that ladies be made chairman of various committees oftener in the future. Mrs. E. W. Steele is Chairman of the Committee on Co-operation, which position she has filled in a very able manner.

Bro. Geo. Ohleyer, of Yuba City Grange, made a verbal report of the work and condition of the Sutter County Farmers' Co-operative Union, and promised a written one for publication. This institution was found to be in a flourishing condition, and constantly increasing its capacity.

Bro. Allen, of Healdsburg, was called upon for a report of the workings of the Healdsburg Co-operative Association. Not being prepared, he promised a written report, if he could obtain it.

Sister Jeanne C. Carr made some suggestions relative to co-operation, and wished to have a committee appointed to draft a letter of fraternal feeling and fellowship to be sent to the National Grange.

Bro. I. C. Steele made a motion that a committee of three be appointed to draft such letter. Carried.

Thursday Evening

Report was presented by Bro. J. F. Deming from the Committee on Subordinate and Dormant Granges.

Worthy Master Flint exemplified the secret work of the Order, after which they proceeded to hold the love feast.

Sister Hattie Sprague read a very excellent poem upon the subject of sickness.

Friday A. M.

Report of Committee on Temperance Resolutions, presented by Bro. A. Adams, was offered and adopted with but one dissenting vote, showing that our members are on the side of good morals.

The Committees on Education, Co-operation and Good of the Order, were made standing committees, to report quarterly to the Executive Committee, and the reports to be published in the Patron.

The Masters under the roll call of subordinate Granges were each allowed five minutes to report their various Granges.

Friday P. M.

The roll call of Granges for Masters' reports was continued, after which, sister Alice Flint, (daughter of the W. M.), favored the Grange with a fine selection on the piano, which was well received. Bro. B. R. Spillman offered a report from the Committee on the Patron; report adopted. Bro. I. C. Steele moved that the Committee on Co-operation be granted further time to complete their report, and that the report be made to the Executive Committee in time for publication in the proceedings. Committee on Appeals presented a report which was adopted. Sister J. V. Webster favored the Grange with a ballad, entitled "The Farmer." In accordance with the regular order, the subject of fixing the next place of holding the State Grange was discussed. San Jose, Sacramento, Vallejo, Plymouth, Martinez, Santa Rosa, were placed in nomination. But it was proven that San Jose was most in need of the inspiration, usually resulting from the presence of the State Grange, so San Jose was declared by acclamation, to be the next place of meeting.

Bro. James Marsh presented an invitation from the proprietor of Sperry's new and massive flouring mill, for the Grange to visit that institution on Saturday morning, at 10 A. M., which invitation was accepted by many, and very much enjoyed by them. There is a beautiful view of the city and surrounding country from the top of this fine brick structure. The roller crushing process is used in all its perfection. The mill is undoubtedly the most complete and perfect in the State (an illustrated view of the building will soon be shown in the Press).

Bro. I. C. Steele moved that the rules be suspended, and the minutes read and approved; carried.

Bro. P. H. McGrew moved that the minutes of the entire meeting be referred to the Executive Committee for publication, and that a vote of thanks from the Grange be tendered the W. M. for the very able manner in which he has presided over the deliberations of this body. Carried. Bro. McGrew also moved that thanks be tendered to the officers, chair, W. Secretary and Assistant Secretary for their labors. Carried. The Grange was then closed in the fourth degree, to open in the fifth, in the evening.

Friday Evening

Was devoted to the conferring of the fifth degree and the feast of Pomona. One hundred and six Representatives and fourth-degree members took the degree, making a very large and interesting class. Owing to the large number present, one ticket to the feast, only, was furnished to each Stockton newspaper and Patrons present. The feast was a grand success. The tables were handsomely decorated, and the fruits of every kind were delicious and enjoyed by all.

NAMES WHO TOOK THE FIFTH DEGREE.

Following are the names of Representatives and Subordinate Grange members who took the fifth degree, "Pomona."

John Gratian, C. A. Wagner, Miss P. L. Hull, H. A. Parker, A. S. Green, J. C. Partridge and wife, Sister S. E. Walter, Mrs. M. C. Williams, Sister R. A. Jones, A. P. R. and wife, Volney Taylor, Wm. Kuhl and wife, B. J. Gratian, Sister Lucy, J. C. Sister Maggie, L. Elliott, W. H. Derick, W. C. Kimball, Sister S. Bab, Sister Mary A. Jones, Sister Eliza Jones, E. G. Williams and wife, F. V. Flint, Sister Alice H. Flint, Wm. H. Overhiser, Geo. W. Ashley, T. J. Fletcher, J. C. McHenry, D. C. McHenry, Sister Eva Utz, Sister Pauline Utt, Sister B. Kooser, S. B. Overhiser, Mrs. L. Overhiser, J. A. Ritter, Sister Katie Overhiser, Sister Dora George, A. F. Raymond and wife, Sister A. Marsh, James Marsh and wife, R. D. Wilson, E. R. Daly, W. T. Allen, Sister E. W. Steele, Sister M. E. Tuttle, J. M. Post, J. Wilcox and wife, Nelson Dill, E. G. Williams and wife, H. Pomeroy, H. G. Keesling, Thos. Edwards, Jr., Sister C. Bagge, Sister J. Stewart, Sister S. J. Edwards, Sister Gertrude De Ege, Chas. P. Beckley and wife, J. L. Beecher, Jr., Sister Beecher, Sister Mary Daniels, Sister E. H. Wight, C. Grupe, D. A. Leonard, Sister L. M. Marsh, Sister O. O. Norton, Sister Minnie Plummer, J. D. Wright, C. B. Richter, Frank Wolf, W. Stearns, C. P. Allison and wife, C. G. Carpenter, S. D. Wood, Sister K. A. Wood, M. E. Allery, Sister A. Allery, L. Freeman, Frank Vanderpool, Sister George Vanderpool, Sister Sarah J. Styles, Sister Eleanor Sallee, E. Wolch, Jas. McHenry, J. Northrup, Sister Northrup, Sister R. S. Perkins, C. A. Smith, Sister R. K. Whitmore, A. M. Woodruff, Sister E. M. Nelson, W. B. White, M. W. Parker.

A sister present contributes the following concerning

Pomona's Feast.

Under the able management of the committee, consisting of Bros. W. B. West, A. Wolf, D. A. Learned, Thos. E. Ketchum, and Sisters C. Gratian, W. L. Overhiser, W. Ashley, J. B. Haroldson, W. Kuhl and P. Peterson, the tables presented a grand display of Pomona's gorgeous fruits. Ceres' golden grains, and Flora's choicest offerings. Among the latter were huge pyramids artistically arranged under the deft fingers of Sisters Deming, Overhiser, Flint, Marsh and Kuhl. We are sorry that we are unable to give a complete list of all contributors, but, as far as ascertained, they are as follows: George West, D. A. Learned, Wm. Ashley, W. B. West, Samuel Myers, W. Kuhl, W. L. Overhiser, Wm. B. Phelps, W. Bailey, A. Burkett, Thos. Ketchum, and others of Stockton Grange, and Chas. Bermuth, of Washington Grange, who supplied the tables with the finest and largest varieties of grapes, peaches, pears, apples, plums, besides almonds and chestnuts from D. A. Learned's place. A large watermelon, furnished by W. O. Clark, of Amador county, was thoroughly tested, with satisfactory results. Noticeably

interspersed along the tables were dishes of popcorn from Sister Ashley, as full and rounded out in snowy whiteness as are the thoughts emanating from her ready pen. Also cake made by the sisters of Stockton Grange. Among those supplying flowers were Sisters Gratton, Ott, Overhiser, Lee, Kuhl, Ashley and Marsh.

The Committee on Preparations for the fifth degree were W. L. Overhiser, Andrew Wolf, P. H. McGrew and Sisters McGrew and Ketchum, who were kindly assisted by G. W. Hancock, Sister Wm. Johnston, and others.

This Report Not in Regular Order.

In order to condense, we do not report the action had in the Grange at all strictly in the order in which it occurred during the session.

Committees Appointed During the Session.

CONSTITUTION AND BY-LAWS—B. R. Spillman, A. T. Dewey, Wm. Phelps, and Sisters I. C. Steele and Clara Deming.

FINANCE AND ACCOUNT—W. C. Kimball, H. W. Johnson, J. R. Dyer and Sisters Nellie G. Babcock and S. T. Coulter.

GOOD OF THE ORDER—L. C. Steele, E. W. Davis, Dr. Gratian and Sisters D. Flint and S. H. Dewey.

CO-OPERATION—Sister E. W. Steele, Bro. V. Taylor, Geo. Cone and Sisters James Marsh and W. Peterson.

SUBORDINATE AND DORMANT GRANGES—J. F. Deming, J. T. Wight, A. Henderson and Sisters B. R. Spillman and Ida R. Flint.

TRIALS, APPEALS, GRIEVANCES AND CLAIMS—M. L. Gray, Amos Adams, M. Stearn, Sisters B. Kooser and H. G. Deming.

RESOLUTIONS—T. J. Fletcher, A. Adams, G. R. Rich and Sisters W. C. Kimball and B. F. Frisbie.

OFFICERS' REPORTS—J. Marsh, R. L. Ford, Hart Smith and Sisters J. F. Cross and E. W. Davis.

FEAST OF POMONA—W. B. West, A. Learned, Thos. E. Ketchum and Sisters C. Gratian, W. L. Overhiser, W. Ashley, —Haroldson, W. Kuhl and P. Peterson.

CALIFORNIA PATRON—B. R. Spillman, A. Adams, J. V. Webster, Sisters B. F. Frisbie and L. I. Hull.

EDUCATION—E. W. Davis, C. A. Hull, D. N. Shearborn and Sisters J. C. Carr and E. W. Steele.

LIFE BENEFIT DEPARTMENT—C. Bagge, J. H. Gardner, O. Deming and Sister T. T. Cooper.

CONGRATULATIONS TO STATE GRANGES—Sister Jeanne C. Carr.

PETITION AND MEMORIAL—T. T. Hooper, R. M. Nixon, —Williams, Sisters J. A. Dyer and M. M. Ford.

DEBIS—Brothers Geo. Ohleyer, G. W. Hancock, H. W. Browae, Sisters Wm. Johnson and S. E. Walton.

MEMORIAL—Brothers C. T. Elliott, J. F. York and Sister Lillie Jasper.

FIFTH DEGREE—Brothers Wm. Overhiser, P. H. McGrew, A. Wolf, and Sisters P. H. McGrew and Wm. Johnston.

CREDENTIALS—Nelson Carr, J. Marsh, F. Frisbie, and Sisters E. W. Steele and D. D. Hull.

ORDER OF BUSINESS—J. Keith, —, Peter Peterson, and Sisters N. Carr and H. W. Johnson.

Committee on Memorials.

Since our last annual session two of our number have been called by the Master of the Universe to the Great Grange above, to-wit.: Bro. Alexander Kerr, Master of Watsonville Grange, and Bro. David E. Twards, Master of St. Helena Grange.

While we submissively bow to the divine will, yet we recognize the great loss this Order has sustained in the death of said brothers.

They were both faithful and earnest in advancing the interests of our noble Order, and in all things worthy the name of true Patrons.

Resolved, That our heartfelt sympathy be extended to the relatives of the deceased brothers, and a copy of these resolutions be forwarded to them.

Reports and Resolutions Read and Adopted During the Session.

OHLEYER'S ANTE-DEBIS MEMORIAL.

"Enjoy your own property in such a manner as not to injure that of another person." When nations have emerged from barbarism and have assumed the garb of civilization, the question of the rights of property was not unduly decided upon the principles just quoted. No civilization ever has or can exist where property rights are disregarded.

In California an industry has grown up which demands the destruction of this law of civilization. It claims the use of our rivers as dumping ground, and our valleys as a receptacle for mining debris. For a time this was tolerated, but never sanctioned. But the violation of this principle has cost the State many millions of dollars, and has nearly ruined our river channels as arteries of commerce and drainage, and if longer continued will render our great valleys uninhabitable. To avert this calamity we must return to the first principles. If we would avoid anarchy, the golden rule must be observed and obeyed. The agriculturist has a law abiding people. To this class nations look for peace, prosperity and support. It is the duty of the Government to protect us in our just rights. But we must demand this protection in no uncertain terms. Governments are seldom moved except by appeals from the people, and his appeal, to be effective, must come from all who value civilization and stability. No miner may use his property as to injure the property of another miner; and no miner or company of miners may so use their property as to rob us of the river channels or our homes. If this may be done on the American, the Yuba, or the Bear, it may be done elsewhere, and no man's home may be safe from the same.

We have a petition to the State Grange for sympathy and support, and not in vain. The friends of the Grange in the cause of right has awakened public sentiment, causing discussion which has enlightened the people and hastened the permanent solution which is now near at hand. Having faith in the justice of our cause, and relying upon the State Grange, not the agriculturist everywhere, for assistance in maintaining this principle we invoke, we again venture, to appear before the State Grange with our grievances.

"No more dumping into our rivers," is our watchword. No remedial measures are equal to the power of powder and water employed by our destroyers. The State must not and cannot legalize the use of our channels for damns and debris. The General Government must not fritter away its resources for the benefit of one class and the destruction of another. These are our principles, and to carry them into effect we implore the aid of all those who value the future prosperity of the State. No man should be elected to office who can not espouse the cause of right, who will not pledge himself to stand by the agricultural and commercial interests of the State.

ANTI-DEBIS RESOLUTIONS ADOPTED.

Offered by George Ohleyer:

WHEREAS, The prosperity of a State depends upon the value of its productions, and the facilities for placing the same in the markets of the world, at the least possible cost to the producer, while the natural advantages that enable such producers to build up the greatest number of permanent and happy homes, surrounded by such institutions as will develop the most perfect manhood, and create a strong attachment for country, and

WHEREAS, In the language of the National Grange, "The soil is the source from whence is derived all that constitutes wealth," and our rivers, bays and harbors provide the natural and most economical means for moving the products of the soil to market, and

WHEREAS, In this fair State a business has been and is being prosecuted under the name of an industry, the tendency of which, in localities where prosecuted, is to so change the face of nature that the provisions created for a wise and beneficial purpose are turned into engines of destruction, carrying ruin in their course and daily reducing the area of our productive soil and rapidly block-

ading and destroying our navigable rivers, bays and harbors. And as true political economy, the higher duties of the Grange and the best interests of the State demand that we shall preserve all we have, and labor to increase the producing area of our State by all legitimate means; therefore, be it

Resolved, That we will no longer permit this wholesale destruction, and the State Grange, with the hearty co-operation of all subordinate Granges and members, is hereby pledged to the protection and improvement of all our navigable water courses and adjacent lands, and to compelling our fellowmen so to use their own as not to injure the property of another, and thus enable us to leave to posterity, unimpaired, a valuable inheritance in the Eden of America. And further

Resolved, That as members of the State Grange of California, we will earnestly labor in our various communities to bring this matter squarely before our people, and will take an active part in the impending struggle, and pledge candidates to the Legislature to earnestly labor for the enactment of just and efficient laws whereby this great destruction shall be speedily stayed and our navigable waters restored to their former efficiency.

Non-Political, Etc.

Offered by E. W. Davis:

WHEREAS, It has gone forth through the columns of the daily press of this State, that the Grangers have called a political nominating convention; and

WHEREAS, It is, or should be, well known that our organic law prohibits the Grange, or any subordinate Grange, from discussing political or partisan questions, or from calling nominating conventions; therefore,

Resolved, That this State Grange most emphatically disavows any connection with any political convention which may have assembled, or which may yet assemble in this State for the nomination of candidates for office.

Resolved, That while the Order is thus pledged against any political action, it accords to its members, as individuals, full freedom on all questions.

On the Sale of Liquors

Resolved, That it is the wish of the State Grange of California that the next Legislature pass a law prohibiting the sale of spirituous, vinous, or fermented liquors, on legal holidays, and also to compel the closing of all places where liquors of any kind are disposed of on those days.

Invitations to Hon. Mr. Holyoke.

The following resolution was offered by Mr. A. T. D. way:

Resolved, That Hon. Wm. Holyoke, leader of the Rochdale co-operative associations of England, be invited by the Patrons of Husbandry of California to extend his visit from the Eastern States to this coast, to confer with the Patrons, farmers and co-operative associations here, for the exchange of information and acquaintance, for the mutual benefit of the producers on this side of the Western Continent and his constituents, the consumers, on the Eastern Continent.

Congressional Globe for Granges.

The following resolution was offered by Mrs. Cluff, editress of the Lodi Review:

WHEREAS, The Grangers are interested in a good government; and

WHEREAS, The Grangers, as land owners, pay their quota of the public money in taxes that is expended in the salary of our public officers; and

WHEREAS, The official public records are placed in the hands of a few favored newspaper publishers and friends of our Representatives; therefore,

Resolved, That it is the sense of this State Grange that we demand of Congress that a copy of the Congressional records be sent to each subordinate Grange throughout our State, that the members can have an opportunity to review the acts of our Representatives without depending upon a partisan press for a report of the same.

Thanks, Compliments, Etc.

Offered by A. T. D. way:

Resolved, That the thanks of this Grange be tendered to Gen. John Bidwell for his very fine display of cereals at this session of our State Grange, consisting of 56 varieties of grain raised upon his farm in Chico, Butte county, California.

Offered by Amos Adams:

Resolved, That the thanks of the State Grange be and the same be tendered to Sisters W. B. Ashley, Jeanne C. Carr, Flora M. Kimball, E. W. Steele, Charles Merrill, S. J. Cross, Clara Deming and M. E. Landers, for the very able and instructive essays read by them during the present session; also to all other Sisters that have nobly contributed to the success and entertainment of our present session.

Committee on Life Benefit Department.

That a well devised plan for the same would prove of great benefit and advantage to our Order is adopted.

The experience of associations like the Ancient Order of the United Workmen, and Endowment Rank of the Knights of Pythias, indicate the feasibility and desirability of such a feature in connection with our Order.

In our opinion, it should be entirely under the care and control of the National Grange, as a matter of absolute safety as well as economy, as less cost would be required for office rent, management, etc.

Furnishing such a shield and protection for the orphan and the distressed families of brothers and sisters in time of bereavement, would prove as noble a benefit as to commend the system, when practiced, most directly to our membership, and be observed also with favor in the eyes of others.

None should be allowed membership except Patrons in good standing, and their protection should cease whenever they fail to keep their connection good with their Grange.

Your committee, therefore, recommends that the Worthy Master of the State Grange be requested to lay this matter before the National Grange at its next session.

In respect to fire insurance, your committee deem it inadvisable at this time to enter in any fire insurance in connection with the Grange, although we recognize the benefit it would be to the members of the Grange if it could be successfully established. All of which is respectfully submitted.

Committee on Education.

That section of our Charter which pledges us to promote the cause of education by every means in our power, imposes upon our Order a sacred obligation, which can best be discharged by each subordinate Grange, in the promotion of the interests of the public schools in its own locality. It has been said that the vast sums which are now applied to public education do not accomplish half the good which they might, if a competent district supervision could be obtained. The improvement of schoolhouses and grounds, the care of school libraries, are legitimate subjects for the interest and efforts of Patrons. The school library fund, amounting to 10% of the funds had been persistently misappropriated in many parts of the State in a variety of ways, but the present condition of the library is made worse by the lack of unity of purpose and efficiency of control of county authorities. Books wholly useless to rural communities, and wholly inappropriate as reading for the young, are introduced by dealers and agents. The library fund, which should be carefully husbanded and sacredly devoted to promote the intelligence and culture of our children, is often squandered for costly apparatus, musical instruments, and the like, not within the intent of the law. Among the most efficient school trustees of this State are several of our Matrons; and where they are in office, the schools have invariably been

visited, and all good teachers sustained. It is within the province of the Grange to influence legislation in the prevention of frequent changes in text-books. It is not long since a radical change was made in many counties, and the proposal to have the State print and furnish free text-books has been endorsed as one of the political dogmas of the hour. This is another proper subject for discussion. While reforms in the courses of study, tending to make all public education more practical, from the elementary school to the university, progress more slowly than we could wish, we can see an advance. We earnestly recommended kindergarten instruction before there was a public school of this kind; there are now several.

Our Agricultural College is as yet returning few educated farmers to the agricultural ranks, but it has rendered important aid to many of our industries. We reiterate the former action and declarations of the State Grange upon the subject of industrial education in all its branches. It is a sin and a shame that we have yet in California no schools where the art of agriculture, the arts of housewifery, or where any of the mechanic arts are taught.

We earnestly hope that one or more agricultural stations may be created by State and National legislation, which may become educational centers, as well as experimental grounds.

We submit this partial report, hoping that discussion may elicit other and more important points for the consideration of the Grange.

Committee on Subordinate and Dormant Granges.

In presenting this, the report of your Committee on Subordinate and Dormant Granges, we feel that the time is too limited to enable us to make such researches as we would wish, in order to present it in a full and complete form. As the present condition of the subordinate Granges has been fully set forth in the various reports already laid before you, there remains little of anything for us to say on that head, and your committee will therefore make no attempt in that direction.

But we would earnestly recommend all Masters, and, in fact, all members, to do their utmost to keep up the old interest and inaugurate a new and greater one by all the honorable means and persuasive powers they possess.

We find it difficult to lay down any specific rule or advice for your guidance, and will therefore make a few suggestions of a general character. Let each Grange set apart some fixed time when they will visit, in a body, their neighboring Granges, and notify them of such intention. We think such an interchange of civilities will create a better understanding, engender a better feeling and renew the interest. Select some interesting topic for discussion and arrange a general programme of the exercises, endeavor to arouse and bring to the front the retiring ones, encourage and assist them in every way, and in this do not forget the younger members; above all, let each member resolve to use every exertion to gather into the fold the young, and see to it that, when they are with you, amusement is provided for them; make them feel at home, and so interest them that they will look forward to Grange day with bright and happy anticipations. Do not forget that you were once young yourself, and that childhood never returns to us; therefore make it the happy springtime of life for your children. Do not let the interest lag. The time is well spent, and your reward will be ample in the contemplation of your children's bright, happy faces; and remember that all the advantages we have acquired are to inure to the benefit of those who, in time, must take our places, and that the future glory and success of the Order will devolve upon them. See to it, then, that through neglect and indifference they be not lost to the cause. Let everything be done promptly, and in business meetings have everything conducted in an energetic business manner. Have an especial care to look after the needy and afflicted; visit them often, sympathize and assist them in every way, and you will find this the most direct avenue to their hearts.

In the matter of reviving dormant Granges we find it extremely difficult to suggest anything of a practical nature. Persuasion would be, in our opinion, almost fruitless; the desire for reinstatement must originate with themselves. But it might, perhaps, be well for the members of live Granges to visit those of dormant Granges in their families, and, by conversation and discussion, show them the advantages of membership and disadvantages of indifference, and thereby introduce the leaven that may arouse them to action. We think that, perhaps, some means of mutual benefit may be devised by the committee you have appointed on insurance matters that might arouse the dormant spirit; I would suggest to that committee that they take this matter under advisement. It might, perhaps, be a good idea for this body to make some rule by which such Granges desiring to return could do so without cost, or making some provision to remit all arrears, thus starting them anew with a clean balance sheet. All of which is respectfully submitted by your committee.

Good of the Order.

It is said, "wise men learn by experience—fools never." The past is valuable for its lessons. The present exhibits the good accomplished by our Order, and the progress that has been made is garnered in the lives of the workers who have accomplished it. The love we bear to the principles of our Order has its best expression in labor performed. Trials and dis-appointments have taken from us many mem-

bers; and yet trials and disappointments are among the vicissitudes of life, a necessary educator. Continued prosperity and great wealth make men hard-hearted—imperious. Disappointment teaches us mutual dependence, and sorrow softens the heart.

Much good has been already accomplished by our Order. The declarations of purposes of the National Grange (a production of the officers of the California State Grange) will challenge the admiration of generations unborn, and be the future rallying point of the agricultural masses. It is the chart by which our Grange ship must be steered.

With a Worthy Master, so unselfish, able and devoted to our standard bearer, we have only to close up our ranks, and imbued with the same devotion to the good of our Order, go forward and conquer the foes of mankind, viz, ignorance and selfishness. The good of our Order requires the sinews of war, and the members of our Order cannot afford to allow a few all the honor of furnishing them; and your committee recommend a sufficient increase in Grange dues to meet the necessary expenses of the State Grange. Emergencies offer opportunities for testing the qualities of men and women. Bro. Webster and Sister Kimball, editors of the *California Patron*, have been in the refining fire of emergencies, and stand forth burnished by its scathing power—worthy of the confidence and affection of every Patron. For, to their untiring efforts we are largely indebted for the revival and improvement of the *California Patron*. A Grange organ in California is a necessity for the good of our Order, and, in such worthy hands, merits the support of every Patron and farmer in the State; and we recommend strenuous effort to increase its circulation. In accord with the wishes of the Worthy Master of the State Grange, and, for the good of the Order, we would most respectfully recommend that the Executive Committee use every means possible to place in the field competent and worthy Lecturers, and that a thorough canvass of the State be made during the coming spring and summer in behalf of the Grange.

Constitutional Amendments.

The following proposed amendments to the State Grange Constitution were adopted:

1. Amend Section 3, Article 10, by striking out the word "six" where it occurs in the sixth line of said Section, and insert "ten" so that it will read:

Section 3. The Treasurer of each subordinate Grange shall report quarterly, and pay to the Secretary of the State Grange the sum of one dollar for each man and fifty cents for each woman initiated during that quarter; also, a quarterly due of ten cents for each member, and the Treasurer of each Grange shall give bonds to be approved by the officers of their respective Granges.

2. Amend Section 3, Article 12, so as to read as follows: Section 3. A Member of the Order joining a Grange on Demit shall first pay to the Grange at least one quarter's dues.

7. Amend Article 15, by striking out the words, "Chairman of the Executive Committee," where they occur in the 4th and 5th lines thereof, and insert "Secretary of the State Grange" so that the article will read:

ARTICLE XV—AMENDMENTS.

This Constitution may be amended at any regular meeting of the State Grange, provided that any proposed amendments shall have been presented to the Secretary of the State Grange, who shall report the same to the Masters of the subordinate Granges one month previous to the meeting of the State Grange.

Bro. W. O. Coulter moved that such legislation be procured in the National Grange as will recognize the eligibility of woman to any position in the Grange and her standing in the Order.

The Worthy Secretary offered a substitute to this, that a committee of three be appointed to draft a resolution to the National Grange, to so amend the National Grange Constitution as to put the sisters of the Order on an equality with the brothers, in all matters pertaining to representation. Motion adopted.

Essays Read.

Sister W. D. Ashley, of Stockton Grange, delivered a beautiful original poem Wednesday A. M.; Sister Flora Kimball, of National Ranch Grange, San Diego, read an able address on "Woman's Influence on Society Through the Grange" Wednesday A. M.; Sister E. W. Steel, of San Luis Obispo, read a very able paper on "Co operation" Wednesday P. M.; Sister J. F. Cross read an interesting essay Wednesday evening; Sister Clara Deming, of Vallejo Grange, read an essay Thursday A. M., subject, "The Power of Wisdom"; Sister M. B. Landers, of Alhambra Grange, Martinez, read an interesting essay Thursday evening; Sister Chas. Merrill, of Stockton Grange, read an interesting essay Friday P. M.

The Grange endorsed the amendment of the National Grange providing for permitting the Past Masters to be elected as delegates to the State Grange when the Master is unable to attend. The good effect of this amendment was seen in the present session by the good services of several Representatives, whose Granges would otherwise not have been heard from. Although we have had State Granges having over 200 Granges represented, this, with only 50, far exceeds all previous efforts, especially from an educational standpoint; and when the reports are published complete, including the essays, the outside world will see what a "feast of reason and flow of soul" we Grangers have been having in this goodly city of Stockton, notwithstanding the clouds have been dropping their condensed moisture upon us.

Although the absent members have not had the cream, they will relish the perusal of these reports when published. There are many reasons why this State Grange has been so interesting. One is, that the farmers are waking up to a realizing sense of the worth of the Order to them. Another is, the good work done by the Master in visiting different Granges and encouraging the members to contribute their mite for the entertainment of others. His kind manner

in presiding over the meetings has a delicate sense of consideration for others, as shown in recognizing all members, and a care that each should be called by name whenever they rose to speak. He ruled in the hearts of the members, as well as over their deliberations, making it possible to lead rather than command them. Every one seemed anxious to assist him in his work, making it more effective and pleasant for all assembled.

Now that he is familiar with the field and all the labors we may anticipate, next year's progress will be more strikingly exhibited.

Another reason for the enjoyable time had at the State Grange of 1882 is the good music which prevailed during the whole session. Sister Nellie Phelps Gough presided at the organ, and is deserving of much praise for the diligent and able manner in which she did so. She was well supported by good singing from the choir of Stockton Grange and visiting brothers and sisters. The effects of the music seemed to permeate and throw a charm of good feeling over all, and the effects of having a good choir to lead during the first of the session was shown by gradually bringing all voices to the front until the last day or two seemed almost like a musical festival, with numerous voices in the choruses. Hence the importance of a good choir at the beginning of the session. It is to be regretted that all the sons and daughters could not have been present to gather new ideas from the various essays and speeches, and see that the Grange is not stupid and uninteresting, but lively and teeming with good sense, wit and humor.

The three sessions a day continuing from day to day did not seem tiresome, the cause of which was the music and the streaks of good humor which gleamed forth at various intervals.

All meetings are in the fourth degree, except the conferring of the Pomona degree.

Probably as many as 300 Patrons were in attendance at one time, and the number that visited at different times was much greater.

Much of interest to Patrons only transpired during the session, which, while enjoyable and profitable to members of the Order, is not proper for publication.

Explanation.

The reason why no more district lecturers had reported to the W. L. at the time of making his annual report was duly and satisfactorily explained before the Grange.

Miscellaneous.

During the session Sister Jeanne Carr made excellent remarks at several different times, and among other good things, she said that the finest specimens of literature are contained in the Declaration of Purposes, and exemplification of the secret work, and are due to a Californian. She also spoke of the probable formation of a Grange at Pasadena in the near future. Also of the persevering work of O. N. Caldwell, in sustaining the Grange at Carpinteria, Santa Barbara county.

In answer to Worthy Master Flint's invitation, Gen. John Bidwell, of Chico, replied in a letter, as follows:

To deliver an address on agriculture before the State Grange next week in Stockton will not be in my power, which I regret. Nevertheless, I appreciate the great honor done me by the invitation, and beg that you will express to the Stockton Grange my grateful and cordial thanks, both for that and the one to myself and wife, to be present at the feast of Pomona, to be held on Friday, the 6th of October. Very truly yours, JOHN BIDWELL.

[This report will be continued in future issues by the publication of the "roll call of Granger," essays read during the session and other information.—EDS. PRESS]

The Stockton Convention.

The Farmers' and Anti-monopoly Convention was held, according to call, on Saturday, October 7th, in Stockton. J. V. Webster was chosen chairman and George Rich, Secretary. The following were admitted as delegates, as reported in the *Stockton Herald*:

Delegates.

The Committee on Credentials reported the following delegates entitled to seats in the convention, 91 of whom were reported present:

Solano County—J. F. Deming, T. T. Hooper. Tehama—C. B. Ashurst, J. Fennell, Jerome Banks, J. S. Copeland, R. H. Blossom, E. H. Ward, George Hogg, George Chandler. Alameda—D. Inman, H. M. Maybee, J. V. Webster, C. Bagge. San Joaquin—T. E. Ketchum, J. D. Huffman, D. A. Learned, T. Clements, J. Furness, J. R. W. Hitchcock, W. C. Dargett, Wm. Cowden, R. W. Leadbetter, J. Rhodes, Ezra Fliske. Santa Cruz—B. Pilkington, J. Tuttle, A. Cocks, M. P. Owens, C. C. Rogers, E. Anthony. Monterey—Wm. Gilkey. Merced—W. H. Mitchell, E. Kelsey, H. J. Ostrander, W. W. Gray, F. G. Poor. Stanislaus—J. B. Caldwell, W. L. Ashe, W. Dallas, G. Dorsey, J. Logan, S. Gibson, A. G. Carver, J. W. Davidson, W. H. McHenry, T. D. Herp. Tulare—J. N. Patterson, J. J. Doyle, W. S. Powell, S. E. Biddle, F. J. Clark, F. J. Walker. San Mateo—L. G. Steele, M. Woodhams. Sacramento—T. McConnell, B. Wilson, Wm. Johnston, John Reith, J. Holland, H. A. Parker, George Wilson, J. Handlan, A. M. Plummer, George Rich, H. W. Johnson, G. T. Carr, E. W. Stickney, L. H. Fasset, A. Ingleson. Sutter—George Ohlsey, Otis Clark, B. R. Spillman, B. F. Walton, B. F. Frisbie, T. D. Kirk, L. P. Farmer. Contra Costa—M. L. Gray, Volney Taylor. El Dorado—C. G. Carpenter, Wm. Starnes. Placer—B. M. Nixon. Amador—J. F. Gregg, J. Farmer. San Luis Obispo—W. P. Barnett, J. E. Lule, W. J. Miller, L. M. Murden, E. W. Steele, Geo. Steele. Sonoma—W. T. Allen, S. T. Coulter. Santa Clara—H. Pomeroy, H. G. Keesling. Kern—G. T. Thornton, R. E. Arick, F. Roper, H. Hirschfeld, H. C. Park, H. A. Jastro. Anti-Debris Delegates at Large—D. E. Feegarden, B. R.

Spillman, C. E. Stone, W. W. McKaig, George Cadwalader. Sacramento—C. W. Clark, P. H. McGrew, Sutter—B. F. Walton, J. D. Kirk, Yuba—P. C. Slattery, D. P. Durst. San Joaquin—Thomas K. Hook, W. T. Prather. Butte—A. Campbell, G. M. Lewis. Colusa—E. R. Graham, L. F. Moulton. Yolo—L. N. Hoag, George Swingle. Tehama—John Barry, J. C. Tyler.

The Committee on Platform reported at length, but the document has not come to hand. The following were a part of it:

Pledges for Railroad Commissioners.

Resolved, That each candidate nominated for the office of Railroad Commissioner be required to sign the following pledge:

I, _____, nominated for the office of Railroad Commissioner, pledge my sacred word and honor that I will, if elected to said office, within thirty days after entering upon my term of office, vote for a resolution reducing fares and freights within the limits of the State of California upon the Central Pacific and Southern Pacific railroads at least twenty per cent upon those now charged, and that I will favor an immediate investigation into the actual cost of said roads, and the rates of freight and fares, and vote for such additional reduction as will be fair between those railroad corporations and the people.

(Signed) _____ Candidate.

It was further resolved that if the candidate would not sign the pledge within a specified time that they should be taken from the ticket and other men be put in their places by the State Central Committee.

ANTI-DEBRIS.

WHEREAS, The present system of hydraulic mining is ruinous to hundreds and thousands of acres of the best land in the State, and is also fast filling the channels of navigable rivers, and will in time, unless checked, ruin the harbor of San Francisco; and

WHEREAS, The system has been judicially condemned; therefore be it

Resolved, That our streams should be kept free from the pollution and damage caused by the deposit therein of the debris from hydraulic mines, and we favor and request our representatives in the next Legislature to procure the passage of a law providing for the appointment and maintenance of a State river police, whose duty it shall be to guard our mountain streams from such deposits, and vested with the power to promptly abate such wrongs, and to arrest all persons guilty of the commission thereof on the spot.

Nominations.

The following nominations were made: Controller, J. P. Dunn; Railroad Commissioners, W. W. Foote, C. F. Reed, J. T. Doyle; Members of the State Board of Equalization, Chas. Dana, E. Wilcoxon, I. C. Morehouse, James Withington.

Nothing Succeeds Like Success.

When an article of real merit is placed on the market, it is astonishing with what rapidity it is introduced and taken hold of, while its very name becomes a household word. The marvelous success of the New England Baking Powder proves this. When first brought to the notice of the public, the market was overcrowded with different brands, and the proprietors of the New England were discouraged by dealers and attacked on every side by manufacturers. But, confident in the superiority of their goods, and satisfied there was plenty of room at the top, where they belong, and where they were determined to be, they still pressed on, and gradually, as one family after another throughout the country gave this baking powder an intelligent trial, its merit became more and more known and appreciated, until now it is more generally used on this coast than any other brand. Not only are the sales in the Pacific States very large and constantly increasing, but orders are being received from Salt Lake, Denver and Texas, and influential parties in Chicago and other Eastern centers have applied for the agency, and also for terms to manufacture on a royalty. The proprietors, however, do not propose to let their process out of their hands or out of the State. The ingredients, as well known, are only the very highest grades of refined cream of tartar and bicarbonate soda, but the proportions and method of combining the same, so as to insure strength, uniformity and keeping properties, are peculiar to the New England alone, and in these it has no rival. **

Byron Jackson.

The farmers and thrashers of the Pacific coast will be glad to know that the partnership of Jackson & Truman having been dissolved, Mr. Byron Jackson continues the business in the same place and under the same policy as before the partnership. Mr. Jackson has been manufacturing agricultural machinery in California for ten years, and his goods are known and used all over the coast. His inventions have increased the quantity and quality of the grain, lessened the cost of harvesting, lightened the labor on the men, and the farmers of the Pacific coast have proved by their almost universal use of his machinery how much they appreciate his efforts in their behalf. Mr. Jackson is constantly introducing improvements to reduce the farmer's labor and expense. His policy with them has always been liberal, and he believes in pleasing a customer and making him satisfied—cost what it may. His policy has always been that his machines working to the complete satisfaction of the purchaser were the best advertisement he could have. On this basis he has built up a large and prosperous business, and the *RURAL* extends to him its best wishes, and hopes that he may continue to prosper in the future as he has in the past.

PIPE, CHIMNEYS, ETC.—N. Clark & Sons, of Sacramento, manufacturers of vitrified sewer pipe, tile, firebrick, chimney flues, etc., who have been for 20 years in the business, with a manufactory at Sacramento, have lately bought out Jno. B. Owens, 22 California street, and will continue to carry a large stock of all kinds of pipe, drain tile, etc. The location, near the Oakland ferry, will be found convenient to people coming from the country.



Flash.

The Fireman's Story.

Flash was a whitefoot sorrel, an' run on No. 3;
Not much stable manners—an average horse to see;
Notional in his methods—strong in loves and hates;
Not very much respected, or popular 'mongst his mates;

Dull an' moody an' sleepy on "off" an' quiet days;
Full of turb'lent sour looks, and small, sarcastic ways;
Scowled an' bit at his partner, an' banged the stable
floor—
With other tricks intended to designate life a bore.

But when, be't day or night time, he heard the alarm-bell
ring,
He'd rush for his place in the harness with a regular tiger
spring,
An' watch with nervous shivers the clasp of buckle an
band,
Until it was plainly evident he'd like to lend a hand.

An' when the word was given, away he would rush an'
tear,
As if a thousand witches was rumplin' up his hair,
An' wake his mate up crazy with its magnetic charm;
For every hoof-beat sounded a regular fire alarm.

Never a horse a jockey would worship an' admire
Like Flash in front of his engine, a radi' with a fire;
Never a horse so lazy, so dawdlin' an' so slack
As Flash upon his return trip, a-drawin' the engine back.

Now, when the different horses gets tender-footed an'
old,
They ain't no use in our business; so Flash was finally
sold.

To quite a respectable milkman, who found it not so fine
A bossin' of God's creatures outside o' their reg'lar line.

Seems as if I could see Flash a mopin' along here now,
A-feelin' that he was simply assistant to a cow;
But sometimes he'd imagine he heard the alarm bell's
din,
An' jump, an' rear for a minute before they could hold
him in;

An' once, in spite o' his master, he strolled in 'mongst us
chaps,
To talk with the other horses, of former fires, perhaps;
Whereat the milkman kicked him; wherefor, us boys to
please,
He begged that horse's pardon upon his banded knees.

But one day, for a big fire as we was makin' a dash,
Both o' the horses we had on somewhat resemblin' Flash,
Yellin' an' ringin' an' rushin' with excellent voice an'
heart,
We passed the poor old fellow, a tuggin' away at his cart.

If ever I see an old horse grow upwards into a new,
If ever I see a driver whose traps behind him flew,
'Twas that old horse a rompin' and rushin' down the
track,
An' that respectable milkman a-tryin' to hold him back.

Away he dashed like a cyclone for the head of No. 3,
Gained the lead, an' kept it, and steered his journey free;
Dodgin' the wheels an' horses, an' still on the keenest
silk,
An' furnishin' all that district with good, respectable
milk.

Crowds a-yellin' an' runnin', and vainly hollerin',
"Whoa!"
Milkman bracin' an' sawin', with never a bit of show;
Firemen laughin' an' chucklin', an' hollerin' "Good! go
on!"
Hoss a-gettin' down to it, an' sweepin' along like sin.

Finally come where the fire was, halted with a "thud,"
Sent the respectable milkman heels over head in mud;
Watched till he see the engine properly workin' there
After which he relinquished a.l interest in the affair.

Moped an' wilted an' dawdled—faded away once more;
Took up his old occupation of votin' life a bore;
Laid down in his harness, and—sorry I am to say—
The milkman he had drawn there drew his dead body
away.

That's the whole o' my story; I've seen mo'rn once or
twice,
That poor dumb animal's actions are full of human ad-
vice;
An' if you ask what Flash taught, I simply answer you,
then,
That poor old horse was a symbol of some intelligent
men.

—Will Carleton, in *Harper's Magazine* for October.

Elnore's School.

"Hark a moment, Toddlekins! I want to
read my letter aloud for the benefit of the
family. Listen:

October 11, 1881.

MY DEAR NIECE:—I am school commis-
sioner in our district this year. We are to have
a large school the coming term, the majority
of the scholars being young men and maidens.
They are not rough, uncultivated boors, requir-
ing to be governed by brute force, but thinking,
earnest students, who need an educated teacher.
I notice your name in the list of Vassar grad-
uates, and if you are half as capable as your
mother was at your age, you will suit me capiti-
ally. Will you come and teach? We shall
pay a salary of \$40 per month, and if you
"board round" the school will be longer; if you
prefer to remain with us, we shall only be too
glad to have you, and I need not tell you that
you will be welcome to all I can give. We are
all well, and all join in love to you and your
family. Tell your father a hearty welcome
awaits him and his family here at the old home-
stead. Please let me hear from you as soon as
possible. Your Uncle,

JAMES O. GREGORY.

"Of course you'll write and tell him no,"
from Mrs. Gregory.
"Tateme!" from Toddlekins.
"The idea!" from Mabel.
But papa said nothing, only looked over the

top of his paper and waited for Elnore to speak.
She said nothing, however, but a funny smile
played around her mouth.

"It is very evident Uncle James thinks we
are not very well off in this world's goods," ob-
served Mabel. "Forty dollars a month! Why
that would hardly pay your boot and glove
bill!"

"I am ashamed, Emma, when I think how
we have neglected writing to James, and how
little I know of his circumstances, and he still
less of mine," said Mr. Gregory.

"I can tell him all about it, father, for I am
going."

"To the backwoods!"

"Why, Elnore!"

"I see doin' 'too!"

Such was the chorus that followed her re-
mark.

"Yes; I've felt for some time that since my
school-days were finished I certainly was not a
useful member of the family circle; and after
mature deliberation, I have reached the con-
clusion that Mabel is decidedly the more orna-
mental; besides, I want to be sure I'm not a
sieve."

Papa smiled, and nodded his head in token
of his entire approval. A few days later, a
dainty missive informed Mr. Gregory that El-
nore was coming. Still later, she went.

Her uncle was waiting for her at the station,
and went dashing home through the crisp, dim
air, behind a span of black horses which Mr.
Gregory guided with a word. A hearty wel-
come greeted her at the farm-house, and her cousin
Lois went up with her to her room. As they
reached the landing, Lois opened the door of
the guest chamber, and said:

"This is your chamber, and mine opens out of
it this side."

Elnore paused at the door of the cheerful
room, and then said:

"Why may I not share it with you? I have al-
ways slept with my sister Mabel at home, and
I shall make you my sister in her place."

"I should like it so much!" cried Lois, a
flush of pleasure staining her fair face. So El-
nore's trunk was brought to Lois' room, and
the two girls were soon busily engaged in un-
packing.

Elnore studied her new relatives during the
evening, and found herself agreeably disap-
pointed in them. The family consisted of Mr.
and Mrs. Gregory, their three sons—aged re-
spectively 24, 20 and 16—and the only daugh-
ter, Lois, a dainty maiden of 18—all but the
eldest to be Elnore's pupils. She loved Lois at
once, and her affection was as warmly returned.

School commenced Monday, and Elnore was
escorted to the scene of her labors by George,
Clarence and Lois. She—Elnore—had entered
crowded ball-rooms, where wealth and fashion
were congregated, without ever experiencing
the tremor which seized her as she entered the
school-room to be confronted by some four-score
pairs of dancing eyes, brimming with curiosity.

The forenoon was spent in arranging her
classes, and she was surprised to find that
some of her pupils studied Latin, others
French, and there was a large class in
astronomy—her oldest cousin belonging to
this—who spent two nights weekly in star-
gazing, and had purchased by subscription a
fine telescope, which was kept at the home of
Mr. Emerson, he having furnished a room for
that purpose. Elnore began to be secretly
afraid they knew more than she did, and de-
termined to send at once to New York for
many books she had left at home, not thinking
she would need them.

It is not my purpose to tell you of her school;
suffice it to say that she filled the position of
teacher to the satisfaction of all concerned.

Monday night being particularly fine, the
class in astronomy met at Mr. Emerson's; and
Elnore, writing to Mabel a full account of the
evening affirmed that she never spent an even-
ing, in her life which she enjoyed better, and
never one in which she got clearer views of
what life meant.

"I wish," she wrote, "you could have seen
those earnest students, doing the very best they
could with what they had to do with; accept-
ing so gladly any information, and making the
most of their opportunities; you would have
been utterly disgusted with all the young men
you ever knew. I could not help mentally con-
trasting our cousin Selwyn with Clyde Carrol,
and a dozen more of his set; and oh! how pitifully
small they look in comparison! I tell
you, Mabel, they raise men here instead of
simple eggs and butter, as we have been led to
suppose. Did you ever think that almost with-
out exception, our most successful public men
were country bred?"

Wednesday evening Elnore made one of a
coasting party. The girls wore short
dresses and snug hoods, and the sleds
were made by nailing a long board to two
sleds, one at each end, and a young man sat at
each end to guide the sled, and the merry,
laughing bevy of girls were closely cuddled be-
tween. The first time they went down, the
swift motion made Elnore faint and dizzy; but
she soon grew to like it. Up and down, up and
down, till the blood was bounding in their veins;
then home to slumber such as Elnore could
never remember having enjoyed before; and
how strange it seemed to go to a merry-making
and be in bed by 10 o'clock; the tea parties
given in honor of "the teacher," where quaint
old china figured, and the old-fashioned silver
shone, brightly polished for the occasion; the
sleigh rides and sled rides, on sleds drawn by
oxen; the house-warming at the home of a young
bride—all these were new and novel experiences

to Elnore, and she enjoyed them heartily; but
the evenings spent at home were best of all.

"O, I love the country, Aunt," she would
cry; "people seem to live for something here!"
"Don't they in the city, dear?" laughed Aunt
Hulda.

"Yes; they live to make money, with which
to make a more splendid failure of life than A
B and C have done before them."

"Oh, you don't mean all that, Elnore."

"I do Aunt! Why, taking myself for an ex-
ample, I have certainly thought more since I
came here of what can be made of life, of what
we are in the world for, than ever before in my
whole life. I have had more to call out such
thoughts and enlarge my vision. We don't have
time to think in the city; we hire a few to do
our thinking for us, and let the matter rest
there; and as to reading or study, if one reads
the last successful novel and glances over the re-
views in Littell's and Harper's, why that is all
that is necessary."

"But you miss the culture and refinement
here, Miss Gregory, do you not?" queried
Ernest Ross, the son of a neighbor, and Selwyn's
dearest friend.

A flush stained Lois' cheek as she awaited
Elnore's reply, and revealed that she, too, had
been thinking on this point.

"I find no lack of true refinement, Mr. Ross.
There is a certain fashionable polish missing,
but in its place I find the old-fashioned courtesy,
which seems to speak ill of the absent—the
chivalrous respect for all womankind, which is
ever tendered by men whose mothers and sis-
ters have been women worthy of the highest re-
spect."

"And yet a little of the fashionable polish
would be very pleasant," said Ross, half mus-
tlingly, half bitterly. "Why, Miss Gregory, I
doubt if I could wrap a shawl around you with-
out 'mussing your back hair,' and tearing your
train, perhaps."

"Perhaps, though, I do not consider you awk-
ward; but you could tell me that life is not
alone a holiday for balls and parties, but a work-
ing day as well, which is more than any of my
gentlemen friends ever did for me, even though
they might be able to wait on me in the most
elegant manner possible."

The young man gave her a grateful look, and
Lois silently patted her mother's hand and
smiled. Aunt Hulda smiled also, but with the
smile was a doubting look which Lois did not
understand.

As the weeks and months went on, and the
time drew near for Elnore to return to her city
home, aunt Hulda's face wore often its doubting
look, and Lois questioned with her eyes in vain.
At last one Saturday, when Elnore had gone
driving with young Ross, she asked her mother
if she did not think they would make a noble
couple.

"Child," said aunt Hulda, "I fear she takes
his attentions just as she would Selwyn's,
and thinks no more of them; but he—his is
manhood's love, no boyish fancy. What kind
of a farmer's wife would she make, Lois? It is
folly to dream of such a thing."

"But think what she has said, mother."

"I know, but the country has the charm of
novelty, and is not her settled home; when it
palls, she can return to her father's."

A few days later Ross and Elnore were trim-
ming the school-house with evergreen, prepara-
tory to examination day, assisted by Lois and
George. The latter were obliged to go home at
three, and Elnore was to come with Ross, when
they should have finished.

The last sprig fastened in its place, Elnore
stepped to the platform to note the effect, un-
consciously pushing a book to the floor as she
did so. Ernest picked it up, and saw it was a
volume of Whittier's poems. Opening it slowly
he laid his hand lightly on Elnore's, which
rested on the table, and read:

"You tempt me with your laughing eyes,
Your cheek of sundown's blushes,
A motion as of waving grain,
A music as of thrushes.

"The playing of your summer spout,
The spells you weave around me
You cannot of your will undo,
Nor leave me as you found me.

"You go as lightly as you come,
Your life is well without me;
What care you that these hills will close
Like prison walls around me?

"I dare your pity or your scorn,
With pride your own exceeding;
I fling my heart into your lap
Without a word of pleading."

As his voice, tremulous from deep feeling
pronounced the last word, he laid the book on
the table, and stood quietly beside her. She
lifted it, and with down-drooped eyes read
clearly:

"Nor frock nor tan can hide the man;
And see you not, my farmer,
How weak and fond a woman waits
Behind this slitten armor?

"I love you; on that love alone,
And not my worth precluding;
Will you not trust for summer fruit
The tree in May-day blooming?"

The dear old Quaker poet—may God's bless-
ing follow him ever!—sums up their lives in his
own sweet words thus:

"And so the farmer found a wife,
His mother found a daughter;
Their looks no happier home than hers
On pleasant Bear camp water

"He sees with eyes of manly trust
All hearts to her inclining;
Not less for him his household light
That others share its shining."

—Mrs. Andrews.

Still Beloved in Memory.

One year ago, the 19th of September, the
world was plunged in mourning over the death
of a beloved President, an honest statesman,
a humanitarian, and a friend of all who knew
him—James Abram Garfield. And it is fit-
ting that we should turn aside for a moment
and thoughtfully contemplate the man as he
was. Scarcely yet has the garb of mourning
disappeared from the land. Still lingering in
the memory of every true American is the re-
collection of Garfield. We have lived a year
without him. His tongue has been voiceless,
and his presence and advice absent from the
Nation's hall of Congress. Another has occu-
pied the chair to which he was chosen.

When death entered that cottage by the sea
shore, and took Garfield from us, the sorrow
that prevailed throughout the world was real
and intense. Not only in Christian America,
but even in every land where civilization had
gone, the death was regarded as that of a very
dear friend. We thought then that scarcely
ever before had the death of one man caused
such universal sorrow, and now that we have
come from out the shadow of death, we find
that it was so.

A year has passed, and with it has come
many changes. Garfield endeared himself to
the people of his country, because he gave the
promise of being a President of the whole peo-
ple. Having come up to his high position from
the common people, fully cognizant of their dis-
tresses and wants, we felt that by his aid a new
and more glorious era of peace and prosperity
must come. And just as the bud of hope was
ready to bloom and bring forth the flower, the
dastard assassin shot him down. We weep no
more, and yet we feel the same sorrow over our
lost one that we did when the sad news of his
death came to us. Time has dried our tears
and comforted us.

There were those at the time of Garfield's
death who predicted that the next 12 months
would produce many unfavorable changes in
our system of government. They were alarm-
ists. This government does not exist by one
man, or for one man. In it the people are sov-
ereign; and as long as the people maintain their
rights to govern, the individual head must and
will obey public sentiment.

President Arthur has not proved to be a bad
President. We would all have preferred Gar-
field; but, since death became an inevitable and
uncontrollable result, the American people ac-
cepted the situation in its best light.

A year has passed, and still we reverence the
name of Garfield. It is the animus of youth,
and the example of his life will long remain the
most potent for the young. To-day we honor
the memory of Garfield scarcely less than we
did when we laid him away by the lake side at
Cleveland. It is natural to remember the good
one has done at his death, and forget the wrong;
but the time always comes when this feeling
gives place to criticism. Then the life we live
is weighed in the balance of public sentiment.
In the case of Garfield there has been no rea-
son to take anything from his memory. He
was just and true in all his trusts. He acted
from the integrity of his heart. He lived for a
purpose, and he has shown the young men of
the day that a man can become great, and still
be honorable. We have said that Garfield's
life was useful and successful; and the result
of his example will be the stimulus given to
young men to be like him.

In imagination the American people, joined
by the subjects of all civilized lands will make a
pilgrimage to the tomb of Garfield each return-
ing year, and place upon his sepulchre a loving
testimonial, and joining with the poet, say:

"To live in heart we leave behind
Is not to die."

—Ladies' Home Journal.

CINDERS IN THE EYE.—Persons traveling by
railway are subject to continued annoyance from
the flying cinders. On getting into the eyes
they are not only painful for the moment, but
are often the cause of long suffering that ends
in a total loss of sight. A very simple and ef-
fective cure is within the reach of everyone,
and would prevent much suffering and expense
were it generally known. It is simply one or
two grains of flax seed. These may be placed
in the eye without injury or pain to that deli-
cate organ, and shortly they begin to swell and
dissolve a glutinous substance that covers the
ball of the eye, enveloping any foreign substance
that may be in it. The irritation of cutting the
membrane is thus prevented and the annoyance
may soon be washed out. A dozen of these
grains stowed away in the vest pocket may
prove in an emergency worth their number in
gold.—*Western Rural*.

LIGHT PENETRATION IN WATER.—Prof.
Forel, practicing with the albumenized paper of
photographers, reached the conclusion, that light
cannot penetrate water to a greater depth than
about 125 ft. More recently, however, some
more sensitive plates have been exposed at a
depth of 300 ft. under water, and the traces of
light were distinctly left on the plates. Light
must therefore penetrate clear water
at least 300 ft., while rays so feeble as to
escape detection by any known means—and yet
so powerful as to exert an influence upon some
forms of sub-aqueous life—may reach still
greater depths.

Housekeeping.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

Housekeeping has its trials as well as everything else. Things cannot be expected to run smoothly always, although the master of the house thinks they should, and imagines that it is very slight work to keep house. A woman will try her best to make everything pleasant and agreeable for her husband. While she is cooking she will fret and worry over what he likes, and what she will have for a change. The table is laid out in the nicest kind of order; the children are washed and tidied up a little, so as to look nice when papa comes, and two poor little hands have all this work to do. What is more, they are expected to do it; and if things happen to go wrong, the bread burned or the meat too rare, or something forgotten to be salted, then is the time that the gentleman of the family is very calmly heard from.

If some of his affairs outside have displeased him in any way he generally takes his troubles home to his wife, as if she had not enough of her own to contend with. If a woman happens to mention any of her trials to her husband, or tells him she is nearly worn out with work and taking care of the children, she is just as likely as not to receive the poor consolation of being told that she is forever growing, whereas a pleasant word would fill the house with sunshine and make the work just twice as easy.

One little word of sympathy, one little word of praise, will shorten weary hours and lighten dreary ways. Oh, think of all the brightness you throw upon her life by speaking ever kindly to your true and loving wife; think of the days so lonely she spends at home for you, trying to make things cheerful, as so many women do. She'll cook and sew and worry over things too slight to name. And wonder if other people are bothered just the same. She wishes her dear husband could not see quite so clear; He notices every article that happens to be out. He likes to see sweet industry, and likes to see things neat; But in the muddy winter he forgets to wipe his feet. And every wife is thinking, are they all alike, these men? We will answer, yes, quite promptly, and lay aside the pen.

Chaff.

Two well-dressed young ladies were examining a statue of Andromeda, labeled "Executed in terra cotta." Says one, "Where is that?" "I am sure I don't know," replied the other; "but I pity the poor girl wherever it was."

A BRIDAL couple from Washoe valley, at breakfast in a Reno hotel, conversed as follows: He—"Shall I skin yer a pertater, honey?" She—"No, thank you, deary, I have one already skun."

"ALWAYS pay as you go," said an old man to his nephew.—"But, uncle, suppose I've nothing to pay with?"—"Then don't go."

THE man who stood in front of his glass for two hours getting the right color on his moustache, said he was just "dyeing to see his girl."

THE Detroit Free Press states that "Rev. Abijah Green, of New York State, preached a sermon on 'Fools,' and then blew out his gas at the hotel, and went to bed to be suffocated." We are glad to hear of a man who practices what he preaches.

THAT was an observing fellow, if he was but six years old, who said: "Papa, I wish you'd quarantine against Tom Jones coming here every night to see Jennie. It is got to be too epidemic."

A BOSTON school teacher is charged with saying to his graduating class: "Young ladies, if Providence plants you upon a barren rock, grow into it and extract the honey from it."

A CHEERFUL face is nearly as good for an invalid as healthy weather. To make a sick man think he is dying, all that is necessary is to look half dead yourself. Hope and despair are as catching as cutaneous complaints. Always look sunshiny, therefore, whether you feel so or not.

About Women.

Rosa Bonheur is 62 years old. Her sisters and brothers are all sculptors and animal painters. She wore masculine dress, the better to go among animals. She is the only woman decorated with the red ribbon, which Eugene once brought her, the Emperor at the same time conferring knighthood upon her.

The admission of women, as competitors for honorary degrees in common with men, is of so recent a date, that the position attained by them is viewed with much interest, both by those who are in favor of and those opposed to the innovation. At the recent matriculation examination at the University of London both sexes competed on equal terms.

Vinie, the aged queen of Connecticut's 50 Pequot Indians, is nearly white, is an active church member and earns her living making baskets.

WOOD holds a high position as an employing agent. The carpenter trade alone gives employment to nearly three times as many persons as the cotton mills and fully 12 times as many as are engaged in the production of flour and meal.

KINDLING WOOD.—The manufacture of this comparatively new article of commerce is becoming quite an important industry all through the country.

Young Folks' Column.

Our Puzzle Box.

Numerical Enigma.

I am composed of 38 letters:
My 3, 20, 36 is a descendant.
My 21, 4, 10 is a weight.
My 1, 34, 37, 27 is a satellite.
My 17, 13, 2 is to make an effort.
My 8, 22, 24 is a personal pronoun.
My 7, 18, 5 is a part of a fish.
My 6, 11, 16 is a tavern.
My 38, 29, 30 is a number.
My 28, 15, 31, 33 is a masculine name.
My 25, 12, 36, 32 is a coin.
My 14, 19, 13, 20, 23, 30 is to hide.
My 1, 35, 14, 29 is to think.
My 33, 9, 31 is to strike.
My whole is a proverb of Solomon. A. B. C.

Curtailments.

1. Curtail a title and leave a part of the head.
2. Curtail a coin and leave obscure.
3. Curtail a luminous body and leave to approach.
4. Curtail a land and leave a noise. JERRY.

Biblical Acrostic.

Each name will read alike forward and backward:
1. The mother of Samuel.
2. A prophethess.
3. Midday.
4. The father of Joshua.
5. A king of Judah.
6. The mother of Samuel.
The primals and finals will each give a name that will read forward and backward the same. W. H.

Metagram.

I am composed of four letters, but I am the most useful and yet the most destructive thing in the world; beheaded, I am wrath; place on my head and curtail me, I am a tree; again curtail and read backward, I am one of the most important words in the English language. What am I? AUNT SARAH.

Syncope.

1. Syncope terror and obtain at a distance.
2. Syncope a numeral and obtain in place of.
3. Syncope willingly and obtain the organ of locomotion of a certain class of animals. MELANCHTON.

Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Leipzig.
CONCEALED QUADRUPED.—1. Dog. 2. Cat. 3. Lion.
4. Horse. 5. Rat. 6. Ass.
PORTICAL ANAGRAM.—
Hark! 'tis that a whisper low!
Like a spirit voice it seems,
Telling where green pastures grow,
And still water softly streams.
HIDDEN DIAMOND PUZZLE.—
H
J O Y
H O M E R
Y E A
R
DECAPITATIONS.—1. Osprey, spray. 2. Hawk, awk. 3. Finch, inch. 4. Spike, pike. 5. Keel, eel.

The Longest Day in the Year

I don't know what the almanac man said about it, but Dan said it was the longest, and Dan was certainly the one who understood the matter best.

"We must get the scythes in good order, so as to make a fair start at the lower meadow tomorrow. Don't let me have to waste time hunting after you, Daniel, when I'm ready to go at it."

Daniel's appetite was gone at once. How he hated to turn that heavy, creaking old grindstone! and how sure his father was to find a dozen things to do first, and keep him waiting all the morning! He went around by the sink drain and dug his bait; he examined his fishing-pole; he put up his lunch; he even tried a worm on the hook, and then he wandered disconsolately around, wishing grindstones had never been invented.

He went to the end of the garden, and leaned sulkily over the low stone wall, eating the halfripe harvest apples, and throwing the cores spitefully away. Down the road a few rods, lay the mill-pond, and in the middle of the road near by, stood Deacon Skinner's horse and chaise.

Old Whitey had his nose down, and one leg crooked in a meditative fashion. The deacon was over in the field, making a bargain with Solomon Murray for some young cattle. What fun it would be to start the old horse up and set him trotting home! Dan could almost hit him with an apple core. He tried two or three, just to see, and then he picked a smooth round stone from the wall, and sent it singing through the air.

Old Whitey brought up his nose with a jerk, straightened his fore leg, and started off at a brisk trot, the chaise-top tilting, and pitching back and forth.

Dan laughed—at least the laugh began to grow, when he caught one glimpse of a frightened little face at the chaise window, and knew that Nanny Dane, the deacon's little lame grandchild, was in the chaise.

It was only a glimpse, and then the bank of gray fog swallowed Whitey and the chaise, and it seemed to Dan that they had gone straight into the mill-pond.

"Daniel! Daniel! come on now, and be spry about it!" called his father, as he moved toward the grindstone, and he obeyed, though he felt as if his feet had all at once turned to lead.

Round and round and round; his tough little hands were blistered on the handle, but he did not know it; his mouth and throat were as dry as the stone, but he did not think of it. "Orr-orr-orr," rang the rough wearysome noise, until his ears were so deafened he did not even hear it. For he was perfectly sure he had killed little Nanny Dane. What would people say? What would they do to him? Hang him, of course; and Dan felt in his heart that he de-

served it, and that it would be almost a satisfaction.

"There," said his father at last, "I reckon that'll do, Daniel. You've been faithful and stiddy at your work, and now you may go fishing."

Dan never knew how he got to Long Pond, or how he passed the slow hours of that dismal day. The misery seemed intolerable, and before evening he had made up his mind he could bear it no longer. He would go home and tell his father; he would tell everybody. They might hang him, they might do anything they pleased.

Tramping desperately home with his empty basket in his hand, he heard the sound of wheels behind him, dragging slowly through the deep sand. Perhaps that was the sheriff coming to arrest him. Dan's heart beat harder, but he did not look around. The wheels came nearer; they stopped, and some one said:

"Hullo, Daniel! been fishing? Fisherman's luck, hey? Well, jump in here, and I'll give you a lift."

Before Dan knew it he was over the wheel and sitting beside Deacon Skinner in the old chaise; with Whitey switching his tail right and left as he plodded along.

"Git up, Whitey!" urged the deacon; "it's getting along towards chere-time. Whitey ain't so spry as he used to be, but he's amazin' smart. This mornin' I left little Nanny in the shay while I was making a dicker with Solomon Murray, and a keerless thing it was to do, but I'd as soon have expected the meetin' house to run away as Whitey. I reckon something must have scart him; but he trotted off home as stiddy as if I'd been driving, and waited at the door for mother to come and get Nanny before he went to the barn."

"Oh! Deacon Skinner," burst out Dan, "it was me that scart Whitey."

"Did ye now, sonny? Well there wuzn't any harm done, and I know ye didn't mean to."

"I did, I did," said Dan, sobbing violently from the long strain of excitement, "I didn't know that Nanny was in the chaise, and I threw a stone at him."

"Well, well," said the deacon, rubbing his stubby chin, and looking curiously at Dan. "Beats all what freaks boys will take; but I know ye won't do it again."

"I never will," said Dan, solemnly. "This has been the awfulest longest day that ever was in the world."—Emily Huntington Miller.

GOOD HEALTH.

PROGRESS OF HOMEOPATHY.—At a recent meeting of the American Institute of Homeopathy, at Indianapolis, Dr. Talbot, of Boston, read a report showing that there are 7,000 homeopathic physicians and 278 institutions in the United States; four national societies report 1,067 members; 26 State societies, 1,783 members; 103 local societies, of which 66 report 2,355 members; 18 clubs, of which seven report 79 members; 23 general hospitals, of which 18 report 1,268 beds; 15 of these hospitals reported having treated last year 6,675 patients. The cost and value of 11 of these is \$770,500. Of 30 special hospitals 15 report 859 beds, and 9 of them treated last year 10,609 patients. The cost and values of these hospitals are \$1,106,000. Of 29 dispensaries, 27 reported having treated last year 1,469 patients. To these had been furnished 256,589 prescriptions; 12 medical colleges have had 1,207 students, and graduated 412 physicians this year, and 5,680 since they were founded.

NERVOUS children often suffer from fear when put to bed alone. No tongue can tell the horrors of a lonesome room to such children. A little delicate boy, whose parents were drilling him to sleep alone, used to cry violently every night, and his father would come in and whip him. He mistook his pertinacity for obstinacy, and he thought it his duty to conquer the child's will. One night he said: "Why do you always scream so, when you know you shall be punished?" "Oh, father, father!" said the little fellow, "I don't mind your whipping me, if you would stay with me." The father's eyes were open from that moment. He saw that a human being cannot be governed by dead rules, like a plant or an animal.

WORKERS IN LEAD.—The Chemical Review regards it as a lamentable fact that workmen employed in the lead trade neglect or refuse to avail themselves of the precautions devised for the protection of their health. They will not drink the sulphuric lemonade which is given them to counteract the poison; they lay aside the respirators which would prevent the dust and fumes from being inhaled; and, after all, a certain class of newspapers persist in blaming the employers, and in denouncing modern science for not devising a remedy.

RHEUMATISM is so rare in the earlier years of life as to be hardly ever mentioned by such writers as West and Vogel. Dr. Garden, in the London Practitioner, gives the case of an infant of nine months who caught cold from bathing in cold water. Rheumatism followed, affecting the knee and ankle joints. These were wrapped in cotton, and three grains of salicin thrice daily were prescribed. The patient recovered in a fortnight, without showing any signs of heart complication.

Domestic Economy

Recipes.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

STARCH FOR SHIRTS.—Two tablespoonfuls of starch, one tablespoonful of white sugar, one teaspoonful of borax, one pint of water mixed thoroughly. The shirt must be perfectly dry before starching; before ironing rub well with a dry cloth.

TOMATO CATSUP.—One gallon skinned tomatoes, two tablespoonfuls salt, four tablespoonfuls black pepper, one-half tablespoonful allspice, three tablespoonfuls mustard, six pods red pepper, chop fine; simmer slowly in sharp vinegar three or four hours; strain through a sieve, and bottle.

ICE CREAM CAKE.—Two cups sugar, one cup butter, whites of eight eggs beaten to a froth, one cup sweet milk, one cup corn starch, two of flour, two teaspoonfuls yeast powder.

GOLD CAKE.—One cup sugar, three-fourths cup of butter, yolks of eight eggs, one-half cup of milk, ore and one half cups flour, two teaspoonfuls baking powder; flavor to taste.

BANBURY CAKE.—Take an equal quantity of clean, well-picked currants, granulated sugar and finely-chopped lemon peel, and mix it all together, and then add a nice flavoring of ginger and cinnamon; now add good, fresh butter enough to form the whole into a nice paste. Take the best puff paste, roll it out in a sheet one-fourth of an inch thick; cut this in pieces two inches square, and place a piece of the prepared butter, currants, etc., in the center of each; now take the two corners, the one nearest to you and the one opposite, bring them up, press them together, and then with the palm of the hand press them down flat. This makes the piece oval in shape, and leaves two ends which are folded together with liberty to rise; now wash the part that is not folded with water and add as much powdered sugar as you can get to remain on. Bake these in a slow heat. These are a little expensive, but are very good, and are the real English Banbury cakes.

SOUPS.—To make nutritious and palatable soup, with flavors well mingled, requires study, practice and good taste. The best basis for soup is lean uncooked meat, a pound of meat to a quart of water, to which may be added chicken, turkey, beef or mutton bones, well broken up; a mixture of beef, mutton and veal, with a bit of ham bone, all cut fine, makes a higher flavored soup than any single meat; the legs of all meats are rich in gelatine, an important constituent of soup. The best herbs are sage, thyme, sweet marjoram, tarragon, mint, sweet basil, parsley, bay leaves, cloves, mace, celery seed and onions. The best seasoning is that which is made up of the smallest quantity from each of the many spices. The good soup maker must be a skillful taster.

POTTED CHICKEN.—One quart of cold roasted chicken, one cupful of cold boiled ham, four tablespoonfuls of butter, a speck of cayenne, a slight grating of nutmeg, and two tablespoonfuls of salt. Free the chicken of skin and bones. Cut it and the ham in fine pieces. Chop and pound to a paste. Add the butter and seasoning, and pack solidly in small stone pots. Cover these and place them in a pan of hot water, which put in a modern oven for one hour. When the meat is cold, cover with melted butter, and put away in a cool dry place.

ROYAL CREAM.—One quart milk, one-third of a box of gelatine, four tablespoonfuls sugar, three eggs, vanilla flavor. Put the gelatine in the milk, and let it stand for half an hour. Beat the yolks well with sugar, and stir into the milk. Set the kettle in a pan of hot water and stir until the mixture begins to thicken like soft custard. Have ready the whites of the eggs beaten to a stiff froth; and the moment the kettle is taken from the fire stir them in quickly and turn into the molds. Set away in a cool place to harden.

COPPER IN BREAD.—Some time ago Dr. J. Van der Berghie was struck with the constancy of the proportion of copper found in bread, and made an examination of wheat. In 1,000,000 parts of the grain there were 9.24 of metallic copper, and oats yielded 10.8 parts in the same quantity. He made, of course, the usual preliminary tests to ascertain the purity of his reagents, and he took care that his gas burners were made of iron. Even the porcelain capsule was supported on a platinum triangle.

A SAUCE EQUAL TO WORCESTERSHIRE.—Shallots, half a pound; pimento powdered, one ounce; mace, powdered, half an ounce; cayenne, quarter of an ounce; half a nutmeg, powdered; anchovy fish, quarter of a pound; salt, one ounce; vinegar, three pints; soy, six ounces. Chop or bruise the shallots, beat up the anchovy fish, mix all together, stand for a month or two, and lastly, strain through a coarse sieve.

FRIED RICE.—A nice breakfast dish is made by taking cold rice and mixing with flour and egg; for a small quantity one egg is sufficient, for large quantity take two eggs. The proportion of flour is about one tablespoonful to each egg, but if this does not cause it to remain firm while cooking add more flour. Fry in very hot lard till brown. Mashed potatoes and cracked wheat may be served in the same way.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. R. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week. 1 month. 3 mos. 12 mos:
Per line 25 .80 \$2.20 \$ 5.00
Half inch (1 square) .11.50 \$3.00 10.00 24.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. R. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, October 14, 1882

TABLE OF CONTENTS.

EDITORIALS—Cultivation and Rainfall; A Quartz Mill Cheese Factory; A Handsome Jersey Bull; Our Lumber Interests, 278. The Week; California Abroad; The Rain and the Grapes, 290. Silk Brocade Presented to Mrs. Garfield; The Need of the Hour, 281. Notices of Recent Patents, 286. The Prevailing Fashions, 288-9.

ILLUSTRATIONS—Jersey Bull, "Lord Bacon," 278. Pattern of Silk Brocade Presented to Mrs. Garfield by the American Women's Silk Culture Association, 281. Ladies' Street Toilet; Ladies' Velvet Toilet; Ladies' Promenade Toilet; Ladies' Bonnets, 288.

ARBORICULTURE.—The Propagations, or Early-Bearing Walnut—No. 1, 274.

HORTICULTURE.—Mulberries, 274.

FORESTRY.—Forest Trees of California, No. 15, 274. POBRESITY OF HUSBANDRY.—Annual Meeting of the State Grange of California, 275-76-77. The Stockton Convention, 277.

NEWS IN BRIEF on page 277 and other pages.

HOME CIRCLE.—Fish, (Poetry); Elmore's School; Still Beloved in Memory, 274. Housekeeping; Chaff; About Women, 279.

YOUNG FOLKS' COLUMN.—The Longest Day in the Year, 279.

GOOD HEALTH.—Progress of Homeopathy; Nervous Children; Workers in Lead; Rheumatism, 279.

DOMESTIC ECONOMY.—Recipes, Banbury Cake; Soups; Potted Chicken, Royal Cream; Copper in Bread; A Sauce Equal to Worcester; Fried Rice, 279.

ENTOMOLOGICAL.—The Anti-Insect Law Upheld; Cherry Leaf Caterpillars; Gas Lime by the Shovelful, 280.

CORRESPONDENCE.—The Santa Barbara Fair; Tuolumne County Notes, 283.

SHEEP AND WOOL.—The Mohair Industry, 286.

Business Announcements.

"Aome" Harrow, Nash & Bro., New York.
Plows and Harrows, G. A. Davis, S. F.
The Victor Mower, Judson Manufacturing Co., S. F.
Sulky Plow, Geo. Bull & Co., S. F.
"Dairy Queen" Churn, G. W. Freeman, Jansville, Cal.
Berkshire Hogs, J. I. Truman, S. F.
Steam Engineering, T. Keppy, Bridgeport, Conn.
San Luis Obispo Lands, Pacific Coast Land Bureau, S. F.
Agricultural Implements, John Caine, Stockton, Cal.
Barbed Wire and Fencing, Huntington, Hopkins & Co.
Agricultural Implements, Bailey, Badgley & Co., Stockton.
Organs, etc., Harbach, Organica Co., Philadelphia, Pa.
California Chief Grain Cleaner, Bush & Co., S. F.
Jersey Heifer for Sale, E. R. Hill, Berkeley, Cal.
Fruit Trees, Milton Thomas, Los Angeles, Cal.
Improved Egg Food, B. F. Wellington, S. F.
Carriages, etc., H. Prindle, San Jose, Cal.
Napa Valley Poultry Yards, R. G. Head, Napa, Cal.
Excelsior Corset, Mrs. C. V. Turner, San Jose, Cal.

The Week.

A continuation of the rains has made it sorer for the produce which was not warehoused and for the fruit not yet gathered. The rains have also dampened political ardor a little, for California patriotism is a tenderer thing than Eastern devotion. In New York, the faithful who serve their country by running the primaries are not frightened by slush and sleet, and we have candidates pouring forth their patriotic fire with their windward ears filled with the drifting snow which sometimes visits the "open air rallies" in the Empire State. In California a shower can do more to defeat a principle than a hailstorm at the East. All which is true, we suppose, because our harvest time, both for grain and for officers, usually falls beneath clear skies, while the Eastern patriot is accustomed to water everywhere but in his whisky. Therefore, the past week has chilled even California politics a little—but wake up ye people, the commonwealth may yet be saved!

California Abroad.

We find in the English *Contemporary Review* for September an article descriptive of California, which we dislike to object to, because it is evidently written with the kindest disposition toward our State, and with a wish to bring others to enjoy the delights of California life, which the writer no doubt appreciates. But he has been led into a thread of exaggerations, which may be apt to mislead the reader who is unacquainted with the State. For this reason corrections should be made, if, by some chance, they may save some one from disappointment. California had a period of overwriting some years ago, and the result was that thousands came to the State expecting to grow rich without work, and to enjoy other conditions which exist nowhere on the globe. This era of exaggeration in the local prints has well nigh passed away; the writers have found that truth, or an approximation to it, serves the only enduring purpose, and that exaggerations overreach themselves.

We do not propose to correct all the little mistakes into which the *Contemporary Review* writer has fallen, nor to show where many of his generalizations go beyond what has already been attained and into the realm of prophecy. There are, however, some statements which we must correct and some descriptions qualify. There are not "500,000 acres of arable land in the Sacramento valley, which, even in the driest years, never suffer from drouth, but yield heavy crops, so rank as to reach above the head of an average man." There is no such amount of land, and the bearing of such crops in the driest years is simply just the reverse of true. It is not true that in any part of the State "vast farms are established, and some hold tracts of a hundred thousand acres on lease from the State and have it all laid out in wheat." There are no such tracts in one man's hands—the State leases no wheat land whatever, etc.

The writer then embarks upon a description of California grain sowing and harvesting, which is exaggerated almost beyond recognition. It is not necessary to follow him throughout, but the statement, "the average return is from 60 to 70 bushels per acre," will serve as a clue to the whole description. All the statistics in the chapter are increased from three to four fold above the truth.

As a sample of poetic fervor, resting upon a basis of misapprehension, the following will serve: "Cucumbers 50 inches in length are not uncommon—meet company for the silvery salmon which are brought from the Columbia river to San Francisco by swift steamers before they have time to realize that they have been captured." Beautiful in thought, but altogether incorrect. The article teams with such gems.

In his notes on the industries of California, the writer is also singularly at sea. One statement he makes is this: "One of the most notable industries of California is the manufacture of beet-root sugar, for which there are large factories in San Francisco and Sacramento." There is no such manufactory in either of the cities named. There is only one factory in the State, and that is Alvarado—the first success out of half a dozen failures in beet-sugar enterprises. The writer has our large refineries working on beet-root sugar! Why should he be so careless of facts?

Of course we have only instanced a line or two here and there in the article, perhaps not the greatest mishaps of the writer, because we have read hastily. But the whole composition is one which California should be spared. There are intelligent people all over the world who know that such descriptions are untrue, and they are uninjured by them; but there are thousands more who are caught by the glowing sentences, and are led here to their disappointment. We want no such immigrants, and any influence which starts them roving is unkind to them and the region they seek.

We believe that the writer to whom we allude wrote from no motive except to interest his readers and to exalt a State which he enjoys, but of which he knows nothing but what he may have picked up in hotel sitting-rooms, from the voluble individuals who love to entertain the stranger—unawares. If he had written of what he saw with his experience of California air and sunshine, he would no doubt have done us and his readers a true service; but by collating all the yarns which were poured into his willing ears, and setting them forth as California statistics, he has made himself ridiculous here, and California ridiculous abroad.

SEEDLING DAHLIAS.—We have received from Luther Burbank, of Santa Rosa, a collection of blooms from his new seedling dahlias which are the finest set of novelties we have seen for many a day. The range of color is wide, and many most rich and beautiful shades are shown. The purity of color and fullness of form of the seedling, as a whole, seem to us quite notable. Mr. Burbank is a very successful propagator of new plants, and his dahlia record will do him honor.

MR. L. L. WOODMANSEE has started on a trip through Nevada, in the interest of this paper, and we hope our friends will aid him by furnishing items of interest for publication.

JERSEY HEIFER.—We have seen the Jersey heifer advertised for sale by Prof. E. R. Hill, Berkeley, and can testify to the beauty and general desirability of the animal.

ENTOMOLOGICAL.

The Anti-Insect Law Upheld.

A man was convicted at Sacramento last Saturday of transgressing the quarantine rules which call for the disinfection of fruit boxes before return to the grower, and the penalty for the transgression was inflicted. Now, the constitutionality of the law will be speedily brought before the Supreme Court for immediate decision on *habeas corpus*, and we shall soon know whether the laws adopted by the last Legislature to prevent the spread of noxious insects will stand or not. This should be fully and finally understood before the next Legislature meets, so that new enactments may be secured if necessary. The leading fruit growers are determined to check the insect invasion, and to force the wilful or careless pest distributors to cease. The following is the record of the trial, and an outline of the testimony adduced.

On Saturday last, the Police Court was occupied most of the day in trying a case against John Cox, a fruit grower and shipper, for violation of the act of the Legislature of March 4, 1881, providing for the protection of horticulture and viticulture, and making it a misdemeanor for anyone to violate any of the quarantine regulations of the Board of State Viticultural Commissioners. Among the rules and quarantine regulations adopted, is that requiring all boxes used for packing or shipping fruit to be disinfected before using again. It is for a violation of these regulations that the defendant, John Cox, was, upon the complaint of Harry De Veue, Jr., one of the Viticultural Inspectors, and at the instance of Matthew Cooke, Chief Executive Viticultural Officer, arrested and prosecuted, W. J. Tusk, one of the attorneys for the State Board, and city attorney Anderson conducted the prosecution, and J. N. Young appeared for the defense.

A demurrer was interposed to the complaint, raising several points directed against the constitutionality of the law, counsel urging that the law is unconstitutional, because more than one subject is embraced in the title, and that it is a delegation of the law-making power to an inferior power. That it is not a police regulation, but an arbitrary power attempted to be authorized, and which, in effect, amounts to the taking of private property, without due process of law.

Counsel for the prosecution combatted these propositions, and argued that the law related to a class, and was a proper police regulation. After an extended argument the Court overruled the demurrer.

The prosecution then called as witness to establish the infraction of the law, Harry De Veue, Jr., Matthew Cooke, Prof. C. H. Dwinelle, of the State University, Dr. Chapin, of Santa Clara (an orchardist and physician), and several other witnesses. The testimony of Prof. Dwinelle and Dr. Chapin was of a most interesting character, and disclosed the fact that there was a most fearful ravage by that insect, fruit and vine pest in this State. That the first appearance of this pernicious pest, as the Professor styled it, occurred near Sacramento in 1874, through some fruit shipped here the year before for exhibition at our State fair, in which fruit was the codlin moth and larva. That from this the contagion took root, and is now present in 31 counties of this State, making great ravages upon the fruit. That it is to check this, that the stringent laws and quarantine regulations have been passed and adopted. It was shown by the evidence, that this pest which infects the fruit has a very injurious effect upon the health of those who consume the fruit, either in its natural state, or in the form of cider or wine. That some classes of these pests attack the trees and vines, and have destroyed entire orchards and vineyards, that unless there could be some general action to abate this nuisance, and which could be enforced on all alike, the result would be very destructive to the fruit and vine-growing interests of this State.

After hearing all the evidence, the Court adjudged the defendant guilty, as charged. It is understood that this should be a test case, and it will be taken at once to the Supreme Court on *habeas corpus*, to test the validity of the act, and to settle all constitutional questions, with a view that in the event that the Supreme Court should declare any of the provisions of the law unconstitutional, that the defect can be remedied this ensuing Legislature. The question is one of vital importance to the grape-growing and fruit interests of the State.

Cherry Leaf Caterpillars.

EDITORS PRESS:—By this mail I send you a sample of worms taken to-day from a cherry tree in my next neighbor's orchard, Mr. John C. Parsons. Every vestige of foliage was cleanly stripped from more than half of the trees, and the work was progressing with diligence and rapidity. All were carefully gathered and isolated, except those which he desired me to forward for nomenclature and analysis. No other trees had been attacked.—J. WINCHESTER, Columbia, Cal.

EDITORS PRESS:—The caterpillars sent by Mr. Winchester are of a species of a moth known as *Notodonta coccinea*. They feed on the foliage of the cherry, plum, pear and apple, which, from their gregarious habits, they often destroy. When full grown, they make cocoons of a parchment-like material, and remain in the caterpillar state until the next summer, when they pass their transformations, and appear in July or August as perfect insects. Trees infested by them can be cleaned by spreading

a sheet on the ground, and gathering them off the tree by shaking or sweeping; then destroying those gathered by pouring hot water on them. The moth is light brown in color; the wings expand about one inch and a one-quarter. The caterpillar gets the name red-bumped from the prominence and color of the fourth segment, on which there are two black spines.—MATTHEW COOKE, Sacramento, Cal.

Gas Lime by the Shovelful.

EDITORS PRESS:—Somebody blundered in your last issue in making me recommend cautious experiments in destroying the woolly aphis on the roots of apple trees by the use of gas lime at the rate of a spoonful on a circle six feet in diameter. The dose, as mentioned by me, was a shovelful, to be tried on trees of small value and in a well-drained soil.—C. H. DWINELLE, Berkeley, Cal.

The Rain and the Grapes.

Our vineyardists endured the first visitation of rain last week with commendable patience, although the downfall was quite heavy. Whether they can brook the continuance of the trouble so contentedly does not yet appear. We trust they may escape the test, and that sunshine may continue for a season. The editor of the St. Helena Star had enterprise enough to go out among the grape growers after the last storm and ascertain the extent of the injury, and he brought back some interesting observations on the general effect of rain on the grape harvest. In answer to an inquiry in reference to the effect of the recent storm upon the grape crop, a prominent vintner of St. Helena said the rain hurts most the ripe grapes; next, those that are thin-skinned and of compact bunches, as Berger and Zinfandel; also, those that lie on the ground, like Malvasies. The most to be feared is a frost. Not that there are any particular indications of it, but that it is the usual conclusion of a spring or fall storm. Another vintner said that so far no material injury is done to those varieties that are ripe. Those that are not ripe, containing too much albuminous matter, will be caused to mold and rot very soon after dry weather comes—especially when in compact bunches (for instance Berger and Black Hamburg), and when these bunches touch the ground. Should the rain continue four more days, the remaining grapes (excepting Mission) must be picked anyway, whether ripe or not, as they will commence to mold—especially on bottom land. The Missions, by the shape of the vine and the bunch, and the peculiar formation of the berry, would stand much more wet without injury. Its branches are so loose that they dry out readily, and the skin is so tough that they will not burst. Only two-fifths of the crop is harvested, the remaining three-fifths still exposed. In this country grape picking is generally suspended in stormy weather. In the old countries they pick the grapes when they are ripe—rain or not. The varieties harvested before the rain were all the white grapes (except the Berger) and of the colored grapes, Malvasie and Zinfandel.

CARBON BISULPHIDE FOR SQUIRRELS.—With the first rains is renewed again the campaign against squirrels and gophers, the scourge of California farmers. Our local manufactory provides carbon bisulphide at a cost so far below the price of the Eastern product as to remove all objection to it on account of cost; further, our California product is accompanied by appliances and directions sufficient to make its application simple and expedient. After the first rains this material is particularly valuable, as, at this season, less is required to do the work, and more satisfactory results are obtained. During past winters, large areas densely populated with squirrels have been so completely cleared as to leave no vestige of them, and those who have used it assure us that the results continue, and subsequent years fail to discover the pest reinvading the property, as so often the case when other poisons are used, and not all are killed. Wheeler's carbon bisulphide kills all inhabitants of the burrow. Acting as a vapor or gas, it injures nothing outside. We have had very favorable reports of it from our readers.

THE BARB-WIRE FENCE PATENTS.—A dispatch from Chicago says: The litigation between the Chicago Galvanized Wire Fence Company and the Washburn & Moen Manufacturing Company, which has been several weeks on trial, was decided to-day by Judge Gardner, of the Superior Court, against the latter. When the Federal Court, in 1880, decided in favor of the Washburn & Moen monopoly in the barb-wire fence, Jacob Haish alone held out and threatened to appeal to the United States Supreme Court. To secure their monopoly they were forced to settle with him on terms which practically gave him the right to manufacture 4,000 tons of wire per year without paying any royalty, while all the other licensees paid three-fourths of a cent per pound. Judge Gardner to-day held that this settlement was a violation of the terms of the contract with the various licensees, and the defendants should be enjoined from collecting any future royalty from the Chicago Galvanized Wire Fence Company.

fully to expose the satin under-facing, also flaring jauntily below, falling in deep points. The drapery is softly wrinkled by plaits laid upwards in the back edges, and is trimmed about all its edge with a row of braid like that adorning the dress. A bow of ribbon is tacked at the upper meeting of the drapery sections, and loops and ends of ribbon droop prettily from the second tacking. The hat has a velvet-faced rolling brim, and is trimmed with ribbon falling in ends at the back.

Girls' Costume.

Fig. 6.—Consisting of costume No. 8231. This

tween the center and the back edges. The center tab thus formed is plaited up closely at its left edge, the plaits being fastened to position under a large drooping bow of Surah ribbon. Plaits are also laid upward in the back edges of the *tablier*, wrinkling the latter softly, and draping it into a series of irregular points. The back drapery is full and puffy, and its edges, like those of the *tablier*, are bordered with two rows of machine stitching. The basque closes at the back, and is nicely fitted to the figure by a bust dart and an under-arm dart in each side of the front, and also by low side-back gores, between

trimmed with ribbon, which is carried from the back under the chin, where it is tied in a large square bow.

Ladies' Bonnet.

Fig. 9.—A pretty and comfortable bonnet of fancy yellow straw is here illustrated. It is under-faced with dark blue velvet, and has around its crown a scarf of soft silk of the same shade. A cluster of blue feathers is placed on the left side near the front, while the strings of soft blue ribbon start a little above the scarf and come down over it on each side, tying

Ladies' Velvet Toilet.

Fig. 11.—Consisting of costume No. 8246. The simple elegance of the toilet here portrayed particularly adapts the mode to rich textures, such as velvets, plushes, brocades, etc., and also to the application of bands of handsome fur—a trimming that is unexceptional in beauty and picturesqueness on these lovely fabrics for cool-weather toilets. Claret velvet is the selection made in the present instance, and bands of beautiful chinchilla fur provide its strikingly elegant adornment. The skirt is fashioned in the short, round, four-gored style, and is cut in



FIG. 5—MISSES' COSTUME.



FIG. 6—GIRL'S COSTUME.

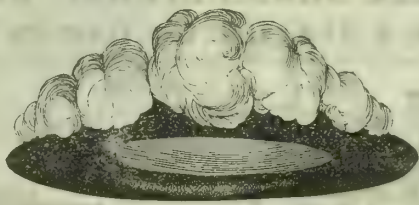


FIG. 7—LADIES' ROUND HAT.



FIG. 8—MISSES' COSTUME.

little costume, though simple in construction, is novel and dressy, and combines three materials—cashmere and plain and striped Surah. The front is fashioned in narrow sacque style, with an under-arm dart in each side, and is closed all the way down with button-holes and buttons. The back is conformed to the figure by curving center and side seams, and as it reaches only a little below the waist line, is ornamentally lengthened by an added skirt, laid in three double box-plaits. Straps, permanently fastened at their straight ends to the front and sides of the costume, and secured with button-holes and buttons at their pointed ends, afford an ornamental support for the wide sash of striped Surah; the sash being laid in folds about the body, and tied in a large bow over the closing. A box-plaited collar of satin finishes the neck, and a band of satin, headed by a tiny box-plaiting of the same fabric, trims the wrist of the little coat sleeve. The bottom of the costume is trimmed about the hem with a box-plaiting of satin, sewed on and turned down over its seam, causing the plaits to flare prettily. Laces, embroideries, plush or fur bands, machine stitching and fancifully arranged braids are all stylish decorations for costumes of this style. The materials may be cashmere, cloth, silk, plush or any of the new suitings, and any combination may be developed in them.

Ladies' Round Hat.

Fig. 7.—A becoming round hat, certainly "a joy forever," for it fits itself to so many occasions. This one is especially pretty, because of its simplicity. It is of black satin straw, under-faced with black velvet, and having its tolerably low crown hidden by a wreath formed of small white ostrich tips. As the brim is not bent in any way, the method of lacing the hat is left entirely to the wearer.

Misses' Costume.

Fig. 8.—(Consisting of skirt No. 8254.) A very charming costume of hunter's-green cloth is here exhibited. The four-gored skirt is neatly proportioned, and is trimmed in a stylish manner with two bias bands of the material. The bands are bordered at their lower edges with three rows of machine stitching, and are sewed on only at their upper edges, the upper band turning down over its seam, and slightly overlapping the lower one. The front drapery is a deep *tablier*, slashed at each side about midway be-

which and the backs are inserted side-plaited fans that extend from the lower edge of the basque nearly to the waist line. These fans may contrast with the rest of the basque if two or more materials enter into the costume, and are very ornamental and stylish in effect. Two rows of machine stitching, made a little above

under the chin or low on the corsage, as desired. This liberty in arranging the ties tends to lighten the becomingness of the bonnet.

Ladies' Poke Bonnet.

Fig. 10.—A slight variation from the regular poke is shown in this bonnet, the edge of the



FIG. 9—A LADIES' BONNET.



FIG. 10—LADIES' POKE BONNET.

the edges, finish the round skirt of the basque, and three rows outline a deep, round cuff to the wrist of the close coat sleeve. A standing collar finishes the neck. Braid or cord may be fancifully arranged upon a basque of this style with very charming effect. If desired, the garment may be plainly finished, or may be elaborately ornamented with lace or embroidery. All sorts of dress goods are suitable for such basques, which may be worn with any style of skirt preferred. The hat is a jaunty shape, prettily

broad brim turning up in regular coronet style and allowing for pretty decoration. The crown is of fine Milan straw in a creamy hue. The brim is outer-faced with brown velvet and lined with cream-colored *faille* silk. The coronet edge is faced with the velvet and thickly studded with tiny straw acorns. On the right side are stiff loops of the velvet, while on the left are five short plumes of the *ecru* shade. The strings are brown velvet ribbon, to be tied under the chin.

deep, narrow tabs all about the lower edge. The tabs are neatly lined with silk, and are underlaid with a box-plaiting of the material, which is prettily displayed below and between them.

The over-dress is somewhat of the redingote style, and, in regard to design and draping, is one of the handsomest novelties introduced for the fall season. It is exquisitely adjusted by double bust darts, narrow under-arm gores, low side-backs and a well-curved center seam. The back is in polonaise style, with extra widths upon its center seam and at its side edges below the waist line. The center extra widths are folded under in a single box-plait, while the side extra widths are each turned under for a wide hem and then arranged in a backward-turning under plait, these plaits adding a stylish amplexure to the square drapery. The remainder of the body is in *basque* depth, deeply pointed in front and arched gracefully high over the hips. To the short portions at each side is joined a long wing drapery, which extends only to the second dart in front and reaches well back under the back drapery, being there held in place by elastic straps or tie-back tapes. These wing draperies fall with unruffled smoothness deep and square upon the skirt, and over their sides the back drapery is looped in a most charming manner. An under tape drapes the back artistically at the center, rendering the back drapery stylishly *bouffante*, and thus making it contrast attractively with the plain sides. Large pocket laps fall from the cross seams joining the draperies to the body, and a band of fur borders their lower and side edges. A similar band is arranged about the back outside the standing collar, and is carried down the front at each side of the closing and down the front edges and about the bottom of the wing-draperies. The sleeves are of coat shape, fitting closely to the arm, and are encircled a little above the wrist with a band of fur. *Lisse* ruffs are worn as *lingerie*.

The skirt may be elaborated to any extent desired, beaded panels upon the front between the draperies being rich, elegant and stylish as a front-gore decoration. It is also beautiful when finished with a deep hem-facing at the bottom and encircled with a broad band of fur similar to that upon the overdress.

The dainty little bonnet is of the costume velvet, and has a cluster of handsome pink ostrich tips at the left side.

Lands for Sale and to Let.

Fruit and Homestead Lands FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of
SANTA CRUZ COUNTY.
Address "Exchange & Mart," Santa Cruz, Cal.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low able and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,
EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

DO Not Fail to send for our FALL Price-List for 1882. Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address
MONTGOMERY WARD & CO.,
227 and 229 Wabash Avenue, Chicago, Ill.

YOUR NAME On 50 large size CARDS. Remember, Sentiment, Hand Bouquet, &c. No. 2 style, 10c, 14 pbs. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and reduced Price-List. 20 fine gilt Bevel Edge Cards, turned corners, 10c. Your Name in this is interesting. *Minnie B. Rose*
Agents make 50 per cent. We offer the largest line of cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. **NORTFORD CARD WORKS, Northford, Conn.**

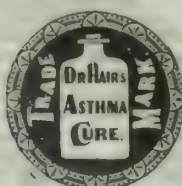
WANTED.

A responsible firm to manufacture Patent Wood and Brass Butter Molds. The work can be seen at 425 Front Street, San Francisco, Cal.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hairs' Asthma Cure, proves most conclusively that it is all that it is represented to be. Dr. Hairs' Treatment of Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. R. W. HARR & SON, Cincinnati, Ohio.

California Inventors Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1880. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers. Plows. Cultivators. Improved Granger Gang. Side Hill Gang. Gun Seed Sowers. Im'd Single Sod and Tule Plow. Double Deep Tiller. Hill's Improved Headers. Single Plows. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

W. R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

Lift and Force Pumps,

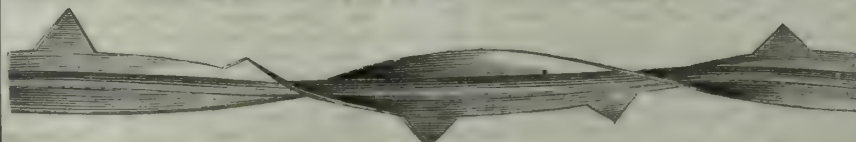
Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.

Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

Educational.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON



LIFE SCHOLARSHIPS, \$70.

Paid in Installments, \$75.

Send for circulars.



417 Kearny Street, San Francisco.

C. N. ANDREWS, President

G. B. BARNARD, Business Manager

Send for Circulars.

STOCKTON

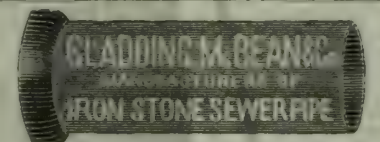
BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.

The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address
P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, E. C. ALLEN, Sac'to, Cal.



For the Drainage or Irrigation of Lands.

TERRA COTTA

CHIMNEY PIPE & TOPS

Vases, Flower Pots, Fire Bricks, &c.

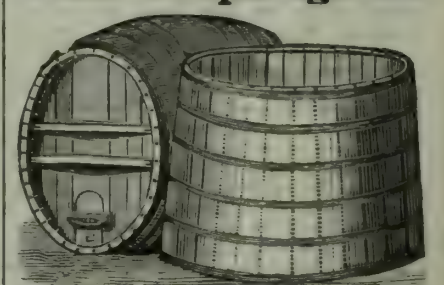
MANUFACTORY AT LINCOLN, CAL.

SEND FOR ILLUSTRATED CATALOGUE

1310 Market Street, SAN FRANCISCO.

CALIFORNIA

Wine Cooperage Co.



FULDA BROS., Proprietors.

30 to 40 Spear St., S. F.

ALL KINDS OF CASKS, TANKS, ETC.

Ship, Mining and Water Tanks a Specialty.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors

Office—\$18 California Street, Room 2.

REISTER'S

PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies' equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,

Chico, Butte County, CALIFORNIA

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAGE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. E. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

B. F. FISH, Santa Clara, Cal. Breeder of thoroughbred Jersey Cattle and Black Hawk Comet horses.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and Importer of pure bred poultry. Langshan eggs, \$4.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. E. K. Game Bantams. Eggs and Fowls for sale.

O. J. ALBEE, Santa Clara, Cal. Breeder of high-class standard Poultry: American Sebrights, Langshans and Brown Leghorns. Choice birds for sale in pairs, trios, or breeding pens. Write for prices.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

IMPROVED BIRD FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

Moore's Prepared

SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

TOWER'S CELEBRATED
OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco
BAGS, TENTS, HOSE, TWINES.

HARNESS, SADDLES,

LEATHER & SADDLERY

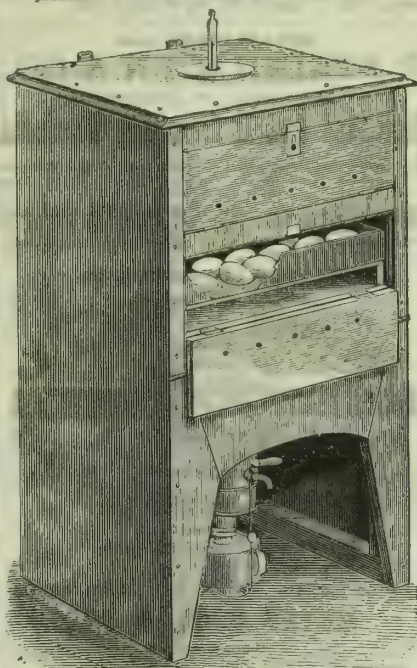
Goods,

WHOLESALE AND RETAIL.

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc.
W. DAVIS, 410 Market Street.

GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,
Los Angeles, Cal.

Dewey & Co. { 252 Market Street, } Patent Agts

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Yolo Co
H. M. LARUE.....San Mateo Co
I. C. STEELE.....Sacramento Co
THOS. MCCONNELL.....Sacramento Co
C. J. ORESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa CoCURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.
LOANS ON WHEAT and country produce a specialty.
COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.
GOLD and SILVER deposits received.
CERTIFICATES OF DEPOSIT issued payable on demand.TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.
BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

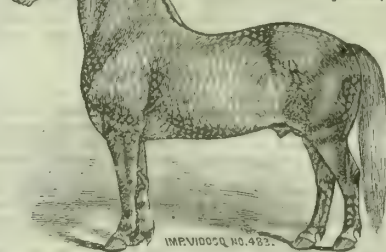
OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. Ry.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue s.

Calvert's Carbolic
SHEEP WASH.

\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Hens and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOK & SONS, Sacramento to Chicago & Kansas City

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

HOG RINGING A FAILURE!

OUR TENDON CUTTER
A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.
"Tendon Cutter," \$3.00 each.
Sold by the trade generally, or address

G. G. WICKSON,

General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

LAUREL RANCH.

Thoroughbred

Spanish Merino
SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.



LANGSHANS.



My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chickens for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR,

1416 Folsom St., S. F.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



FOR SALE.

17 Half Spanish, Half Saxony Bucks. 1 Leicester Buck. 8 Leicester Ewes. Apply to

ASHTON & HOLCOMB,

413 Montgomery Street, SAN FRANCISCO

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - San Mateo Co.

Sios Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE.

BANSOME, 402 Montgomery St., S. F. Send for circular

S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 11, 1882.

There has come quite a brisk feeling in several lines of produce, and prices have measurably improved. The greatest awakening has been in Beans, which quickly escaped from the depression of last week. Wheat has held its own, and is to-day at the same rate as a week ago, with a good prospect in the improvement abroad as shown by the following.

LIVERPOOL, October 10th.—The spot market is strong, at 9s 3d @ 9s 6d. Cargoes, 44s for just shipped, nearly due and off coast. Cargoes are firmly held, but not active.

Freights and Charters.

Freights during the week have been steady at previous quotations. Business, however, has been fairly active, the charters reported being 14 vessels, of a register of 20,062, or a carrying capacity of 30,078 short tons, or 601,560 cts. The chartered Wheat fleet in port has now a register of 58,928, or an export capacity of 88,392 short tons, or 1,767,840 cts, against 86,777 tons at the same time last year. The free tonnage in port has now a register of 82,561, or a carrying capacity of 123,841 short tons or 2,476,820 cts, against 7,064 tons at the same time in 1881. There is also a disengaged register of 6,192 at Wilmington. Tonnage now on the way to this port has a register of 233,920, against 379,866 at the same time in 1881, and 218,743 in 1880.

The Foreign Review.

LONDON, Oct. 9.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Wheat sowing has commenced favorably. Flour ruled very dull, new prospects being in favor of buyers. Foreign Breadstuffs partially improved. American Red Winter Wheat advanced 6d. The arrivals of Flour in London are very heavy, both American and European arriving freely. Maize is becoming scarce, but with the movements of the new American crop, there is every appearance of a decline of about 10 shillings from the highest rate, namely, 54 shillings. Ex ship cargoes are inanimate. There were 11 fresh arrivals, 8 cargoes sold, 11 withdrawn and 9 remain, including 6 of Red Winter and 1 of California. Cargoes on passage met with better inquiry, at 1 shilling advance. The sales of English Wheat for the past week were 57,266 quarters, at 39s 6d, against 60,864 quarters, at 46s 9d for the corresponding period of last year.

Eastern Grain and Provision Markets.

CHICAGO, Oct. 10.—Closing quotations: Wheat, strong, higher; regular, 95½ @ 96½c November; Spring, 95½c Corn, higher, 66½c cash; 66½c October; 65½c November. Pork, generally lower; \$20.95 November. Lard, weak, lower; \$12.80 cash; \$12.15 November.

Eastern Wool Markets.

Boston, October 10th.—There is change in wool. The demand is steady but moderate and holders are not disposed to make concessions on account of the tightness of the money market, as they are confident that all the wool on hand will be wanted and the tight money market is but temporary.

Ohio and Pennsylvania fleeces have been selling at 41½ @ 42c for X, and 42c for XX, including choice selections. Michigan fleeces are quoted at 39½ @ 40c, and are held firm. Combing and delaine fleeces are in demand at 44½ @ 45c for fine Ohio and Michigan delaine, and 45 @ 50c for fine and No. 1 combing.

Unwashed wools are in steady demand, and prices range from 24 to 36c for fine and medium including selected lots, and 18½ @ 20c for low and coarse. California wools are quiet at 24½ @ 32c for Spring. Fall wool is dull and neglected. Pulled wools are in fair demand at 42½ @ 50c for choice Eastern and Maine superior; 23 @ 40c for common and good. In foreign wools there is no change and very little has been done.

BAGS—Prices are about the same as last week.

BARLEY—Barley has had an active week, and closes about 5c, on the average, higher per cwt than last Wednesday. Speculation has been rife, as may be seen by the following: For No. 1 Feed, spot, \$1.32 was bid, \$1.34 asked, on the Produce Exchange. Sales were 1,300 tons as follows: 200 No. 1 Feed, October, \$1.34; 100, November, \$1.33; 600, \$1.33; 200, \$1.33; 100, buyer \$2, \$1.34; 100 No. 2 Feed, seller \$2, \$1.29.

BEANS—Beans have asserted themselves this week, and the advance has been fully 1c on several sorts. The inquiry is quite general, and free sales have been made.

CORN—Corn has been rather quiet and sluggish this week, and Large Yellow is quotable a shade lower.

DAIRY PRODUCE—Choice fancy Butter has reached 50c, and is hard to get. There is, however, plenty of the lower grades, and packed Butter is held at unchanged rates, which argues considerable in dealers' cellars. Oleomargarine is said to have begun to appear last week. We have a reputed sample, which we have not had time to fully examine yet. Cheese is improving, the best California returning to 14c, a price which has not been quoted for some time.

EGGS—Eggs also have reached the half dollar, and are scarce. The lower grades are also advancing.

FEED—Barley is dull and lower, future delivery sinking to \$16.50 per ton. Other Feeds are unchanged. Hay is arriving wet, and is hard to sell at full figures.

FRESH MEAT—There is no change, except in live Hogs, which have fallen off considerably.

FRUIT—There is little in but Apples, Grapes, Pears and Plums. Prices are about the same as last week.

HOPS—Hops have advanced again to 65c for the best California. Reports of Hops damaged by the rains are coming, and if that be true to any extent, the price is likely to do almost anything.

OATS—Oats have improved a trifle, and some choice lots now reach \$1.70 per cwt.

POTATOES—Silverskins are doing 5c better per cwt. POTATOES—This has been a Potato week. Rates are from 10 to 20c per cwt higher than last week. Everything has been up except Sweet Potatoes, which have fallen to \$1.25 per cwt.

PROVISIONS—There has been a continuance of good trade with unchanged prices as yet.

POULTRY AND GAME—Fowls are unchanged. Turkeys are 1c lower than last week.

VEGETABLES—Eggplant is higher. Prices are as a rule about the same as last week.

WHEAT—Spot prices are unchanged. Sales are few just at present, both spot and futures. Sales on the Grain Exchange were 2,600 tons, as follows: 1,200 No. 2, October, \$1.04; 100, \$1.03; 300, \$1.03; 600, \$1.03; 500, November, \$1.03.

WOOL—The railroad has reduced the freight on the low grade of Wool, and this is expected to facilitate the movement of this stock, of which there is considerable on hand.

Domestic Produce.

WHOLESALE.

BEANS & PEAS.		WEDNESDAY M., Oct. 11, 1882.	
Bayo, cil.	23 50	Petaluma, cil.	65 00
Butter.	25 00	Tomatoes.	50 00
Cashew.	30 00	Humboldt.	— 00
Pea.	23 50	" Kidney.	— 00
Red.	26 00	" Peachblow.	— 00
Pink.	26 00	Jersey Blue.	90 00
Large White.	23 50	Cuffey Cote.	— 00
Small White.	23 50	River, red.	1 00
Lima.	24 50	Chico, cil.	1 00
Field Peas, eye 2.	25 00	do, Oregon.	— 00
do, green.	26 00	Peasless.	1 00
		Salt Lake.	— 00
		Sweet.	— 00

BROOM CORN.

Southern. 3 @ 31
Northern. 4 @ 6

CHICORY.

California. 4 @ 44
German. 6 @ 7

DAIRY PRODUCE, ETC.

BUTTER.

Cal. Fresh Roll, B. 40 @ 45
do Fancy Branda. 47 1/2 @ 50

Pickle Roll. 30 @ 32 1/2
Frisian, new. 20 @ 25

Eastern. 20 @ 25
New York. — @ —

CHEESE.

Cheese, Cal., D. 13 @ 14

BUTTER.

Cal. Fresh, doz. 42 1/2 @ 47 1/2
Oregon. — @ —

Eastern, by exprs. 25 @ 30
Picked here. — @ —

Utah. 25 @ 37 1/2

FEED.

Barley, ton. 17 25 @ 17 50
Corn Meal. — @ —

Hay. — @ —
Middlings. 28 00 @ 28 00

Oil Cake Meal. — @ —
Straw, bale. 55 @ 60

FLOUR.

Extra City Mills. 5 25 @ 5 50
do, City Mills. 5 25 @ 5 50

do, Oregon. 4 75 @ 5 12 1/2
do, Walls, Walla. 4 50 @ 4 75

Superfine. 5 50 @ 5 75

FRESH MEAT.

Beef, 1st quality, B. 7 1/2 @ 8
Second. 6 1/2 @ 7

Third. 5 1/2 @ 6
Mutton. 4 1/2 @ 5

Spring Lamb. 6 @ 6 1/2
Pork, undressed. 5 1/2 @ 6

Dressed. 10 1/2 @ 10 1/2
Veal. 8 @ 9

Milk Calves. 7 1/2 @ 8
do. — @ —

GRAIN ETC.

Barley, feed, cil. 1 27 1/2 @ 33
do, Brewing. 1 32 1/2 @ 42

Chevalier. 1 35 @ 50
Buckwheat. 1 35 @ 50

Corn, White. 1 67 1/2 @ 71
Yellow. — @ —

Small Round. — @ —
Oats. — @ —

Milling. — @ —
Rye. — @ —

Wheat, No. 1. 1 62 1/2 @ 62 1/2
do, No. 2. — @ —

do, No. 3. — @ —
Choice Milling. — @ —

HIDES.

Hides, dry. 19 @ 19 1/2
Wet salted. 9 1/2 @ 11

HONEY, ETC.

Beeswax, lb. 23 @ 25
Honey, lb. 12 @ 15

Extracted, light. 9 @ 11
do, dark. 5 @ 9

HOPS.

Oregon. 60 @ 62 1/2
California. 60 @ 62 1/2

Wash. Ter. 60 @ 62 1/2
Old Hops. — @ —

NUTS.

Walnuts, Cal. 10 @ 11
do, Chile. 7 1/2 @ 8

Almonds, hd shd. 15 @ 17
Soft shell. — @ —

Brazil. 10 @ 12
Peanuts. 14 @ 15

Peanut Oil. 14 @ 15
Fiber. — @ —

ONIONS.

Red. 30 @ 40
Silverskin. 35 @ 45

POTATOES.

New, cil. 50 @ 75

Fruits and Vegetables.

WHOLESALE.

WEDNESDAY M., Oct. 11, 1882.

Apples, bx. 35 @ 1 50
do, Baskets. 40 @ 60

Apricots, bx. 50 @ 75
Bananas, bnch. 2 50 @ 4 00

Blackberries. — @ 8 00
Cantaloupes, cri. 2 @ 12 1/2

Cashew, cil. 25 @ 30
Cherry Plum, bx. 35 @ 75

Cocoanuts, 100. 6 00 @ 7 00
Crabapples, bak. — @ 50

Cranberries, bd. 12 50 @ 14 00
Currants, chst. 4 09 @ 5 00

Figs, box. 25 @ 30
Gooseberries. 4 @ 5

Grapes, bx. 40 @ 50
do, Rose Peru. 60 @ 80

do, Muscat. 50 @ 85
do, B. Hambg. 60 @ 90

do, Tokay. 60 @ 95
do, Isabella. 70 @ 75

Limes, Mex. 8 00 @ 9 00
do, Cal. box. 75 @ 3 50

Lemons, Cal. bx. 60 @ 3 00
Sicily, box. — @ 8 00

Nectarines. 50 @ 5 00
Oranges, Cal. bx. 4 00 @ 5 00

do, Tahiti M. 35 00 @ 40 00
do, Mexican. 15 00 @ 17 00

do, Loreto. — @ —
Peaches, box. 50 @ 1 25

do, Smocks. — @ 60
Pears, bak. 65 @ 1 00

do, Bartlett, bx. 50 @ 2 00
do, do. bak. 1 00 @ 1 25

Pineapples, doz. 6 00 @ 8 00
Plums. — @ 60

Quinces, bak. — @ 40
do, box. 50 @ 75

Prunes. — @ 12 00
Raspberries, bx. 7 00 @ 10 00

Strawb'r, chst. 7 00 @ 10 00
Watermelon, 100. 4 00 @ 6 00

DRIED FRUIT.

Apples, sliced, lb. 4 1/2 @ 11
do, evaporated. 9 @ 11

do, quartered. 5 @ 6

Apricots. 12 1/2 @ 14
Blackberries. 14 @ 16

do, Baskets. 26 @ 30
do, Oitron. 26 @ 30

Dates. 9 @ 10
Figs, pressed. 4 @ 7

do, loose. 11 @ 12 1/2
Grapes, cil. 10 @ 12 1/2

Peaches. 6 @ 7
do, pared. 13 @ 15

Pears, sliced. 7 @ 8
do, whole. 6 @ 7

Rhums. 5 @ 6
Pitted. 10 @ 12 1/2

Prunes. 10 @ 11
Raisins, Cal. bx. 2 25 @ 2 50

do, Halves. — @ —
do, Quarters. — @ —

do, Eighths. — @ —
Zante Currants. 8 @ 10

VEGETABLES.

Artichokes, sk. 25 @ 50
Asparagus, box. — @ —

Beets, cil. — @ 75
Cabbage, 100 lbs. 87 1/2 @ 1 00

Carrots, sk. — @ 60
Cauliflower, doz 1 00 @ 1 25

Corn, green, sk. 1 00 @ 1 25
Cucumbers. — @ 30

Eggplant, box. 75 @ 1 00
Garlic, lb. 1 1/2 @ 2

do, poor. — @ 1 1/2
do, do. — @ —

Lettuce, doz. 10 @ —
Mushrooms, bx. — @ —

Oars, green, B. — @ 4
Parsnips, lb. — @ 2

Peppers, sk. 50 @ 75
do, Chile. — @ 7

do, Ohlie. — @ 75
Rhubarb, bx. 25 @ 75

Squash, Marrow. 5 00 @ 8 00
String Beans. — @ 4

do, wax. — @ 4
do, Lima. 24 @ 25

Summer Squash. — @ —
do, box. — @ 50

Tomatoes, box. 10 @ 25
Turnips, cil. 75 @ 1 00

SPECIAL ATTENTION

Page 282 of this Number.

Commission Merchants.

Grangers Business Association,
SHIPPING AND COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Bales, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

SEND YOUR CONSIGNMENTS TO



SAN FRANCISCO

"THE OLDEST HOUSE"

PETER MEYER. LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders.

P. O. Box 1940.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1986 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

JAS. P. HULME. JACKSON HART.

Late Miller & Co.

HULME & HART,

(Successors to MILLER & CO.)

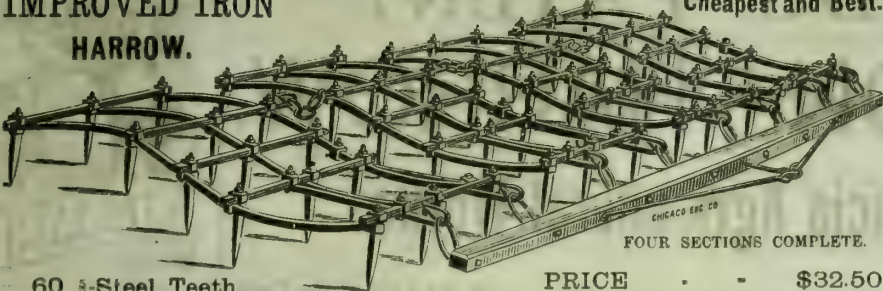
Wool, Grain,

AND GENERAL

THE
MONARCH
OF THE
FIELD.

BEST!

IMPROVED IRON
HARROW.


60 Steel Teeth.

Cheapest and Best.

SHRINKING,
SWELLING,
OR
Rotting Out.

DURABLE!

FOUR SECTIONS COMPLETE.
PRICE - - \$32.50

No. 1. has three sections, 45 steel teeth; cuts 3 feet wide. This is a light size for two horses. Weight, 168 lbs. Price, \$25.00
No. 2 (represented in the cut) has four sections, 60 steel teeth; cuts 4 feet wide. This is our standard style for two horses (generally used). Weight, 230 lbs. Price, 32.50
No. 3 has five sections, 75 steel teeth; cuts 5 feet wide. This is our 3-horse Harrow; can leave off one section and use two horses with the same draft-bar. Weight, 291 lbs. Price, 37.50
No. 4 has six sections, 90 steel teeth; cuts 6 feet wide. For this size we use four horses abreast, with two draft-bars coupled together at the ends; adapted for large farms. Weight, 336 lbs. Price, 48.00

The No. 4 IRON HARROW is simply two No. 3 harrows with the draft-bars coupled together, thus making a large four-horse harrow, suitable for large farms. These harrows have been in use all over the Pacific Coast for two years, and give the best of satisfaction. The frame is indestructible, made entirely of iron, and locked firmly together by the teeth passing through malleable iron clamps, and having screw-threaded shanks on their upper ends, which bolt the framework securely together. This mode of constructing a harrow frame dispenses with drilling or punching holes through the bars of the frame, thereby securing much greater strength and durability. It is indestructible. No shrinkage, swelling or rotting of frame-work. It is constructed in narrow sections, each acting independently; will adapt itself to any uneven surface of the ground, and will cut the soil better and more evenly than any other harrow. Constructed on correct mechanical principles; each section has a center-draft, and each tooth cuts a separate track. No one tooth in line with another. The safety hook obviates the necessity for unhooking to turn round. Four different sizes to suit customers. The Teeth are solid steel.

STRONGEST AND BEST HARROW MADE.

The IRON HARROW can be taken apart and packed very closely for shipment. We ship them over the entire coast. They are the most successful harrow ever introduced to the farmers. We have received a great number of testimonials. They all speak very highly of the Iron Harrow:
"Your Harrow is a good one."—M. Madden. "They give perfect satisfaction."—Jas. Cass & Co. "Your Iron Harrow is a good one, and fully met my expectations."—Dr. L. F. Moulton. "I like your Iron Harrow very well."—Milton Carpenter. "I tried your Iron Harrow the other day, and it beats them all. My manager says 'it is the best.'"—D. Freeman. "We like your Iron Harrow very much."—Steale Bros. Address

BYRON JACKSON, - - - San Francisco, Cal.

SACRAMENTO. SAN FRANCISCO.

HUNTINGTON, HOPKINS & CO.,
Hardware, Iron and Steel.

AGENTS FOR

BRINKERHOFF GALVANIZED FENCING,

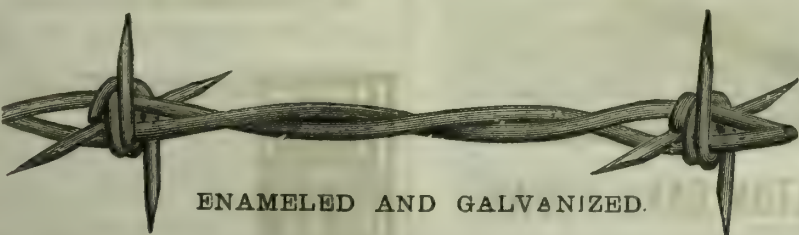


"KELLY" BARB WIRE.



ENAMELED AND GALVANIZED.

"Red Star," 4-Pointed, Barb Wire,



ENAMELED AND GALVANIZED.

S. P. BAILEY. O. F. BADGLEY. JOHN BAIL'Y.
BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - Stockton Cal.,
IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,


Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Belle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.
We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow.
In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.

A TURNED LEAF will point out the article supposed to be of special interest to persons receiving sample copies of this paper.

TO YOUNG MEN who wish to learn Steam Engineering, send your name with 10c. in stamps, to F. KEPPY, Engineer, Bridgeport, Conn.

SPECIAL ATTENTION
IS CALLED TO
Page 282 of this Number.

MRS. C. V. TURNER,
Inventor and Manufacturer of the

EXCELSIOR
Perfect Fitting
CORSET,
(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice the above Corset.
Rules for self-measurement sent on application, and a Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St.,
SAN JOSE, CAL.

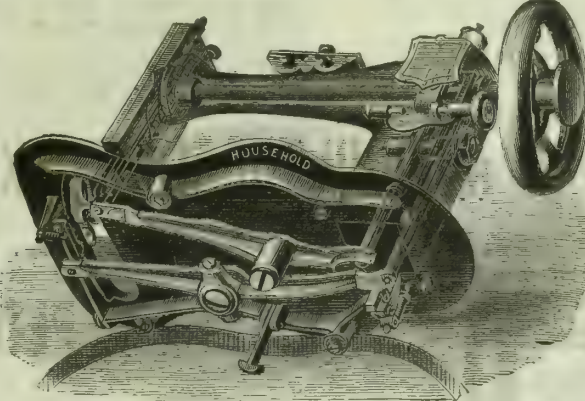
All parties are cautioned against making or causing to be made the above Corset without my License Stamp, under full penalty of the law.

Berkshire Hogs For Sale.

One Boar Pig and three Sow Pigs, two months old, from the pure-bred Boar and Sow imported from England in 1880. Price Boar Pig, \$25; Sow Pigs, \$20. They are first-class, and nicely marked. Can be shipped from Mountain View by express or freight. Address, I. J. TRUMAN, 327 Market St. S. F.

THE
Easy Running, Simple and Beautiful
"HOUSEHOLD."

Delivered upon receipt of price, freight paid, to any R. R. station or steamboat landing in California or Nevada. This Machine, manufactured by the Household Sewing Machine Co., Providence, R. I., is an example of what can be accomplished by a union of unlimited capital and the very best mechanical skill in the country. Here is a Machine perfect in every part, made almost entirely of Cast Steel, insuring great durability, having a high arm, giving ample room for work. Is almost noiseless, and the easiest running shuttle Machine ever made.



THE SHUTTLE
Is very simple, of cylinder shape and open at one end. The

BOBBIN
Holds an extra large amount of thread and runs loose in the shell without spring centers or point bearings, insuring an even and automatic tension.

TREADLE
Sets on anti-friction bearings and never requires oiling. It is the Finest Finished Machine ever offered to the public.

STYLES AND CASH PRICES
No. 1—Plain table, 1 drawer...\$45
No. 2—1 drawer, cover and drop leaf... 50
No. 3—3 drawers, drop leaf and cover... 55
No. 4—2 drawers on each side... 58
Write directions for shipping plainly. Complete list of attachments free.

HOUSEHOLD HEAD.
MARK SHELDON, Wholesale Agent, (9, 11 & 13 First St., S. F.) Agents Wanted.

PRICES REDUCED!
JOHN CAINE,

Sole Proprietor of the

Globe Iron Foundry and Machine Shop.

STOCKTON IMPROVED GANG PLOWS,

With Extra Reversible Molds, Standards, Wheels, and Landsides.

Eastern and Home Made

Sulky &

Gang Plows.

The Russell Manufacturing Co.'s Solid Woven COTTON BELTING, Black Coated.

BEST BRANDS BARBED WIRE.



Agent for
STUDEBAKER
Farm, Freight and Spring Wagons. Made to my Order.

GEM and CAHOON SEED SOWERS.

Salesroom and Warehouse, northeast corner of Market and El Dorado Streets, Stockton, Cal. Address, JOHN CAINE, Globe Iron Works, P. O. Box, No. 95, Stockton.

Illustrated Catalogue, Photograph and Lecture, 10c.
MAGIC LANTERNS AND VIEWS
Magic Lanterns and Slides WANTED
HARBACH ORGANINA CO., 809 FILBERT STREET, PHILADELPHIA, PA.

AUTOMATIC CABINET. Play any Tune.
ORGANS
Musical Wonder Catalogue, FREE.

DISSOLUTION OF CO-PARTNERSHIP.

OFFICE OF

JACKSON & TRUMAN.

Notice is hereby given that the partnership heretofore existing between us is dissolved by mutual consent. Mr. Byron Jackson will continue his business in the same place, No. 626 Sixth street, manufacturing his Self Feeders, Elevators, Derricks, Engines, Windmills, Harrows, etc.

Mr. I. J. Truman will be found at 327 Market street, and will continue the manufacture and sale of Hay, Hide, Hop and all kinds of Baling Presses, Excavators, Baling Ties, Wire, etc.

Mr. Byron Jackson is authorized to collect all accounts owing the late firm, and to receipt in full for the same.
BYRON JACKSON,
I. J. TRUMAN.

NAPA VALLEY POULTRY YARDS.



I have for sale all the leading variety so Pure-bred Poultry: Single birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn chickens, and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list.
R. G. HEAD,
Napa, Cal.

BEAUREGARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to
Break off,
or Nuts to get Loose.



Is the Boss of the Field.
It combines Strength,
Lightness of Draft and
Durability.

Light, Strong, Durable, Cheap, and Indestructible, Best Iron Harrow Made.

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and, like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team. THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast. Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW is the Best, Cheapest and Lightest Draft.**

PRICES:

1 Section, with 24 Teeth.....	\$14 00	3 Sections, with 72 Teeth and Draft Bar.....	\$42 00
2 Sections, with 48 Teeth and Draft Bar.....	28 00	4 Sections, with 96 Teeth and Draft Bar.....	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide. For further particulars, Address

BENICIA AGRICULTURAL WORKS, Benicia Cal.,

Or BAKER & HAMILTON, Agents, S. F. and Sacramento.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches. FOR SALE BY JOHN H. WHEELER, 111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

THE DAVIS GUN.



The best Shooting Gun for the price. Fine Stub Twist Barrels. Patent Fore and Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12 Gauge, \$22; 10 gauge, \$25. Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire Arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

CANCER Scientifically Treated and Radically Cured. No knife, no cautery, no pain. Book sent free, containing convincing testimony from responsible persons. Address, **DR. J. McLEISH**, No. 215 West Fourth Street, Cincinnati, O.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. STOCKTON.

Rates, \$1.25 to \$3.00.

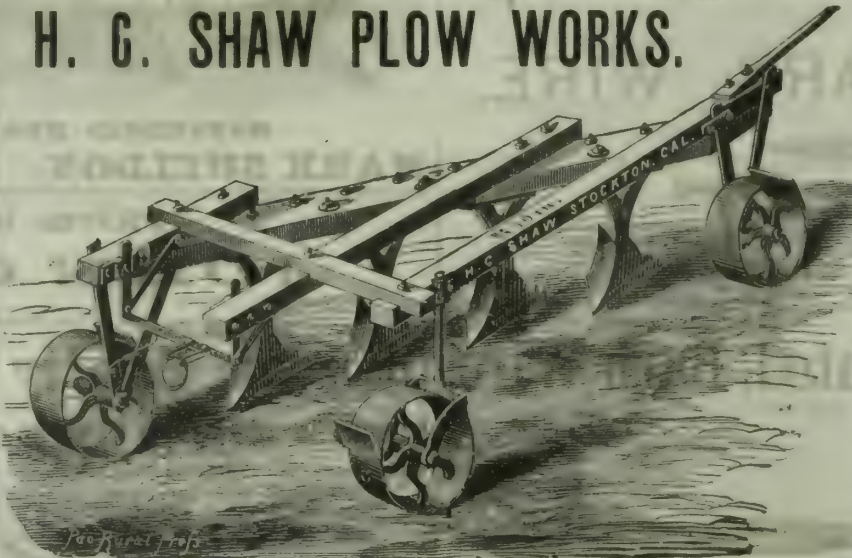
Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and all others who have used it. **INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.**

STRENGTH INCREASED. PRICE REDUCED. Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store, San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS



ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address **L. F. McCarty**, 502 Taylor St. Price, 50¢.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address **E. G. RIMMOUT & Co.**, 10 Barclay St., N. Y.



A Rapid and Permanent cure for
DISPEPSIA, INDIGESTION,
Or Rising of Food After Eating,
LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER. N. B.—Correspondence solicited from Wholesale Drug-gists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,

Sole Proprietors and Manufacturers,
295 Outer Street, CINCINNATI, OHIO.

CHEAP CASH GROCERIES

NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

FOR

MUSICAL SOCIETIES.

Glee and Chorus, easy and difficult, are found in Emerson's **CHORUS BOOK** (\$1.00), Perkins' **AMERICAN GLEE BOOK** (\$1.50), Cobb's **FESTIVAL CHORUS BOOK** (\$1.25), Perkins' **GLEE AND CHORUS BOOK** (\$1.), **GERMAN FOUR-PART SONGS** (\$1.50), and Zerah's **INDEX** (\$1.)

Easy Glee and Part Songs are found in abundance in Perkins' new **CHORAL CHOIR** (\$1.) and his new **PERLESS** (75 cts.), also in Emerson's **HERALD OF PRAISE** (\$1.) and **IDEAL** (75 cts.)

1,000 or more separate Octavo Choruses, Glee and Anthems, each 6 to 10 cents.

First rate Anthems are found in Perkins' **ANTHEM HARP** (\$1.25), Emerson's **BOOK OF ANTHEMS** (\$1.25), **AMERICAN ANTHEM BOOK** (\$1.25), and **GEM GLEANER** (\$1.), by Chadwick.

Scenic Cantatas, as **JOSEPH'S BONDAGE**, (\$1.00), by Chadwick, **HEL-BAZZAR** (\$1.), by Butterfield, and the classic **DON MUNIO** (\$1.50), **COM-ALA** (80 cts.) and **CHRISTMAS** (80 cts.), by Gutter-ton.

Send for lists and descriptions. Any book mailed for retail price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & CO., 243 Broadway, New York.

HEAR YE DEAF. Garmore's Artificial Sear Drum. As invented and worn by him perfectly restores the hearing of those who have lost it. Are not observable, and are a great help in hearing. **CAUTION!** Beware of cheap imitations. The only successful artificial ear drum in the world. **JOHN GARMORE**, with & Race Sts., Cincinnati, O.

Attention, Housekeepers!!

The immense stock of

Furniture, Carpets, Crockery and Household Goods of

A. EASTON,

Will be offered at cost from OCTOBER 1st until JANUARY 1st. Bargains for all.

El Dorado Street, One Door South of Main, STOCKTON, CAL.

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons, OF ALL DESCRIPTIONS.

Cor. Thirteenth and J Sts., Sacramento, Cal. Repairing promptly attended to.

1882.

GEO. A. DAVIS & CO.,

1883.

AGRICULTURAL IMPLEMENTS.

Plowing Season for 1882.



FURST & BRADLEY GANG PLOW.

We challenge any Sulky or Gang Plow to a Plow Trial. We sell our Gang Plow under a *Guarantee* to give satisfaction, or no sale. We will sell the Gang Plow to any responsible Farmer, Rancher, or any one wishing a Gang Plow upon trial, and if the Plow does not give satisfaction it can be returned to us at our expense.

We have chilled iron bottoms for our Furst & Bradley Gang Plows. We have chilled iron shares, which will fit steel bottoms. We have steel shares which will fit chilled iron bottoms. We have steel bottoms for our Furst & Bradley Gang Plows.

The Gang Plow above represented is the result of many years' experience in the manufacture, aided by a long series of practical tests in the hands of some of the best farmers on the Pacific Coast. They are extremely simple, strong and durable, and have several features superior to all other known Gang Plows. One feature of great importance is the BRAKE arrangement, for raising the Plows out of the ground. By this means even a boy can raise them with perfect ease, since the horses do the raising as soon as the brake is applied to the wheel. Another desirable feature consists in having but one simple lever for regulating the depth of furrow, and raising or lowering the Plows.

Every Plow Has a Land Gauge Lever Furnished Free.

It can be operated by the driver while the Plow is in motion. For plowing around circular corners, or curved furrows of irregular shaped lands, it works to perfection.

We also make a JOINTAP Pole, which allows a free up and down play of same, and does away with any pressure upon the horses' necks, that may otherwise occur in plowing over uneven surfaces. They are guaranteed to do as good work as can possibly be done by any gang plow in existence.

SEND FOR DESCRIPTIVE CIRCULAR AND PRICES.



FURST & BRADLEY WROUGHT FRAME SULKY PLOW,

With Patent Friction Attachment for Raising the Plow out of the Ground by the Power of the Team.

It draws light, it is easily handled, it is substantially made, and the best Sulky Plow in the market. STEEL BEAMS! More sold during the last year than of any other kind.

DON'T let the PRICE be the ONLY consideration when you go to buy a Sulky Plow. We believe in buying for as little money as possible, if you get the BEST, but be sure before you close the bargain that you are not taking SECOND QUALITY. Poor goods can be handled, and, from necessity, have to be sold CHEAPER than good ones. To the farmer who thinks one kind is as good as another we have nothing to say, our repairs are intended for those who can understand that Sulky Plows, although they have the same general appearance, vary as much in quality as do wheat, corn, oats, cattle, hogs, butter, cheese or any other farm product.

Why should the 'Furst & Bradley' with its Patent Friction Attachment and other valuable improvements, be sold for the same price as one that does not have them? The improvements are valuable to the farmer. Isn't it worth something to him to have a Plow that can be raised out of the ground by horse-power, instead of having to be pulled out by main strength and awkwardness? Isn't it worth something to have a Sulky that your BOY can do as much plowing with as you can? Isn't it worth something to have one on which the Main Lever locks to the PLOW, leaving the frame and pole perfectly free, so that there is no pressure on your horses' necks? And, isn't it worth something to have a Sulky that is well made, of strong material, by an establishment that has many years of experience in their manufacture? Well, we think it is. Our Sulky Plow is the ONLY ONE IN THE WORLD having a Patent Attachment for throwing the Plow out, and the only one having its Main Lever lock to the Plow; which features are PATENTED and controlled by us.

Just think of these things when you go to buy a Sulky Plow, and don't let any agent's "soft blarney" make you forget them either.

LA DOW'S JOINTED PULVERIZING HARROW!

Each Gang is Independent, with Patent Reciprocating Scraper Bar Attachment!

The most perfect device ever used for cleaning the wheels in STICKY SOILS. EACH BAR IS INDEPENDENT, EACH SCRAPER IS INDEPENDENT, and is made to shave to earth from each disc of each gang ALL AT ONE TIME, by simply drawing the Lever toward the driver. When not in use the Scrapers do not rub against the wheels and make the machine RUN HARD. When the handle is released, the Scrapers are OUT OF THE WAY.

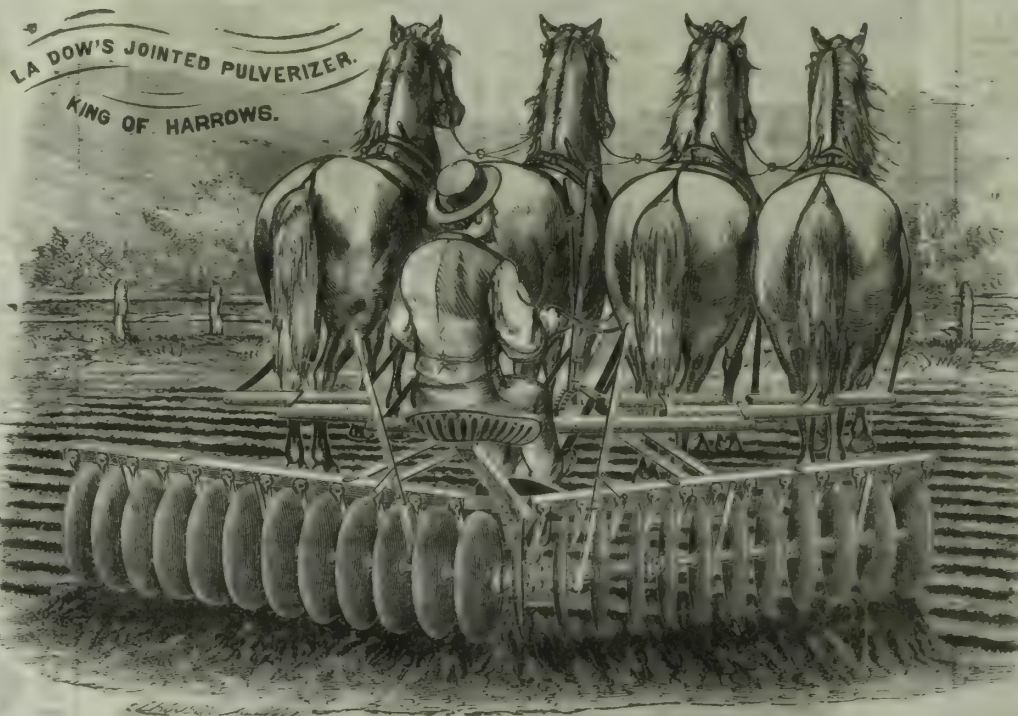
Each Gang Drawn by Three Journals. Cuts Uniformly Deep the Entire Length of Each Gang.

GROUND THOROUGHLY PULVERIZED IN ONCE GOING OVER.

Points of Superiority In which it Excels

It has a LEVER to change the angle. It is not heavy on the horses' necks. It has no side draft. It leaves no ridge at the center. It has self-feeding oil cups. It has a wrought-iron frame. Its chilled bearings cause it to wear longer and work easier.

LA DOW'S JOINTED PULVERIZER.
KING OF HARROWS.



It is easier to ride. It conforms to uneven surfaces perfectly. It can be made rigid if desired. Its journals are protected from dirt.

REMEMBER.

That this is the ONLY HARROW that has the RIGHT TO USE A LEVER to change the angle, or that has the Axles of the Gangs hinged together, or that has Flexible Joint Bearings on the AXLES. USE NO OTHER, as you can see at a glance that this Harrow has the RIGHT PRINCIPLE.

Send for prices and descriptive circulars of our SUPERIOR GRAIN DRILLS AND SEEDERS, FREIDEMAN HARROWS, SCOTCH HARROWS AND SQUARE HARROWS. WALKING OR HAND PLOWS in endless variety and size. CAST-IRON PLOWS, CHILLED IRON PLOWS, STEEL PLOWS, ETC. We carry a large stock of Plows for our domestic and export trade; and in season our assortment of Plows CANNOT BE EQUALED upon the Pacific coast. Our stock of Implements is too varied to admit of advertising ALL continuously; therefore, we only present the different articles in their different seasons. For a full and complete description of all, send for our New Catalogue and Price List. Mailed free to any address.

Our New Illustrated Catalogue is Now Out. SEND FOR IT.

GEO. A. DAVIS & CO.,

327 & 329 Market Street, - - - SAN FRANCISCO, CAL., U. S. A.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Volume XXIV.]

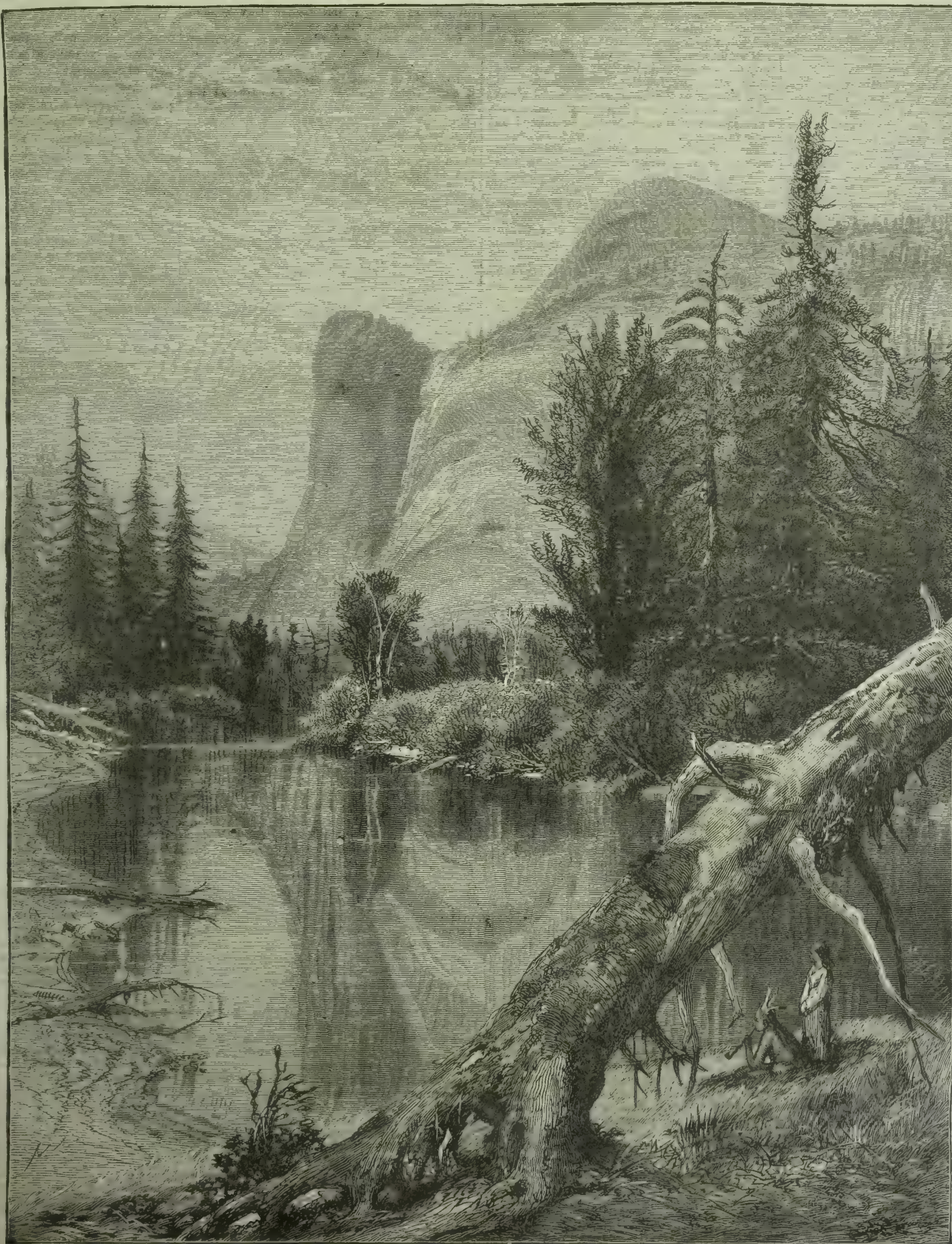
SAN FRANCISCO, SATURDAY, OCTOBER 21, 1882,

Number 17

Mirror Lake.

Few localities are as famous the world over for beauty and sublimity of scenery as the Yosemite valley. Description and illustration inadequately picture the scenes. It seems as if nature outdid herself in forming this retreat of rare beauty. Without attempting any description of the valley in general, it will be sufficient to speak of Mirror lake, which is so beautifully pictured in the illustration on this page. Some distance from El Capitan up the canyon of the Tenaya is the lake called "Mirror lake," an expansion of the Tenaya fork, which flows down the canyon of the same name. The lake is small and deep, and lies in one of the grandest spots of the valley, at the foot of the fine rounded precipice called the Washington Column. From the reflections in its still waters of this and other great heights in its vicinity, such as the North and South Domes, and particularly Mt. Watkins, it has been called the Mirror lake. The proper time to see the reflections is early in the morning, when the sun makes its first appearance in the valley over the crest of Mt. Watkins.

The lake is embedded amongst the wildest scenery possible. In the rocky sides of the mountains opposite and overhanging the lake can be seen by an exercise of the imagination, contortions and crevices, much resembling an eagle, a lion and a crane. Amongst other curious formations on the face of the mountain may be seen an elephant without his trunk, a pig without legs, the head of a second elephant on one part of the cliff, and its hinder quarters and tail



MIRROR LAKE, YOSEMITE VALLEY.

on another portion of the cliff, an engine and two carriages turned upside down on the mountain, but right side up when seen reflected in the water, with the addition of a station into which the train was on the point of entering; a clothes line with three articles of wearing apparel depending from it; a cross, a man's head with a braid, an angel supposed to be flying, but without wings, a rooster, a cow with half a head, a sheep, and a bottle lying on its side pouring liquid on to George Washington's head, the part of his physiognomy besprinkled being his left cheek. Two lovers are also pointed out to the visitor. They were supposed to be standing and gazing into each other's faces.

To a spectator viewing the reflections from a boat in the lake, when the sun is brilliant, the glare becomes very blinding. By degrees, however, one becomes accustomed to the light, and the longer one looks into the water the clearer becomes the objects reflected in it. All the surrounding heights are lit up in a remarkable manner; every tree comes out in the reflection most marvellously clear. Were it not for the fact that the objects are reversed in the water, it would be very difficult to tell which one looks at—the original or its reflection.

The visitor may amuse and interest himself in the vicinity of Mirror lake for many hours. No one who visits the Yosemite valley should fail seeing this wonderful little body of water. No doubt before the advent of the white man this valley was visited frequently by the Indians.

PISCICULTURE.

Carp Culture, No. 1.

EDITORS PRESS:—Allow me to have a social chat with your many readers on carp culture. While our farmers are making the greatest effort to increase the production of their lands and beautify their homes by labor, intelligence and capital, they generally neglect the sheets of water found in their possession, and it is high time attention was being given to them. Carp culture may be considered one of the principal means of making the water productive. In early spring, when all nature awakes from her winter sleep, the carp, being a source of income to the farmer by the sale of fish two, three and more years old; in autumn in the autumn when the farmer is depressed by cares and anxieties, because the season has brought too much rain or too much drouth so that he has not even been able to work his fields in a rational manner, the carp, which is not influenced by the above mentioned extremes of the weather, will be a good source of income.

While it requires a vast amount of care and labor to procure the necessary quantity of food which the domestic animal needs during the seven months of winter, the carp, so to speak, sleeps all through winter, and may be termed the best domestic animal. When they come to your table at any and all seasons of the year the carp is the best of all.

Description of the Carp.

The carp has a toothless mouth, thick lips and four barbels on the upper jaw. In place of the usual teeth of the mouth there are a number of stout teeth on the pharyngeal bones which are arranged in three rows. It has a single dorsal fin which is longer than the anal; both these fins have at their origin on the anterior edge a strong ray which is serrated in a downward direction. The caudal fin is of a semi-circular shape, and the natatory bladder is divided into two sections with connecting air passage. The scales have an entire edge, and the body is compressed on the sides. The general color of the back and sides is a dark olive brown, the abdomen often of a whitish yellow or orange tint. The coloring depends, as with all fish, partly upon the age and season, partly upon the soil, the water, and also upon the food of the carp.

The carp has occasionally been compared to the buffalo fish but has no resemblance to it except the similarity of their coat of scales—neither does the flesh of the buffalo fish ever come up to the excellence of the carp.

Prof. Baird, the Chief Commissioner of Fisheries, calls the carp the "farmers' fish," and predicts that within ten years it will take a very important rank among the food supplies. Carp will live and multiply almost anywhere, grow rapidly, and are of excellent quality. I am solicited almost daily for instructions how to prepare, care for, and manage them. In detail, I shall now speak to farmers and small pisciculturists. I shall not go into scientific principles, but merely lay the foundation for them. First we will speak of small ponds, such as will answer for family use, one with 8 or 10 square rods in it will, with good attention and care, produce as many as any one family can use; of course the larger the better.

Query: How do you make your ponds?

Answer: In the RURAL of Sept. 9th, I gave a paragraph on this subject, but I will go over it again. It makes no difference how ponds are made, or in what shape they are, so that there is a depth of about four feet of water in the deepest place with considerable shallow water. In a colder climate, where water freezes to considerable depth, of course the water should be deep enough to prevent its freezing to the bottom. All ponds should have a drain box in the bottom of the dam for at least two reasons: First, that you can draw all the water off without injuring your dam, and to separate your fish if desired, also to see if there is anything wrong or any enemies of the fish in the pond which should be taken out, of which I shall speak hereafter. This box may be made of four boards sufficiently long to reach through your dam. The two side boards should have a groove cut across them about six inches from the end, deep and broad enough to hold a gate. The side boards should sit on the bottom board, the ends coming even, the top board coming just against the gate. From the gate to the ends of the side and bottom boards should be covered with three two-inch strips crosswise, the one next the gate and the one at the end nailed smoothly and firm. You want a wire screen over the end of the box to keep the fish from going out when you draw the water off (an old wheat riddle will make a good one). The two-inch openings on top are left so that in case of a small supply of water you can fill in with earth so as to prevent any leakage, but with a good flow of water this top space may be boarded over tight, omitting the earth filling. This is the end of the box in the pond, and completes the box. In making dams I prefer, and think it will pay, to board it up on both sides; say, have four stringers—two on a side, one at the top, and one at the bottom; then setting the boards against them, driving them down well. This saves all wear and tear of the dam. Across and on top of the dam there must be a waste box to carry off the water. This may be made of three boards, and the upper end of this should be screened, also, to keep the young fish from

going out. The common gauge is good for this.

The pond should have plenty of watercress, lily and grass, or some aquatic vegetation in it, for several reasons: First, it gives shelter to the fish; second, there is a vast amount of food derived from it and its accumulations; third, it is indispensable, for on it the fish deposit their spawn (or eggs). The eggs are adhesive, and stick to the sprigs or branches, and without this the eggs would fall in the mud on the bottom and be lost. There is no need of this should there be any stone or gravel in the pond.

Now, having a pond, we must protect it, and to do this we must have a good canal or ditch all around it to carry all the surplus water off, and not allow any overflow. This all done, we have a pond ready for the water, which may be warm or cold, fresh or salt, as the history of these fish show that they will adapt themselves to all waters; but the warmer the water up to 100 degrees the better, and the faster the fish will grow. The water should be kept at or near a uniform depth. The flow of water is immaterial, so that there is plenty of life in it. Of course, the greater the flow (so you can control it) the better it is, and the more fish you may crowd in a given space. We are now ready for the fish.

To Stock a Small Pond

For breeding purposes we want about six fishes; two females and four males. I am aware that this is contrary to the general supposed idea, but my reasons are that two females are enough, and will very soon over-stock a pond, and the four males should be with the two females, as they do not cohabit together, but the males follow after the females and impregnate the eggs, after or as they are spawned, and I always see two males following one female; otherwise, a great many of the eggs would be missed and come to naught.

The number or amount of eggs that a single fish will produce is astonishing. When I had only two young females I raised from 2,000 to 3,000 fish each season, and I presume we might as safely calculate on from 2,000 to 10,000 young fry here as they do in Europe on 25,000. Mr. Hassel says that the abundance of eggs in a carp is very great, and it is this circumstance that will explain its extraordinary increase. A fish weighing from four to five pounds contains on an average from 400,000 to 500,000 eggs. Other authorities figure still higher. The greatest number of eggs I have any account of being taken from one fish was at the Vienna exposition, which was 8,760,000. The one that these were taken from weighed 24 lbs., and the roes or eggs weighed 12 lbs.

Carp are two years old when they begin to spawn. There may be one now and then that will spawn sooner, but not more than one in a hundred. I have seen a piece going the rounds of the press, taken from a Stockton sheet, in speaking of Mr. Mosley's increase of carp which he obtained of me. It stated that they were yearlings when obtained, the previous December (which was true), and representing them to have spawned at one year old. The fact is, they had to be one year old before they were yearlings, and at spawning time were two years old. In a good, warm pond, where the fish has remained all winter, they may commence to spawn as early as the 1st of April or May, and continue until August; but if transported late in the spring, it will set them back in spawning for weeks or months, and I think sometimes the entire season. I have an account of two lots that I have shipped failing to increase. The parties receiving them supposed I had made a mistake, and sent them either all males or all females, which I think hardly probable, as I am very cautious to always pair them, unless otherwise instructed. Then, again, they may have spawned and the eggs been destroyed by craw-fish, frogs, water-dogs, or other fish, or something of the kind, all of which are ravenous for them, and should be well guarded against. Then, again, it may have been that the necessary aquatic plants were lacking, or the ponds so small that the old fish, in swimming and rooting about, may have dislodged the eggs and they have sunk to the bottom and perished in the mud.

Where a man has a very small place for keeping his fish in, the better way would be to purchase what young fry his pond would support, instead of propagating them. In this way he can keep quite a number of them in a good-sized tank or small pond (it has been stated that they have been grown in wash tubs in China), and as they are used out they can be replenished at a very trifling expense. There should be at least one in each district or county who would grow the young fry in quantities and supply others. In that way many could have them when it would be difficult otherwise.

During the spawning season a perceptible change takes place in the males, protuberances like warts appearing on the skin of the back and head and disappearing at the expiration of that period. Sometime before the spawning season sets in the falling out of the pharyngeal teeth takes place. These grow anew each year. Some days before spawning the fishes show an increased vivacity; they rise more often from the depths below to the surface, followed by the males. This is called running-spawning, and is more frequent in warm than in rainy or windy weather. The females prefer spots which are overgrown with grasses and other aquatic plants. The male fish follow the females, and go as near the water's edge as the diminished depth of the water will allow them. They lose all their timidity, so that they may be taken very easily. They lash the water in a lively way, twisting

the posterior portion of the body energetically, and shooting through the water near its surface with short, tremulous movements of the fins. They do so in groups of two or three males to one female fish, and forming almost one compact mass. This is the moment when the female drops the eggs, which are immediately impregnated by the milt. As this process is repeated several times, the female drops, probably, only from 400 to 500 eggs at a time, in order to gain resting time, so that it will require days and weeks before she has given up her last egg.

The eggs of the carp are adhesive, not detached like those of the salmonidae; these latter lying loosely on the ground, while the former adhere in lumps to objects on which they have fallen. As soon as the egg has left the fish it swells up a little. The mucus which surrounds it serves as a means to fasten it upon aquatic plant, stone or bush. Those eggs which have no such object to fasten to are lost. Says Mr. Hassel again, I found numerous eggs on the reverse side of the leaves of the *Nymphaea* and their stems, the *Phellandrium* and *Utricularia*, but the greater number of them I discovered on the *Festuca Fluitans*, which among fishermen is known generally by the name of "water-grass." Its long, narrow, strap-shaped, thin leaves spread softly over the water's surface, as also its numerous branches in the water afford to the fish the sought-for opportunity of depositing its eggs upon the tender leaves. The seeds of this grass are an excellent food for the carp. This may be regarded as a useful indication to be acted upon in the construction of ponds.

The eggs will develop themselves quickly if in good, warm, shallow water, as early as the fifth or sixth day. The first traces of dusky spots, the eyes, will be visible, and in 12 or 15 days the little embryo fish will break through its envelop. This rapid development takes place only in thoroughly warm shallow water, but in deep cold ponds it will take from 20 to 25 days. We now have the little diminutive beauties, and will speak of the care of them in our next.

LEVI DAVIS.

Forestville, Sonoma county, Cal.

THE APIARY.

The California Honey Product. Past and Present.

In the California *Apiculturalist* for September J. G. Corey of Santa Paula, Ventura county, makes a pointed reply to the estimates of the honey products of the State, put forth by Mr. McCaul, of New York, which we recently copied from an Eastern paper. He says:

The bee-keepers of California are now and then treated to some very amusing reports of their doings; for example, about two years ago there appeared in the English newspapers a statement that most of the bees in America were owned by the Thurburs, of New York; that they were farmed out in lots of 25 and 50 to farmers, who attended to them for a certain share of the product. This article was extensively copied by a great many American newspapers, who, without any knowledge upon the subject, were very easily "sniped." And now in 1882 comes Joseph M. McCaul, agent of Messrs Thurbur & Co., and rushes over portions of the honey-producing counties of Southern California, and reports to *Bradstreet's*, estimating 90 to 100 tons as the honey crop the present year for Southern California. Ventura county alone has produced 110 tons this year, and certainly Los Angeles, San Bernardino, San Diego and Santa Barbara counties have produced some. The honey crop for California for 1878 was estimated by him at 360 tons, while the figures made by the Ventura Bee-keepers' Association for that year show that we produced 40 tons more honey in this county than he gave the entire State credit for.

The folly of these crazy reports ought to be a good lesson to parties seeking correct news, to look out in future and see that their reports come from some reliable source.

The yield the present season has been very light, and confined to warm locations quite remote from the sea coast, the warm canyons being most favored, and even in these localities the secretion did not appear until July. The statement of Mr. McCaul, as to the cause of the frequent failures to produce honey in this section, were frequent fires and pasturage of the bee ranges by herds of sheep. Our experience differs with this, as only one year is lost and the bee range is improved by fire. Then the sheep do very little damage to a good bee range, as the surface of the mountains is so rough that it produces no grass and is not approachable by sheep or any animal, except now and then a deer or grizzly bear. The true causes of our failure he did not discover.

In 1877 we had only 4.35 inches of rainfall, and, as a consequence, had no flowers to secrete anything. In 1878 our rainfall was over 20 inches. Cold weather continued until June, when favorable weather set in, and we produced over 200 lbs. to the colony that year. In 1879 we had nine inches rainfall, followed up with cold weather during the whole honey season; the entire country was a sea of blossoms, but lack of moisture and unfavorable weather prevented secretion, and we made no surplus. The year 1880 we had over 20 inches rainfall, but the weather remained cold so late that it was a good year for increase, but below an average for surplus honey. In 1881, with 12 inches

rainfall and cold weather, notwithstanding our bee ranges were covered with bloom, we had no secretion of any importance during the entire honey season, and, as a consequence, made no surplus. The present year, with 10 inches rainfall and cold and unfavorable weather, with abundance of bloom of every kind, we had no secretion until after July 1st. Our bees did well in warm locations, and produced from one-fifth to one-sixth of a crop, taking the county over.

A careful review of the causes of our failures to produce honey every year will be found to be lack of moisture and unfavorable weather, and not frequent fires and herds of sheep.

The question of sowing seeds of honey-producing plants looks well on paper; but to the honey producer, who looks to the high, rugged, rocky and almost inaccessible mountains for his foliage, it looks very unreasonable. The bee-keeper who has rolling hills, with good soil, might cultivate honey-producing plants, but the bulk of the honey produced in southern California must come from the high, rocky mountains, and from wild, indigenous shrubs and plants.

POULTRY YARD.

Poultry and Our Fairs.

EDITORS PRESS:—During the past few weeks fairs have been held in the different agricultural districts, at each of which among the displays of the products of the farm and factory, poultry figures on a small scale, and while incidents are fresh in our memories, it is thought a fitting time to speak our mind regarding the general management of this department. When a fair is little more than a horse trot there need be little hope of a good display of poultry. However, all our fairs are not of this sort, and wherever there is an exhibition of live stock worthy of the name, poultry fanciers and their birds ought to be largely represented. The only reason why they are not, is because of the indifference on the part of officers of Agricultural Societies toward the poultry department. All that is necessary, and it is asking little, is, first, to provide a suitable place in which to show the fine birds and banish the notion which some seem to entertain, that any out-of-the-way place good enough for pigs is good enough for poultry.

Second, have an intelligent poultry fancier make out the premium list, some one who can readily see that a prize "for best Cochins" and another for "best Leghorns" is not quite definite enough to call out a very large competition—looking over a "fair" premium list has often decided a breeder to keep his birds at home (as has been the case with me since coming to this coast).

Third, secure a good judge of fowls (standard fowls, bear in mind, not mongrels) to judge them according to the standard, and not by his own notions; in short, a man who knows his business and will attend to it. Put a few grains of common sense and as much cash as you can afford into the poultry department of your fair, and, our word for it, you will not be the losers, nor the public, either. Try it, and see if it does not pay.

Poultry fanciers are not fools; they can make the show of fowls a success, but they want a decent recognition. What would the public think to see a horse jockey in the fancy goods department, and a lady giving the horses the word "go" in the horse judge's stand? Yet this would be as sensible as it is to see a man who can't tell which are Cochins and which are Brahmas until he reads the cards on the coops, and who never heard of the standard, attempting to judge a collection of fine fowls or striving to make out a poultry premium list. Take a look into the chicken-house, where a fine display is being made; can any one be found there? Is there no interest in the show? Of course there is interest, it is a popular feature of the fair, and with a very little effort this department could be made the scene of a grand gathering of poultry and poultry fanciers at every fair. We, the fanciers of this coast, and I speak advisedly, stand ready to do our part; will you not do yours? Attending, as I have been in the habit of doing, fairs where these entries range from 500 to 600, and where \$1,000 are paid out to every hundred at the fairs in California, our exhibitions here seem rather tame, and is it any wonder that they are, when such ludicrous features are permitted as that to be found in the premium list of District No. 2 fair at Stockton, viz., sweepstakes for best display of native poultry. How is this, gentlemen—thorough-breds in all other departments, but must have scrub chickens. I can conceive of but one idea, and I accord them the benefit, that is, to get as many together as possible and ship them out of the country. So mote it be.

While feeling free to condemn that which is displeasing, I am always willing to render to Caesar that which belongs to Caesar, and accordingly I say: all honor to the management of our State fair in concurring with suggestions offered in connection with our late fair, and in the manifest disposition to still further confer with poultry fanciers, with a view to giving the exhibits in this department the prominence its importance demands. I hope that other societies will do likewise.

L. C. BYER.

Petaluma, Cal.

ARBORICULTURE.

The Préparturiens, or Early-Bearing Walnut.—No. 2.

Its History, Description, Propagation and Culture.

(Written for the PRESS by FELIX GILLET.)

I will now give the readers of the PRESS as full a history of the Préparturiens walnut as was ever published in any country. First I will introduce Mr. Henry Chatenay, of Doué, Department of Maine et Loire, in the old province of Anjou, France, a place about 30 miles from Angers, where are located Mr. Andre Leroy's nurseries. The letter of Mr. Chatenay was addressed to Messrs. Vilmorin, Andrieux & Co., the well-known seed dealers of Paris, who, at my request, propounded my questions to the Doué horticulturist:

I am so much more able to give you all the information you ask regarding the Fertile or Chatenay walnut, because it was my grandfather who originated that new variety to which the name of "Préparturiens" was given afterwards, so as to do away with the originator's name and to prevent our Doué's nurseries from being known. Such means have been resorted to by several horticulturists and nurserymen, not a hundred leagues from Doué either, and who realize pretty good profits from the new varieties of fruit produced in the Doué nurseries.

But about that walnut. My grandfather, Mr. Louis Chatenay, in the year 1830, planted a lot of common English walnuts in a box, with the intention of resowing the nuts that would sprout. Those seed not having done well, the box finally was left in the ground without any further notice. Still several nuts did spring up from that lot of seed, and one of them, at the age of two or three years, went to bearing. Of course that tree was preserved and all the others taken out. This new variety was first propagated by grafting, and I have still upon my place two very large trees that were grafted by my father, Mr. Pierre Chatenay.

This walnut has a very peculiar characteristic, and which serves much to distinguish it from all other walnuts; it has a great tendency to branch or spread out. As a matter of course, from that great tendency to spread out, the top of the tree will go into shape sooner than that of other sorts, and grow a multitude of ramifications, which will produce quite an abundance of blossoms. This explains, too, the great fertility of that tree, to which my grandfather had given the name of "Fertile or Chatenay walnut." Notwithstanding that tendency to branch and spread out when so young, that walnut cannot certainly be called a dwarf, for I have two trees of that kind, about 40 years old, and which have already attained a height of about 12 meters (39 ft.). It is easy enough to find out, in nursery rows, which trees reproduce well from seed by that tendency to spread out and grow ramifications. We pick nuts on trees on the second or third year of plantation, and often upon trees that have hardly reached a height of four feet. In most cases, seedlings yield nicer fruit than grafted trees. As a type, that walnut has nothing extraordinary outside of its remarkable propensity to go to fruit when very young and to produce abundant crops. One-half of the trees raised from seed will go to bearing within the first five years. Mr. Jamin, Sr., now dead, of Bourg la Reine, must have sold some of those trees before 1837, for he was the very person to whom my grandfather sold his first trees.

That Mr. Louis Chatenay, of Doué, and not Mr. Andre Leroy, of Angers, was the originator of the Préparturiens walnut, was a well-known fact in France, but of which I was not aware. All that Mr. Andre Leroy claimed, was that he did put it first to commerce under the name of Préparturiens, as early as 1838.

I will now introduce Mr. Ferdinand Jamin, of Bourg la Reine, near Paris. The letter of this horticulturist was addressed to Mr. Charles Jolly, Secretary of the National Society of Horticulture, of France, who also, at my request, propounded the same questions in regard to that famous walnut to the well-known nurseryman and florist of Bourg la Reine. Here is Mr. Jamin's answer:

The Fertile walnut (*Juglans Préparturiens*) was discovered by my father, now dead, Mr. Jean Laurens Jamin, in the nursery of a certain Louis Chatenay, dead also, at Doué (Maine et Loire). My father was the first one to cultivate and propagate that variety, and I remember well that he had some of those trees planted in pots which every year were covered with nuts. I was very young then, so that I couldn't tell very well by whom the fertile walnut (that was the name my father used to give it) had been christened with the name, very appropriately I should say, "Préparturiens." But I should be inclined to believe that the Viscount Hericourt de Thury, who at that time was President of the Royal Society of Horticulture, had had something to do with the naming of that tree. It could be found out, very likely, in the annals of that society. My father was also on good terms with the gentlemen of the Museum of Natural History, which institution was separated from his own place only by Buffon street. I shouldn't be surprised at all if he addressed himself to those learned gentlemen to properly christen this walnut, the subject of your letter.

The original type of the *Juglans Préparturiens* affected at the start a dwarfish form, but little by little, and by planting nuts from new bearing trees as well as old ones, that species returned to the mother-type or common walnut (*Juglans Regia*). However, the prolific characteristics of the variety did remain, for trees grown from the seed keep on bearing when quite young, like the original type, and in many cases when only three years old. The proportion of such early-bearing trees varies considerably, though often attaining 35.

Before mailing his letter Mr. Jamin had time to add the following postscript:

How glad I am! I have just found the very article referred to by me at the beginning of my letter; the article is from Papin, and I see that the name of Préparturiens was given to the fertile walnut by Poiteau, who at that time had charge of the annals of the Society, a man as modest as he was learned, and whom it was my good fortune to be well acquainted with. What a fine thing are the books, and how glad we are to be able through them to prove our very assertions! You will find that article of Papin in the collection of the annals, tome XXVII., page 241, paragraph 3, under the head of "New Varieties of Fruit."

Mr. Chas. Jolly, with the reply of Mr. Jamin, sent me a copy of that passage of the Annals, viz:

Note on the *Juglans Préparturiens*, a new variety of the common walnut or *Juglans Regia*.

Mr. Jamin (Jean Laurent), florist and nurseryman, No. 9 Buffon street, Paris, has the name for being a very enterprising horticulturist, always in search of anything new in the horticultural line. In one of his yearly trips around the country, to see what new varieties could be discovered, he found on the place of an horticulturist in the Province of Anjou, at Mr. L. Chatenay's, at Doué, and right among other young walnuts raised from the seed, a three-year-old tree in bearing, which struck him as a kind of phenomenon, since most all those seedling

trees were hardly two feet and a half in height. He purchased that very one at once and planted it in his grounds in the fall of 1838. The ensuing year that tree bore again some nuts which Mr. Jamin showed to all visitors to his place, and which he also exhibited to the Society at one of its sessions. In purchasing that tree, Mr. Jamin had purchased tree, nuts and all. Those nuts he planted on his place in the fall of 1838, this year (1840) most all the nuts obtained from those seed are covered with nuts, and they are hardly 30 inches high, which fact would tend to show that this variety will keep on reproducing itself true to seed. The appearance of that new walnut is pretty much like that of the mother type or common walnut, its fruit growing in clusters at the extremity of branches and ramifications, makes it look a great deal like the Cluster Walnut (*Juglans Regia Racemosa*), but with this difference that the walnut which is the subject of this article goes to bearing when very young, while with all the other varieties ten years at least is required before they go to fruit. The nut of this variety ripens in the usual time. It is very likely that this new walnut will not grow so high as the other sorts, since all its wood is bearing fruit. To this day Mr. Jamin has cultivated that variety under the name of Fertile, to which it is not any more entitled than other varieties which are as fertile as that one. I therefore propose to maintain the name of *Juglans Préparturiens*, given to it by Poiteau in the "Bon Jardinier." I look at that walnut as an excellent acquisition. It might be cultivated in pots and boxes, since it grows to fruit when no larger than dwarf apple and cherry trees. The nut is like that of the common sort, though somewhat smaller; the kernel is full-fleshed and of good quality. PERIN.

October 21, 1840.

Let us see now what Mr. Baptiste Desportes, a partner in Leroy's nurseries, and who acted as head foreman of that well-known establishment for 40 years, has to say in regard to this matter. Here is what the old horticulturist of Angers wrote to me:

The Fertile walnut, which was its first name, but afterwards *Juglans Préparturiens*, was originated in 1830 at Doué, a place 40 kilometers (30 miles) from Angers, by Mr. Louis Chatenay, a nurseryman of that place. Mr. Andre Leroy having heard that a very young walnut only two or three years old was a ready bearing nut, and that those nuts did actually reproduce the same kind, purchased several trees which he first propagated by grafting and afterwards from the seed, after his own trees had commenced to bear. That was in the neighborhood of 1837, and at the same time, Mr. Jamin, a Paris nurseryman, did, too, purchase some trees which he propagated also by the same process. It is, therefore, well understood, that the *Juglans Préparturiens* has been originated by Mr. Louis Chatenay, and first propagated by Messrs. Andre Leroy, of Angers, and Jamin, of Paris, as the following works will prove:

"First, the annals of the Society of Horticulture of Paris, tome XXVII., page 241 (Here Mr. Desportes gives the name of the signed Papin, and of which I have just given a translation).

"Then, continues Mr. Desportes, I will refer you to the *Revue Horticole*, tome IV., No. 28, January, 1841, page 433. "Walnut going to fruit two years from the planting of the nut. In a trip that Mr. Leroy, Jr., an Angers horticulturist, made to Paris in 1838, he told us that he had on his place that valuable variety, and we were not surprised to see Mr. Jamin, in 1839, exhibiting nuts of that kind to the Society of Horticulture of Paris. We learned from Mr. Leroy that the first tree of that new species planted in the province of Anjou had already reached quite a size, being 40 centimeters (16 inch) s. round, and its heavy and well ramified top yielding every year hundreds of nuts. It is to be regretted that the owner of the tree reserves the nuts for his own use, so that this new and valuable variety cannot be propagated as fast as it ought to be. But Mr. Leroy has got it all ready on the market."

The minutes of the Comice Horticole of Maine-et-Loire, Vol. II, session of the 5th of July, 1840, page 97, has also a note on the Fertile walnut, as having been originated by Mr. Louis Chatenay, of Doué, and mentions its prolific qualities. The note is signed by the Secretary, Huttenin. In the same work, page 137, under the signature of Mr. Millet, President of said Comice Horticole, that walnut is referred to again, and Mr. Millet is of the opinion that the name of *Juglans Préparturiens*, that had just then been given to it by Poiteau was more appropriate than that of "Fertile."

Mr. Andre Leroy, in his catalogue of 1840-41 advertises already the Fertile walnut (just discovered); price five francs.

The catalogue of 1841-42 for the first time names it *Juglans Préparturiens*. Same price—five francs.

"All those authorities," adds, very properly, Mr. Desportes, "ought to establish beyond a doubt the origin of the Préparturiens walnut. Now, as to the

Silence of Mr. Andre Leroy

In his great Dictionary of Pomology, regarding the Préparturiens walnut and nut-bearing trees in general, it is easily explained by the death of the author, that didn't permit him to finish his work."

As far as the Dictionary of Pomology of Andre Leroy is concerned, I was certainly wrong to give for authority a work that I knew only by reputation, never having had a copy of it in my hands. I thought it was complete. But no; for, as Mr. Desportes says, Mr. Leroy didn't have time to finish it, and such is the reason why nothing at all in that unfinished work is said concerning nut-bearing trees, such as walnut, chestnut, almond and filberts, and also figs, mulberries, medlars, and other kinds of fancy fruit. Of course, the description of the Préparturiens walnut could not be found among that of apples and peaches."

I hope that I am not trespassing on the patience of the readers of the PRESS, for I have yet some very interesting information to give them regarding the Préparturiens walnut.

The next horticulturists that I will introduce will be Messrs. Croux & Son, of Sceaux, near Paris. The letter of the Sceaux horticulturists was addressed to Messrs. Vilmorin, Andrieux & Co., and read as follows:

In reply to your queries about the Fertile walnut (*Juglans Préparturiens*), I have this to say. As far as the size of the tree is concerned, this variety differs much from the common sort; for it is a good deal smaller. My oldest tree is 20 years old, and is only six metres (20 feet) high. Aside from that dwarfish characteristic, the Fertile walnut does not differ at all from the common walnut; foliage, top, etc., is identical.

Cultivated in nursery rows, side by side the common walnut, it is impossible to tell which is which; both keep on growing with the same vigor till being four or five years of age, the time at which the Fertile walnut goes generally to fruit; its growth then is checked somewhat, which is due, we believe, to its precocity in bearing. From that time the trees never miss blooming and bearing fruit in quantities. We made the remark that this species is less liable to be injured by late frosts in the spring than the common one, for our trees bear fruit every year. We consider this variety as reproducing itself true to seed. When, getting to be four or

—Mr. Desportes forgot to say anything on the size of his oldest trees.

five years old from the seed, a good third of the trees go to fruit; the two or three following years the balance of the trees follow suit and go to fruit, too. Still, we must admit that a certain number, say one-tenth of the whole lot, seem to return completely to the mother-type or common walnut, and we consider them as such. This is what we do, so as to be certain to furnish our customers with Préparturiens walnuts that are really early-bearing. As fast as the trees go to fruit, we mark them, and we keep on doing that for two or three years; as to the balance of the trees, we simply put them on the market as common English walnuts."

Mr. E. A. Carriere, editor-in-chief of the *Revue Horticole* of Paris, writes the following to Mr. C. Jolly, who, at my request, had addressed himself to that eminent horticulturist in the hope of finding something definite on the origin of the Préparturiens walnut:

What I know by my own experience, and that of competent horticulturists, is that the Préparturiens is a variety of the common English walnut, and that, as most fruit species, this one varies considerably in all its characteristics; for some trees are found to be very prolific indeed, and going to fruit when only two, three and four years old, while others will go to bearing several years later. So it is concerning the size and appearance of the trees; and very often seen gathered on a tree known as having the characteristics of a genuine Préparturiens will produce trees of all sizes—small, medium large, and even very large; a little of everything, from a very small tree to a giant; from very prolific to moderately productive. The Fertile or Préparturiens walnut, was originated in 1830, at Doué (Maine-et-Loire), by Louis Chatenay. It was in 1838 that Messrs. Andre Leroy and Jean Laurent Jamin obtained trees from the originator himself, and propagated the new species.

Trees obtained from seed go to bearing when three years old, sometimes at two, but generally at four years, though there are some that will go to fruit later yet. You will find all the information you want about this walnut in the "Annals of the Society of Horticulture," of Paris; also in a paper from Poiteau, in the "Bon Jardinier," on that new variety, in the "Revue Horticole," tome IV., No. 28; and in the "Journal of the Society of Agriculture, Sciences and Arts," of Angers, Vol. II, pages 97 and 120."

I will have now the pleasure of introducing to the readers of the PRESS, the veteran nurserymen and horticulturists of France, Messrs. Jacquemet-Bonnefont, father and son, who are at the head of the oldest and most extensive nurseries to be found in Europe. So vast is their establishment that it is divided into three large departments, 20 miles apart from each other; the forest and ornamental trees department, the fruit trees, and last, flowers and garden seed and exotic plants department. Messrs. Jacquemet-Bonnefont sent me

An Affidavit

M. de before a Notary Public and duly certified by the Justice of the Peace of Annonay. The whole paper reads as follows:

In the presence of Chapuis (Andre Leon), Notary Public at Annonay, Ardèche, appeared Mr. Jacquemet-Bonnefont (marriage), nurseryman, residing at Annonay, Montgoulier street, acting for and in the name of the commercial firm of Jacquemet-Bonnefont, father and son, whose seat is at Annonay, and of which he has the right of signature, in his quality of partner and in the collective name of the firm, who has declared and testified before me, to be used as it will be judged fit, to wit:

First, that he delivered and shipped to Mr. Felix Gillet, at Nevada City, California, Préparturiens walnut trees, to wit: Two trees on the 10th of November, 1870; 2,950 trees on the 4th of November, 1873; and 2,500 trees on the 3d of November, 1873.

Second, that those walnut trees delivered by them were really of the kind designated in horticultural works, which have described that species, under the name of Fertile walnut or *Juglans Préparturiens* without the character of "dwarf" having ever been added thereto.

Third, that trees of that variety, planted in the grounds of said Jacquemet-Bonnefont since the year 1841, have reached already a height of eight metres (26 ft.), and with a trunk 80 centimeters (32 inches) in circumference, dimensions that necessarily exclude the character of "dwarf," considering particularly that those trees are far from having attained their full development.

Lastly, said Jacquemet-Bonnefont did present to the Notary Public subscribed a work entitled "Flores des Serres et Jardins d'Europe," published at Gand by Louis Van Houtte, in the year 1848, and from which the said Notary Public has copied literally the following article in full, page 367, and signed Charles Lemaire:

"It is well to remind the amateurs of nice and good fruit, of a variety of the *Juglans Regia*, that the abundance and precocity of its fruit render doubly interesting. That precocity did induce Mr. Poiteau, an excellent judge in such matters, to give that walnut the very appropriate name of Préparturiens, adopted since by all pomologists. That name, in fact, alludes directly to the precocity of the tree, which commences to bear at the age of two or three years. Préparturiens, that bears or fruits before, from the Latin *parturiens* (producing) and *præ* (before), a characteristic of an immense interest, and which renders the Préparturiens more valuable than the mother type or common walnut, which, as everyone knows, does not go to fruit before 8 or 10 years, and even a great deal later. Is it not, indeed, a curious sight to behold a walnut hardly three feet high bearing fruit already, when in ordinary cases walnuts will not bear before being over 15 ft. high?"

"That variety was found by mere chance among a lot of young trees grown from the seed of the common walnut, at Doué, Department of Maine et Loire, France. It was already covered with fruit, a fact that attracted attention at once, and the kind was preserved. Experience has demonstrated that that characteristic of producing fruit, when so young, was a constant one, the nuts having always reproduced trees that go to bearing when quite young. The foliage of the Préparturiens is identical with that of the mother type, but, on account of its precocity, that tree will probably grow to smaller dimensions. The fruit is very abundant on the tree and forms a kind of cluster at the end of branches and ramifications."

Done and attested before me at Annonay, in the year 1882, May 27th. CHAPUIS, Notary Public.

Following this is the certificate of the Justice of the Peace.

In their letter accompanying the above affidavit, Messrs. Jacquemet-Bonnefont add:

At the time that article from Van Houtte's work was written (1848), the Préparturiens was yet quite new, and it didn't look at first like being a kind so vicarious as the common walnut; and in fact on our grounds, though planted in good soil, it does not take such a development as the *Juglans Regia*. But nobody that we know of in Europe ever gave that name to the name of "dwarf." The climate, soil, etc., modify from end to end the growth of a tree, and advance or retard the epoch of its going to fruit. The best proof that you have that the walnut trees you get from us are genuine Préparturiens, is their having gone or going to fruit when so young, in nursery rows, upon your place, as you wrote to us. This precocity is yet the best kind of authority to produce to prove the genuineness of our Préparturiens walnuts. And, too, that other precocious characteristic (which is common to other kinds), to bud out late in the spring. By the way, we must say that we cannot rely on those other varieties of walnut whose vegetation is also late to come true from seed, as the Préparturiens generally does; those other kinds have to be propagated through budding or grafting.

We trust that the information we give you in reply to your queries will be more than sufficient to well establish the fact with you that the walnut which you offer in California under the name of *Juglans Préparturiens* is undoubtedly the one known in Europe by that name.

As to a dwarf variety of the Préparturiens, we never heard of any one.

Of the 5,452 trees sent by Messrs. Jacquemet-Bonnefont I lost over 3,500 killed by the frost

from New York to California. Out of the 2,500 trees composing the invoice made on the 3d of November, 1879, I saved only 37 trees, all the balance having been killed by frost on their way from Colorado to California. Thus will people see that it is not all profit with nurserymen, without speaking of a certain percentage of trees keeping stunted in nursery rows, as is the case with all kinds of fruit. Since that time I have been propagating the Préparturiens walnut with nuts raised upon my own place.

Messrs. Vilmorin, Andrieux & Co., and Mr. Chas. Jolly, Secretary of the National Society of Horticulture of France, both corroborated all that is said by the other French horticulturists on that variety of walnut. Mr. E. Huard Du Plessis, in his work on the walnut, second edition, 1867, describes that variety as follows:

Fertile walnut (*Juglans Préparturiens*).—Put in commerce by Mr. Andre Leroy, of Angers; fruit medium, full-fleshed, soft shell. This variety is very remarkable on account of its precocity, the tree going to fruit even when only three years old; but it does not take such a development as other sorts. It reproduces itself from seed.

The San Francisco Bulletin, in its weekly edition of February 4, 1880, gave a good description of that walnut, under the head of "Préparturiens, or Early-bearing Walnut." The Bulletin's description was illustrated with a cut representing a Préparturiens walnut, and anybody would have called it a photograph of my own cut, so much like it was that of the Bulletin. The article reads as follows:

The variety, of which the above engraving is a good representation, was originated in France and was introduced to cultivators for the first time in 1837 by Mr. Andre Leroy, of Angers. The nut, its quality and general appearance, is similar to the common English walnut, while the tree, both in form and foliage, also bears a close resemblance to that variety, though its early fruitfulness dwarfs it to some extent, so that at a corresponding age the tree is smaller than the common English walnut.

The advantages claimed for the Préparturiens walnut are that it commences to bear three years from the planting of the nut, as against 6 to 10, and sometimes 16 or 18, for the common variety; it is very productive, its branches frequently bending to the ground under the burden of nuts; it reproduces itself true to seed; it is more hardy, withstanding uninjured a degree of frost that is very damaging, if not fatal, to other varieties; and, lastly, it blossoms later than the common walnut, thereby escaping late frosts, which frequently destroy the crop of that variety. Its hardiness and late blossoming render it possible to cultivate the walnut in localities where it has been heretofore deemed impracticable, while its precociousness strongly recommends it to all those who are impatient of the time required to bring the common sort to bearing. This walnut is popular in Europe, and is being extensively planted in France and England. At Kent, England, many old trees are being grafted with the new variety and many new plantations are being started with it.

The PACIFIC RURAL PRESS, in its issue of the 18th of January, 1879, commenting on some Préparturiens samples sent to them from Nevada City, and grown on Gillet's barren hill, says:

The Préparturiens is indeed a handsome nut, and will return Mr. Gillet much credit for his enterprise in securing and making the variety known. That our readers may be familiar with its external appearance, we give an engraving of one of the nuts, which is true to nature and size of the specimen. Its interior is just as handsome. The shell is thin, and the kernel full-fleshed and exceedingly well-flavored. The skin which surrounds the kernel is also notably thin, and, as this skin contains the better principle, its thinness is very desirable. It is owing to this thinness of inner skin that the kernel owes its almost unalloyed sweetness. The nut is certainly of great promise."

The Sacramento Record-Union says in its issue of December 17, 1880, under the head of "Valuable Walnuts and Chestnuts:"

We have received from Felix Gillet, the well-known nurseryman of Nevada City, samples of his Préparturiens walnut and Marron Comble chestnut. To begin with, we must say that the specimens are magnificent productions. The Préparturiens walnut is a larger nut than the average of the English walnuts imported. It is claimed that it is a much earlier and more prolific bearer than the common English walnut.

This walnut has a very sweet meat, and is very easily extracted from its socket; and the skin enclosing the meat, and which gives the meat when eaten the bitter taste of the walnut, in the Préparturiens is very delicate and thin, and hence does not affect the meat very perceptibly. For this state this nut has many advantages, which will be appreciated more and more as they come into general use. Much was expected from the English walnut, but little has been realized, and we see no reason why these unfruitful trees may not be made useful by grafting them with scions from the Préparturiens."

I will close here this second part of my essay on the Préparturiens walnut, and in the third part I will speak of the "Dwarf Prolific" walnut, having taken the pains of making the necessary researches so as to establish the fact whether the American Dwarf Prolific is a scrub variety of the French Préparturiens, or the very same kind under a different name; and I will close up by giving the readers of the PRESS some notes on the propagation and culture of the Préparturiens walnut.

Nevada City, Cal.

SUPPOSED SUBTERRANEAN DRAINAGE OF THE INTERIOR OF AUSTRALIA.—In a paper in the *Journal of the Royal Society of N. S. Wales*, Vol. XV, 1882, entitled, "Notes of a Journey on the Darling," by Mr. W. E. Abbott, the author refers to the observations of Mr. Russell, which seem to prove that the amount of water received by precipitation over the watershed of the Darling much exceeds that which is carried off by the Darling and by evaporation, and he inclines to the opinion expressed by Mr. Russell, that there is an underground drainage system wholly distinct and different in direction from the surface drainage. The underground water would probably take a course to the southwest, and he suggests that this may have been the course of a more ancient river system. Some evidence with regard to such subterranean waters is presented from wells which have been sunk in the vicinity of the Darling, and whose flow seems to be independent of variations in that river.

A GRAIN of iron may be divided into four million parts, and gold may be beaten so fine that it will take 1,360,000 leaves to make an inch in thickness.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

(Continued from Last Week)

Roll Call of Granges.

On Friday A. M. the Worthy Master called on each Master of Subordinate Granges present to give five minutes' remarks on the conditions and work of their respective Granges. We regret that, without a phonographic reporter present, it is possible for us to repeat a portion only of the interesting things said, and that in substance rather than in the language of the earnest speakers:

AMERICAN RIVER: J. T. Wight, W. M. A year ago our Grange was in so low a condition that I did not think it worth representing by the Worthy Master. In November we considered the question of surrendering our charter, and voted "no." There were just enough present to fill the offices at the meeting held for election. At installation meeting, 15 applications for new members were received, and a class of some 40 or more was soon initiated. Work was resumed in earnest, and a new hall has been constructed, 30x60 ft. in dimensions, at a cost of \$2,300, and all paid for. Other Patrons must work to keep up with American River Grange, as we intend to do as well in spirit and deeds during the coming year. On the 26th of this month we intend to dedicate our hall with services appropriate for Grangers, and we invite all Patrons to assist and partake with us on that occasion.

BENNETT VALLEY: Bro. Nelson Carr being temporarily absent, Sister Carr, Representative, spoke for him. Nine years ago, in May, we organized. In the fall we built a large hall, hard-finished, with anterooms and other conveniences, including kitchen apparatus, etc. We now have about 45 members. From that time to this we have always had a quorum, except once while a county fair was being held—and good meetings at that. We have good times. Our Grange is prospering. Many have moved away; 11 or 13 have been added during the year.

Some of our old members have come back, and enjoy the meetings exceedingly, and are now among our best workers. New ones have also come in. We are inclined to make it as pleasant as possible for our young people, and believe in doing all we can to induce them to come in for the great benefit of themselves and the Grange. Santa Rosa Grangers sometimes visit us, and it does us good. We make it a point to attend Grange every other Saturday at Santa Rosa, and feel that it is a privilege in that way to be able to attend one of the Granges every week. The Grange, we feel, is a noble institution, and, when duly appreciated, a great blessing. Its good members are growing nearer and nearer to each other yearly, as they approach together their beautiful home everlasting.

DANVILLE: D. N. Sherburne, W. M. Situated near and southwest of Mt. Diablo; at present has some 83 members; once had some 135 members, but when the backset came, we were reduced greatly in our members. We have now increased to 83 during the past few months. Credit for our revival is due to W. M. Flint, who mentioned, at the Walnut Creek meeting, the grand success of American River Grange as an example for all other lukewarm Granges. A hint was enough, when he told us what a few determined Patrons could do. Half a dozen of us resolved to act and volunteered to work, with the result of 15 new applications at the next meeting, and Bro. Flint had the pleasure of meeting these at the harvest feast. We shall go on, and expect 100 members during the coming year. Have good material for work, and we intend to do our duty.

EDEN: Representative, O. Dennis, in the absence, by illness, of W. M. Anway, said: We had a good Grange in Haywards, and have good material yet. Some of our best members are so situated as not to meet often with us. Among other big guns so situated is Bro. P. M. Joel Russell, whose family residence is now in East Oakland. Our Master, a zealous and foremost Patron, has been away during harvest, and is now very sick. It has so happened that much sickness has interfered this year with the attendance of other workers. We have one of the best fruit and grain sections in the State. It is remarkably healthy, as a rule. We are within about one hour's ride of San Francisco. Our population is increasing, and we ought and hope to double our numbers from the best and most desirable material.

ENTERPRISE GRANGE: The Master not being present, Sister Parker was called on. She expressed surprise that the Master was not here, as expected. We are still in a prosperous condition. If you will all come up to our anniversary meeting, we will show you that we are live and working Grangers, as some others here present can testify. We have 71 paying members; aim to support no dead branches. Located eight miles east of Sacramento city. Our P. O. address is Brighton.

FRANKLIN: P. M. William Johnston responded briefly in absence of the W. M., members of whose family were unfortunately ill. We

have a lively Grange, living in harmony; have lively meetings regularly. All take the Grange organ.

GRASS VALLEY: A. Henderson, the Secretary, was elected Representative, and reported. Our Grange is situated in Grass Valley, Nevada county, on the narrow-gauge railroad from Colfax. It is the first organized out of four in this county. Two have become dormant, while two remain healthy. We organized with 30 members; increased to 50; a period of lethargy ensued. We have got over that. Now have 43 members, and are as healthy as at any other period. Magnolia, one of our neighboring Granges, is in healthy condition. One or both of the dormant Granges may become useful soon. Much of our life and success is due to the spirit and work of our sisters. If the brothers will be as earnest, honest, patient, kind, laborious and persistent in well doing as our sisters, our own Grange, with all others, will thrive more pleasantly, usefully and permanently.

LOMPOC: We make a few extracts from the report of Deputy Lecturer, L. F. Potter, to the W. M., as follows: I cannot make it convenient to be present at the State Grange. It is with reluctance that I forego this pleasure. My whole heart is in this work, and it seems to me that now is the time to strike for liberty. Much may be done now; if left undone the opportunity may pass, never to return again. Lompoc Grange has very near doubled its membership within the last year. I would urge on you the necessity of coming or sending some one competent to deliver lectures and stir up the farmers. If something is not done, and that speedily, our birthright will be sold, and that for less than the mess of pottage. I imagine I see this monster monopoly, anaconda-like, winding himself around and encircling the laboring classes.

LODI: C. T. Elliot, W. M. We are 14 miles north of Stockton, on the C. P. R. R. Have 45 members. We have a solid basis of old standby members, and are adding new ones, seven or eight having joined during the year. We are generally prosperous and happy, and intend to continue our good work vigorously in the cause of the Grange, and co-operation for the good of all concerned.

MONTEZUMA: T. T. Hooper, W. M. Located on a little point of land at Rio Vista, on the Sacramento river, where Grange material is limited. In 1873 we took a notion to organize a Grange. Considerable opposition was met. This stirred us up and gave us a determination which resulted in an organization in January, 1874, of 23 members; afterwards increased to 45. The Secretary, summing the cost of first year's expenses of the Grange, reached the sum of \$150. Bro. Hooper found his payments for support of the Grange amounted to \$157. The Grange began to go down and has since been very small, with only 14 members at present, but carrying no dead weights. You can count on us as long as we have strength and means, and good Grange work yet to be accomplished. Thanks to Bro. Webster for telling us six is a better quorum than none, and if it becomes necessary we will count the babies in, and endeavor to be equal to any emergency. We hope to have a better report in future.

NORTH BUTTE: C. C. Partridge, W. M. Situated in Sutter county, in the extreme north portion, at Pennington. Our hall was built by an association of grangers, and is rented for different societies and other good purposes. Our town is noted for the absence of drinking saloons. We have 72 members and a class of five on the way, and one application for our next meeting. We meet on the second and last Saturdays of the month. We have a good average attendance. We have a good working force of members. The Patron is liberally patronized. There is no chance of our going back, for our gallant Past Master Spillman is a stirring member of our Grange.

POINT TIMBER: Geo. T. W. Carter, M. W. Organized in May 1873; a pioneer in the Grange movement in this State; consequently experienced all the vicissitudes of the Grange; invested in Grange banking business; also in insurance and shipping wheat; and lived through all, and is a live Grange to-day. When the Order came to vacate the schoolhouse, they adopted the co-operative plan, and with their own hands built them a hall, which is rented to the various Orders. In looking over our Grange we find among those who have stood by the Grange the most active workers in the various Orders established in the neighborhood, the church, Sunday-school, Good Templars, A. O. U. W., etc. The Grange in the State seems to have been left to these active workers, and an impression of their characters is being felt in this State Grange. The unassociable, the indifferent—those who take no interest in neighborhood improvement—seem to be the ones, as a rule, which the Grange has lost in the past few years.

SAN LOUIS OBISPO: Bro. W. J. Miller spoke in absence of the W. M. We have a good membership, and are the only Grange in the county. Have at present 41 members—all square on the books. With vicissitudes, up and down, we lived, and will live. Sister E. W. Steele added: We will soon have something in the way of a co-operative warehouse association, and also a shippers' co-operative organization. We intend to keep our Grange in good order as an inheritance for our children. We believe it will be more precious to them than anything else we can leave them.

SOUTH SUTTER GRANGE: J. R. Dyer, W. M. We organized in 1873 or '74, with 26 members, in a schoolhouse, which was burned down with

all the Grange paraphernalia. Soon after, we erected a \$2,000 to \$3,000 hall, which is all paid for, and we have money in the bank. We also have established a seminary of learning for the benefit of the Grange and towns. Are determined to stay with the Granges. We have a class of candidates, of whom, all but one are young people. Leaving out all non-paying members, we have 50 to 60 members.

SUTTER CREEK: J. M. Post, W. M. The town is 45 miles from Sacramento. Our Grange is one of the live institutions of the State, as Worthy Master Flint can testify. We have 35 members—live, good Grangers—and our harvest feasts are large enough for the State Grange, should they call individually or collectively at any time. And we are still marching on.

TEMESCAL: Christian Bagge, W. M. Ours is a small Grange, in Oakland, numbering 40 live members. Year before last we lost some. The past year 11 have joined. We have more coming. Have more money than usual in our treasury. We meet in Odd Fellows' building on the first Saturday evening and third Saturday afternoon of every month. Being near San Francisco, our Grange is convenient for Patrons to visit from that city, and they are heartily invited to do so as often as possible. Our Grange contributes proportionally more to the Patron than any other Grange, as its editor, Bro. Webster, can testify. We have added 15 to 20—all live members—during the year. We have 14 (including all our officers but two) present at this State Grange session.

WALNUT CREEK: M. L. Gray, W. M. Located 20 miles from San Francisco and Martinez. We have 40 members, having, after flourishing in good Grange times, been reduced in members. We have received four new members the past year. We meet twice a month. Have good and interesting meetings. There are some old pilgrims that always attend and keep up an interest, and so long as these old pilgrims live there will be no surrender at Walnut Creek. Our post office is Walnut Creek, and we invite Patrons, one and all, to visit our Grange. [We happen to know that Walnut Creek is lucky in having such "old (gray) pilgrims."—EDS.]

WASHINGTON: Nelson Dille, W. M. Situated in the northeast corner of San Joaquin county, 15 miles from Lodi, on the San Joaquin and Sierra Nevada (narrow-gauge) railroad. Have about 70 members. Thirty-eight copies of the Patron are taken. Have good solid material, and are on a firm foundation. We have good times socially. Have successfully worked the past year for a co-operative store in Lodi on the Rochdale plan. Nine new members have been admitted.

[We shall continue our report of the roll call and the session hereafter.—EDS.]

Remarks.

Owing partly to the detention of some members by the rain during the first part of the session, several essays prepared by the sisters were not read during the session, which we hope to be able to present to all our readers in future issues, as well as others which were delivered.

Everyone left, at the close of the session, feeling that the State Grange was a benefit to themselves and an honor to the State, and that Stockton and Stockton people were delightful. It is impossible to be treated better than we have been in this metropolis of the San Joaquin valley.

Lodi Co-operative Association.

Bro. C. T. Elliott, Secretary of the Grangers' Co-operative Business Association of Lodi, by request, furnishes the following sketch of that organization:

The Grangers' Co-operative Business Association of Lodi California, was incorporated March 2, 1882, with Wm. Eoniss, J. D. Huffman, J. Wiltse, Truman Stoddard, R. J. Parsons, A. A. Van Sandt and John Northrop constituting the board of directors, which was organized by electing the two first-named as President and Secretary respectively. The authorized capital of the association is \$50,000, divided into 2,000 shares of \$25 each, of which \$3,000 was subscribed at the date of incorporation.

In the latter part of April of this year, the board of directors was reorganized, and then composed, and still consists, of Wm. Eoniss, President; B. F. Langford, Vice-President; C. T. Elliott, Secretary and business manager; George Hogan, Treasurer; E. Lawrence, Auditor; J. M. Fowler, R. J. Parsons, L. M. Morse and A. A. Van Sandt. Subsequently, E. R. Pease was associated with the concern as one of its business managers, putting in one-half of the required capital, commenced business May 1, 1882, with a guaranteed capital of \$20,000. At this time, Oct. 1, 1882, there is \$15,550 of the capital stock paid up in cash, and the balance is guaranteed by the directors when required. The stock is all held by Grangers.

The Association conducts a general merchandise business, aiming to supply all the wants of the farming and business community. All purchases are made for cash, and from first hands as far as possible. It will be seen that buying for cash pays, as the discount for cash on our purchases to this date amount to nearly \$1,700. We sell as nearly as possible for cash, but extend short credits when desired and considered safe.

The sales of merchandise for the first five months aggregate about \$30,000. Our manner of doing business enables us to take the lead and make prices. We consider the prospects of our Association good.

An Appeal from the Sisters.

(Read before the State Grange of California, October 5, 1882, by Mrs. Mary F. Morrill.)

Worthy Master, Brothers and Sisters:—Of all the secret societies which have been organized since the world began, the various temperance societies and the Grange are the only ones, I believe, which admit women as an *apparent*, if not real equal with man.

Into these she may enter, may press onward and upward, may speak and be listened to with at least outward respect, and, if she so desire, may possess most of the honors which Grangers and Templars hold most dear.

This has all done much for us, and we, the weaker vessels, feel an especial gratitude to our beloved Order, which has brought to many a woman the realization that she, too, has a mind and a capability, and to many a man the new knowledge that his wife is a creature of thought, of feeling, and of purpose like himself.

But much good as has been done, there is still an immeasurable distance between things as they are and as they should be; great as has been the progress toward the goal where man and woman shall stand, equal and undivided, there are still many weary miles to be traversed before it is reached; and I come to you to-day, my brothers, and ask that you will help to bridge the chasms, scale the rugged mountains, and ford the turbulent waters that lie between us and that goal of greater peace, greater security and greater happiness, not only for us, but for you.

Not with a demand do I stand before you, but with an appeal; not with a clamor for the ballot-box and bifurcated garments, but with the cry of the weak to the strong, the generous and the brave, for thoughtful love and protection. Recognizing that you are the leaders, we are willing to be led; but we wish to be led hand in hand, pressing onward with you, not behind you. We fain would walk where we might feel the pressure of the toil-worn hand, hear the beating of the strong and noble heart, receive the glad encouragement of the unflinching eye, and where should we perceive an obstacle, which you in your high have overlooked, we might whisper of its whereabouts in your ear, lest it should cause you to stumble on your way.

All of these dear privileges our Order gives us, but this is not enough; we want them, not only in our Order, but in our homes; not only in name, but in fact.

There is too little sympathy, too little appreciation, of each other's cares and responsibilities between those who should, above all others, understand fully, thoroughly and entirely the workings of each other's daily life. The farmer as he goes forth to his daily toil, the wife as she takes up her dreary round of household duties, are often as far separated in heart and purpose as if the waves of the mighty Pacific rolled between them. He, as he plows his field and sows the golden grain, is never cheered by thought of smiling wife and crowing babe at home. If his mind does stray to those he left behind at morn, it is when the sun begins to ascend the noon-day sky and he feels a hunger—not of heart—while he wonders if the dinner-horn will not soon waken the echoes of the woodland near. His only vision of her he should hold most dear, is the glimpse he caught through the kitchen door of a flushed face and not too tidy form as he devoured with haste the last hotcake and drank with a gulp the fragrant coffee no hand prepares so well as hers; and the vision was hardly fair enough to dwell, even until noon, within his heart.

No parting word of cheer, no kiss of love did he leave behind to lighten the toilsome hours. And she, as she goes wearily on the same dull round she has pursued so long, does she feel her heart grow warm and tender as she thinks of him who is her lord, or does she only think to glance anxiously at the clock to see if his favorite pudding has time to boil and be just right at the stroke of 12? Does she sit down on the vine-clad porch for an hour's rest and sweet communion with the children, teaching them by precept and example to love and honor the author of their being, or does she, tired and nervous in the hot, uncomfortable kitchen, order them to "clear out and don't bother me, or your father's dinner will be late, and he'll just about raise the roof?" Which of these two conditions, my brothers and my sisters, rightly represents the life of many farm homes within our beautiful land, and which ought to?

O, my brothers, be very tender with her who walks with you in the journey of life. Irritable she may be; unreasonable you may think her; but if you could for one short week exchange your full free life for her contracted one I think you would be more forbearing, more thoughtful, less exacting, and, in truth, and in fact, a better Granger at home, as well as in the Order, than you are.

If you are not able to provide help to lighten her heavy burdens, lighten them yourself by your watchful, tender care and sympathy, and by your own loving assistance when you can, but, above all, let her—make her fully understand—that you are not able; let her know and feel it is necessary you should refuse the stipend which would go to the assistant she needs so much; tell her of the mortgage which hangs like a blight over your fair and fertile fields, but

do not make her feel that she brought it into existence by carelessness and extravagance; let her see that you trust her fully, freely and entirely with the knowledge of your business successes, trials, or (and?) disappointments, and you will never regret the confidence you have bestowed upon her, and if death should call upon you first, to remove your hands from off the Plow of Life, she will be able to cut the furrows that remain deeper and truer and more steadily than if the fields she has been called upon to till had ever been hidden from her sight by deep and dreary snows of distrust, unthawed by the sun of sympathy and love. She will be able to rear your children in greater honor if they have ever seen that "mother" was regarded as your equal in mind as well as heart.

And when the great day comes, which shall judge us all, she will stand by your side then as now, and, content to bask in a radiance all your own, will bear evidence that yours has been a life, not only brave and honorable, but tender and loving, just and true.

St. Helena Notes.

EDITORS PRESS:—This usually quiet little village is now lively with many men and teams handling the immense crop of grapes, which is being transported to the numerous wine cellars in this vicinity. This is certainly the vine growers' paradise, for the crop they have and prices obtained has surely been a source of sudden wealth. The question has been asked me elsewhere, can 10 tons of grapes be produced on one acre? I now answer yes, and much more. Some of the citizens will not tell the full amount they have per acre lest their veracity be questioned, but will tell an inquisitive stranger—like your correspondent—to watch the boxes being filled at the rate of 1½ boxes to the vine, or 75 lbs., with from 650 to 700 vines on an acre. The amount may seem fabulous, but such are the facts, as witnessed on the ranch of Mr. Wheeler, a short distance south of town; and, in several other instances, the result seemed equally satisfactory.

The rain has done but little damage to the grapes as yet, though the cool weather retards the ripening, and is quite a drawback to the wine makers, as it hinders fermentation.

Real estate agents are at a loss to find land enough to show the swarm of purchasers who throng the country. Owners ask the very moderate price of \$1,000 per acre for good vineyard land in the valley, while that of inferior quality is rated as low as \$200.

L. L. W.
St. Helena, Napa Co., Oct. 4th.

It is said that the purchase of the Capay Ranch on Monday last for \$97,000 was the result of an agreement between Mr. Clarke and H. J. Glenn. The lands are to be divided, each paying a half for the land. It possesses some of the richest soil in the county, the bulk of which the Colusa land king will probably take as his portion.

The great current of Italian emigration has till now been directed to South America, and especially La Plata. In the Republic of Uruguay there are now about 450,000 inhabitants, and there land at Montevideo every year about 17,000 Italian emigrants.

California Chief Grain Cleaner.

We give on this page an engraving of the latest invention in the way of a grain cleaner, and which the inventor, Mr. T. S. Bayley, confidently names the "California Chief." Mr. Bayley has had a long experience in grain thrashing and cleaning apparatus, and now states that he has perfected a machine which succeeds beyond his anticipations. The arrangements are applied both to large cleaners to use with separators, and in the manufacture of small cleaners for hand power. The large cleaner is claimed to have a capacity of from 2,000 to 2,400 bushels per day. It weighs only 800 lbs., and takes less than one-half horse power to run it. It is well adapted to clean out the barley and oats, having over 12 square ft. of perforated zinc screens, with light draft of wind between the screens. The cheat screen is a corrugated rotary screen, presents over 40 ft. of surface, and cleans itself, and it is claimed to take out all the small seeds and cracked wheat. This screen is adjusted so that the discharging end can be raised or lowered while in motion, thus enabling the operator to clean the grain as desired. The nearer level the cylinder is kept, the more thoroughly it will separate the cheat and cracked wheat. Where other machines have to elevate the grain ten feet, this only elevates seven feet into the hopper, thus saving one-half the power. It is built on ordinary wagon-rack sills, will fit any wagon, and, being very light, can be used on a wagon that will not do for a heavy load. There being considerable room under the fan and rotary screen, leaves room enough for tool boxes and traps used about the thrasher. The lower hopper being immediately behind the wagon between the sills, it can be backed up under the auger spout of the separator at any desired angle, which gives a chance to take advantage of the wind. There are other points described in the circulars published by the agents.

The engraving shows the California Chief adapted to hand power. There are three sizes of the hand machine varying in capacity from

400 to 1,200 bushels of grain per day. They are made also for cleaning beans, peas, mustard, alfalfa, or any other small seed. The screen having a rotary motion, it is impossible for small seed to pass from one end to the other without falling through the screen. A blue-stoning attachment will be connected with the cleaners when desired, by which the wheat can be cleaned and blue-stoned with once handling. The California Chief Cleaners are offered by Brush & Co., 409 California street. The inventor's address is T. S. Bayley, San Leandro.

AGRICULTURAL NOTES.

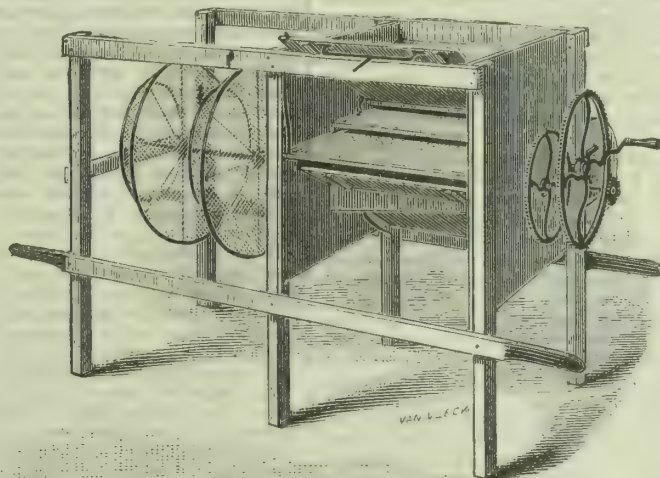
CALIFORNIA.

KERN.

THE GAME LAW.—Bakersfield Californian: The game law went out of force on the 15th ult., and will remain so until the 15th of March. The shooting season, instead of extending over six months, should not last more than three. The principal game animals and birds are too young when the season begins. Fawns, in many cases, still need the care of the does, and many die every year because deprived of maternal care too early. In this county the deer are disappearing so fast that in a few years more not one will be found. A man may hunt, even now, in localities where they were formerly numerous, for days without seeing one. The same is probably true of all parts of the State. If any of the nobler game, or indeed any game at all, is left in the State after a few more years have passed, it will only be because some more stringent means are taken to protect it. In some States, to guard against the result here indicated, the game laws are occasionally kept in force for three or more successive years, until it becomes plentiful. The time has arrived when this example should be imitated here.

LOS ANGELES.

THE FAIR COMMERCIAL.—The preparations



THE CALIFORNIA CHIEF GRAIN CLEANER.

for the approaching fair are now being pushed at all points. A full force of carpenters are at work on the pavilion, which will be ready for the reception of exhibits in ample time for the opening, which takes place on the 16th. At the park there is every sign of active preparation. A number of noted racers have already arrived, and others are dropping in nearly every day. The various kinds of stock which are merely for exhibit will not arrive until a day or two before the exhibition. This department, we are told, will be quite full. Mr. R. H. Hewitt, Secretary of the association, is working night and day to stir up a wide-spread interest in the exhibition, and we think we may safely promise the public that few industries, if any, in southern California, will fail to be creditably represented. Let us have a rich display of agricultural-horticultural products, as well as a full representation of handiwork at the pavilion, while the stock interests are well represented at the park. There is a rich field in southern California to be drawn from, and if there should be a deficiency in any department, it can be attributed alone to a lack of interest on the part of our people.

SANTA CRUZ.

SAN ANDREAS DAIRY.—San Jose Herald: The San Andreas dairy, situated about four miles from Watsonville, in Santa Cruz county, on the line of the Narrow-gauge railroad, presents to the eye one of the handsomest, as well as one of the busiest, scenes in this portion of the State. The tract of land contains 750 acres, and was purchased about a year ago by James Harkens, of San Francisco, at the cost of \$40,000. The land is all reclaimed land, and is seeded to Italian rye grass. There are 29 miles of ditches on the place, and the land is so situated that any field can be overflowed in one day, and in four weeks' time produces the best of pasturage. There are 300 milch cows kept on this place, all Durham graded cattle. The one industry of the place is that of butter making, and the arrangements made for carrying on that trade are as fine as any that can be found on the coast. A large barn, 40x250 ft., has been erected on the place with accommodations for 250 head of cattle and storage-room for from 300 to 400 tons of rye-grass hay. The cows are milked in this barn, and are fed morning and night on sugar beets and hay. The butter

manufactured at this place is branded "Diamond G." It is entirely free from all coloring matter, the green pasture afforded by the ranch giving the butter a better color than can be produced by any chemical coloring. Mr. W. V. Goffey, a practical butter maker, has leased the San Andreas dairy for a long term, and is devoting his entire attention to the work, superintending the care of the stock and attending wholly to the manufacture of butter. From October 1, 1881, to October 1, 1882, Mr. Goffey shipped to his agent, James Hart, grocer, of this city, over 42,000 lbs. of butter, more than 115 lbs. per day. The place is kept in the most perfect order, there being neither a weed or stalk of mustard to be found on the entire ranch. As may be seen from the large number of cattle fed on so small a ranch, the nature of the soil must be very productive. Mr. Goffey has harvested from one field three crops of rye grass and hay, averaging from three and a half to four tons per acre each crop. The rye grass is a perennial, and adapted to low moist lands. It is said to make better hay or pasture, and to be more productive than the alfalfa. Mr. Goffey has been in San Jose this week making arrangements with James Hart, by which he becomes agent of the "Diamond G." butter. Upon his return to Pajaro valley, Mr. Goffey took with him a fine thoroughbred Durham bull which he purchased in San Jose.

SONOMA.

THE VINEYARD AREA.—Petaluma Courier: An interesting fact showing the progress we are making in developing the resources of Sonoma county, is the steady increase, year by year, in the area of our vineyards. R. A. Thompson, Esq., has in course of preparation an exhaustive paper setting forth the varieties and acreage planted in each township since 1879 up to and including 1881 from which we are permitted to furnish the following: Acres of vineyards 1879, 7,248; new vines planted that year, 494; planted in 1880, 1,353; planted in 1881, 2,499; total average, 11,594. In addition, the planting of 1882 will

The demand for these big Normans is increasing, and it is every day becoming better known that Petaluma is the place to find them. At two and three years of age a Duke colt will bring \$250 to \$300. It will cost just as much to raise a three-year-old steer, or plug horse, which will only bring \$50 to \$75. It will be seen at a glance that the profits on the big Norman are out of all proportion with the profits on the plug.

TULARE.

TROUT IN MONARCH LAKE.—J. W. A. W. in Visalia Delta: Some readers may remember that, in one of my mountain letters last year, I told of the interesting experiment tried by Messrs. J. N. Wren, W. A. Ward and M. Lavelle, to transplant the fine golden or "rainbow trout" from Little Kern river to the two large lakes in Monarch canyon, at the base of Miner's peak, Mineral King district. As these splendid fish are brook trout rather than lake trout, it was somewhat doubted whether they would thrive in these lakes, especially at their altitude of between 10,000 and 11,000 ft. above sea level. It is a pleasure to report that this interesting and useful experiment has proved a complete success. Mr. Ward and Mr. Wren both inform me, that not only have the fish lived through the winter, but that they have spawned, and now there are large numbers of young ones in both lakes. Some of these fish have even left this lower lake, and worked their way far down the small stream, which flows down Monarch canyon, and empties into the East Fork of Kaweah river, in Mineral King flat. They probably cannot, however, pass alive over the falls—about 50 ft. high—just above the flat. Yet they will have several miles of a mountain stream in that grand canyon, in which to disport themselves. A wire netting will have to be placed in the outlets of the two lakes to keep the fish in their intended limits. As nearly 200 fish were placed there in the summer of '81, there are likely to be thousands of golden trout in Monarch canyon next summer. This successful effort deserves to be tried elsewhere.

PERSIAN'S CLING.—Delta: The largest peach for the season brought to Hanford is a handsome white cling. It is from a tree planted two years ago by Mr. F. A. Blakeley, in his yard. It weighed over 12½ ozs., and measured around the largest way from stem to point 11½ inches, and 11 inches the largest way. It is an excellent peach for canning, and one advantage is, it is a late peach, ripening the first week in October. It is borne by a tree obtained from the nursery of I. H. Thomas & Bro., near Visalia. This tree, though only three years from the seed, has produced 25 lbs. of fine fruit for canning. Mr. Blakeley informs us that it produced one peach larger than the one above described, but, unfortunately, it was used for canning before it was weighed. Following Downing's valuable work on "Fruit and Fruit Trees," this is most likely a seedling from "The Heath or White English" Cling. Downing says that this peach, which he describes as "the most superb and most delicious of all late clings," is often produced from the seed without variation. The variety in Tulare county is known by the local name, "Persian's cling," from Mr. Persian, an old citizen of the county.

TUOLUMNE.

EDITORS PRESS:—If this were spring in place of fall, I should say that we had splendid growing weather. Stock of all kinds are feeding on the young grass, and the prospect for more rain is certainly good. Plowing and seed sowing is the order of the day. Sun-dried grain received a damper. It brings driers to the front. Many out-of-the-way places depended entirely upon the sun. More especially is this the case with the fig in the lower sections of the thermal belt. They are pretty well secured, but the higher altitudes will be unable to secure the crop. Hence, dried figs must be somewhat scarce and high.—JOHN TAYLOR, Chinese Camp.

YOLO.

BRUSH DAM BURNED. Sacramento Bee: Last Friday night the brush dam erected two years ago to fill the gap in the levee at the English break, three miles above Washington, Yolo county, and prevent an overflow there, was found to be on fire. About 15 citizens, among whom were Messrs. Pixley, Hubbard, Bentley and Eatrian, turned out to fight the fire, and succeeded in saving 100 ft. of the north side of the structure and about 15 ft. at the south end. The dam for the distance of 550 ft. was destroyed. It is believed that the fire was kindled by an incendiary. And these are the dams that engineers advised as capable of protecting the valley from slickens! Dams that when dry any rascal can destroy in an hour.

NEVADA.

RENO NOTE.—EDITORS PRESS: This flourishing town certainly has a bright future. It now enjoys a large trade derived from the agricultural regions and mining districts surrounding it. An immense amount of freight is handled and transhipped from here, it being the main distributing point of supplies for a large section of country both north and south. The Oregon & Northern Railroad, now being built, will soon be a great additional advantage, as a great part of the Eastern Oregon and Northern California freight will be taken over that line instead of being sent through to the seaboard by way of San Francisco. The road is now finished to Oneida, 30 miles distant, and has all the business it can do.—WOOD.

TUCSON, A. T., wants a Territorial museum located there.



The Bairns a' at Rest.

There was din, as ye ne'er heard the like,
 'Mang our bairns the nicht roun' the fire-en;
 A' were busy as bees in a birk;
 A' were blithe as the birds in the glen.
 What wif' castles and kirks built wif' stools,
 What wif' rhyming a' spellings a' roun',
 What wif' playing at ball and at boole—
 But there's peace now, they're a cuddled doun.

Now the bairns are asleep, and a calm
 Has fa'n roun' like a soft gloaming shade.
 And a kind hand, unseen, sheds a balm
 O'er their wee limbs in weariness laid.
 On their fair chubby faces we see
 Sic a heavenly sweetness o' rest,
 That ye'd doubt but they'd borrow'd a wee
 Frae the far-awa' realms o' the blest.

Like wee birds in a nest do they cower,
 By ilk other so cooey and kin;
 O, their bed's like a rose-bed in bow'r,
 And our glances o' love on it shine.
 O, awa' wif' your glairy gowd crown,
 Frae the cunning cald fingers o' art!
 But, hurrah for the bairns that hae grown
 Like a living love-wreath roun' the heart!

Ha, let's wheest! † As we warm in their praise,
 We micht waken some flaxen-hair'd loon;
 See, already shot out frae the claes
 Just as lithe a wee limb's in the toon!
 Hap it o'er, hap it o'er. Bonnie bairn,
 Whaur awa' may that wee footie pace?
 The richt gait o' the world's ill to learn,
 And fair fortune is fickle to chase.

There are hid 'neath these lashes so long,
 The full een that are stars o' the day;
 There lies silent the nursery song
 On these lips fresh as mornings in May;
 And there beats in these bosoms a life
 More o' promise than spring-buds are giv'n,
 That must meet the world's favor or strife,
 And shall make them or mar them for heav'n.

Will ye guard them, ye angels o' peace,
 In this haven, in the curtains o' nicht?
 Will ye guide them when dangers increase,
 Hewing out in their day-dream fight?
 For O, whaur, frae the bairn's so wee
 To the bairn's the biggest o' a,
 Is the ane we'd first part wif', an' see
 To a bed in the mools? taen awa'?

Good Words.

*Marbles. †Whisper. ‡The grave.

The Power of Wisdom.

[By MISS CLARA DEXING.]

[Delivered before the State Grange of California at its annual session of 1882.]

Education is a subject of universal interest, and one which has absorbed the attention of the world for ages. A person possessing a good education has always been looked up to with admiration by the masses. The wise men of Greece have wielded a power, such as no king or general were able to wield; and their influence has marched down the steps of time and walks with the thinking population of the world to-day. Every man of wisdom adds his mite to turn the balance of thought in favor of universal education for the future.

Poets have written, and bards have sung its praises until the universe has become imbued with a desire for learning. The wand of the fair goddess Minerva, that used to wave for a favored few, is now stretched forth by her loving, protecting hand to all who are willing to work for the reward of her gracious smile and the respect of their fellow men.

Wise King Solomon has said: "Wisdom is the principal thing; therefore get wisdom; and with all thy getting, get understanding." Wisdom has a broader meaning in the present than in any previous age. Broad intellectual culture is becoming a necessity to all people in every walk in life. Nothing has caused this advance along the line of progress more than the system of free schools in the United States. If every boy and girl has not, at least, an ordinary education, it is his or her own fault. As you educate the masses, so do you advance civilization. When our ancestors established public schools throughout the land, thus giving every child an inalienable right to a common school education, they were mindful of the needs of the nation. They knew if the people were to govern themselves, they must do it understandingly. The legislators were to be chosen from the masses, hence the populace must be one of intelligence, that those who were chosen to represent them in the halls of Congress and the legislatures, might be able to do it with credit to themselves and the districts which honored them with their proxy. They also desired that the people should comprehend the laws which the law-makers might provide for them to abide by; and when not acceptable to the majority they might be changed by the vote of an intelligent people.

Where has there been a nation so young that has commanded so much world-wide respect as the United States? What is the cause but the integrity and broad intellectual culture of her people? The old world looks to us for the supply of the deficiency of her table and inventive powers. Is it right for us to allow her uneducated subjects who come here to govern us through wire-pulling politicians by the preponderance of their vote? Nowhere has civiliza-

tion made more rapid strides than here, where education is the heritage of all.

The king said: "With all thy getting, get understanding." Wisdom and theoretical knowledge will be of no use to us if we are unable to make practical use of it in gaining a livelihood for ourselves, and benefiting our fellow creatures by deeds of kindness. The heart must be educated as well as the mind. It will be useless if the necessary daily tasks are to be neglected. Learning should teach us how to lighten the tasks and simplify the methods of performing them. Persons who think themselves too highly educated to make bread or shovel a load of sand, or despise honest manual labor, have not been truly enlightened. We often find upon becoming acquainted with such people that they are not so wise as they think themselves.

The man who shuns another because he earns his living by the "sweat of his brow," is narrow-minded, and narrow-mindedness is caused by little education, and allowing one's self to think in one channel without noticing that there are other channels of thought quite as good, if not better.

The woman who despises housework has been reared with false ideas of ladyhood and narrow ideas of life. No matter what other spheres woman may be called upon to move in, house-keeping will devolve upon her at some period of her existence. How much easier it is to assume the charge of her household and servants if she possesses a complete knowledge of all its departments. The greatest lady of all is she who reigns queen in both kitchen and drawing-room. If we are to have healthy, active minds, we must have vigorous bodies. And what greater pride and happiness can we have, sisters, than to be conscious of the fact that it is through our superior knowledge of the culinary art, cleanliness and good management that the angel sweet content reigns in our homes, and those nearest and dearest to us have attained eminence in some of the walks of life through our influence. Many think that brains are not needed in a trade, farming or house-keeping. But no matter where we are placed, good brains, and educated ones, too, are a necessity, if we would have life a success and living a pleasure. Therefore, Patrons and farmers, give your children as high an education as possible. Send them to the public schools, universities and seminaries. A man with a thorough education is fitted for any station, and you know not where he may be called to stand. You may think Latin and Greek useless to them; but if men of science and wisdom are going to use them in their callings, other men need them to understand the teachings of the learned. Give your girls an equal chance with your boys. So many places have opened their doors to woman, that now she may stand on any plane and rise to any eminence, and be a perfect companion for her brother, enjoying what he does, and helping him with her ready wit and quick perception.

To children whose parents are unable to advance them as they desire, I would say: Persevere and work for your education, gaining it little by little. Those who have to labor most, are often the ones who appreciate it best, and are the ones to rise to places of honor. An example well known, and appreciated by all, is that of our lamented President, James A. Garfield.

While children are becoming proficient in book lore, they should be taught by degrees to perform various duties about the home for the purpose of strengthening their bodies and giving them command of life's daily tasks. They may be taught proficiency in these things in such a way that they will not know how or when they learned. A good education is conducive to good morals, and good morals are necessary for us to be noble men and women, "with a heart for any fate." Happiness reigns in households where each evening finds the family resolved into a sort of literary club, reading and discussing all subjects—political, historical, or whatever may be absorbing the public mind. The power of wisdom is ever marching on and drawing men to higher realms of thought and grand achievements. The instigators of the Order of Patrons of Husbandry recognized this power and supplied the great need of the agricultural classes by bringing the farmers together and drawing them out of themselves in the Grange-room. The Grange is educating everyone of us. It is impossible for us to converse with one another without finding some germ of thought worth fostering and dwelling upon. For this reason, if no other, the Grange is a great benefit to the farmer and, consequently, to the country at large.

We need feel no discouragement at our failures as long as the beautiful words of our beloved home poet remain a part of our language and vibrate upon our heart strings:

In the world's broad field of battle,
 In the bivouac of life,
 Be not like dumb, driven cattle;
 Be a hero in the strife!

Trust no future, howe'er pleasant;
 Let the dead past bury its dead.
 Act—act in the living present;
 Heart within and God o'erhead.

Lives of great men all remind us
 We can make our lives sublime,
 And, departing, leave behind us
 Footprints on the sands of time.

Footprints that, perhaps, another,
 Sailing o'er life's solemn main,
 A forlorn and shipwrecked brother,
 Seeing, shall take heart again.

Let us, then, be up and doing,
 With a heart for any fate;
 Still achieving, still pursuing,
 Learn to labor and to wait.

A Plea for the Children.

[Written for RURAL PRESS by REV. DR. SNOWDEN.]

What shall we do with the wild, noisy, restless, mischievous boys and girls? Like a vessel on the sea of life, they need a compass, an engine and a rudder. They should have "wisdom which entereth into the heart," and "knowledge which is pleasant to the soul." If they have such, "discretion shall preserve them and understanding keep and deliver them from the way of the evil man. Thus they will walk in the way of good men and keep the paths of the righteous."

What the youths need to-day is to have distilled into their susceptible and retentive minds lessons of Christian virtue, giving a proper bias to their impulses, and curbing their impetuous dispositions. Thus armed and equipped for the battle of life, they can mingle with the impure and vicious, as they are sometimes compelled to at school and other places, and, by comparison, weigh that which is good and evil, and be enabled to accept the former and discard the latter.

Locke says: "If we would rightly estimate what we call good and evil, we shall find that it lies much in comparison." Comparison, then, is certainly an important factor in the formation of character. Many are made better by that which is positively evil. Evil frequently has a repellent effect. For instance, children of intemperate parents, notwithstanding their hereditary tendencies, have been temperate, and all their lives have waged an unrelenting warfare upon the giant disturber of the world, the wholesale murderer of men, women and children.

Children are the material of which men and women are made. They will take our places in life, enter the various vocations and professions, make laws, assume the reins of government, sit in Congress, in the Senate of the United States, while many may aspire to the dignity of the Chief Magistracy of the great republic. Shall they excel their parents in their march to honor and greatness, become the noblest specimens of the race, the highest type of men and women? or shall they be as "broken cisterns"—social, moral and mental wrecks in life, a curse to themselves, a reproach to their parents, a burden and pest to the State?

If we would have them like the former we must begin at once to instill good principles into their minds and hearts, give them a sound moral and literary education, and lay broad and deep the basis of a symmetrical character which will be a source of joy, a fountain of delight, and a perpetual recommendation to them.

Yes, begin at once to thus shape and mold them. Don't let us wait until they are grown, flattering ourselves that we can then speak the word or administer the rebuke which will make them what we would have them be.

We were summoned to the bedside of a very sick child which was supposed to be dying. Mother and friends were weeping. Something offended a five-year-old brother of the little sufferer; which aroused his uncured temper and caused him to break forth into fearful blasphemy. No one rebuked him, and when we called the attention of the aged grandmother to him, she calmly said: "When he grows up we will whip that out of him."

If they wait until the boy grows up, to straighten his crookedness, they might as well attempt to dip the Pacific ocean dry with a thimble. A child may turn the mountain streamlet, but when it runs into the valley and becomes a swollen river, no power can stay its impetuous progress.

In the early and proper instruction of the children lies the bulwark of their safety. To effect this desirable end there is nothing more powerful and salutary than wholesome parental example. Moral and mental instruction, backed up by wise, judicious and consistent lives of the parents, is a powerful incentive to good.

Many esteem very lightly the solemn and responsible duties of parents. They pay much more attention to the raising of fine calves, fat pigs, and other blooded stock, than to the training and proper discipline of those who sprang from their loins, and who must live forever.

God says to the parent: "Take this child and nurse it for me, and I will give thee thy wages." He also anoints parents, as priests, over their children, saying: "Fathers, provoke not your children to wrath, but bring them up in the nurture and admonition of the Lord."

If the human soul is more valuable than the whole world, we should do all in our power to save it. There is no relationship so tender, and none more responsible, than between parent and child.

"What will you drink?" was asked a young man in the presence of his father. He replied: "I will take what father takes." Yes, boys walk in the footsteps of their parents, and are thus often led to ruin.

A mother was famous for her

Fine Brandy Peaches

Her son, 14 years of age, had free access to them, and it was not long until he formed an ungovernable appetite for strong drink. In four years the hellish work was done. Just before he expired, he said: "Those infernal brandy peaches, mother, gave me the first start on the downward road. Remember that,

mother." Was it strange that the heart-broken mother, filled with remorse and unutterable agony, fell on her knees at the open grave of the ruined son, and, in wild despair, cried: "Oh, my precious boy! Lost, lost, lost! Sent to perdition by your mother's hand!" and swooned away. When will parents take warning? When will they cease to imperil the life and character, the body and soul of those whom they were instrumental in bringing into the world, and whom they should love?

May it be said of all parents: "For I know him, saith the Lord, that he will command his children and his household after him, and they shall keep the way of the Lord to do justice and judgment."

San Jose, Cal., Oct. 6, 1882.

The Light of the Sky.

Capt. Abney lately read a paper before the British Association on the light of the sky at high altitudes, based upon observations made in the Alps on the Riffel, at a height of 8,500 ft. His investigations proved that in high altitudes the light of the sky diminishes very much, so as to make photography difficult, and that it is only a tenth or a twentieth of that which is found on the surface of the earth. There was a remarkable absence of the rain-band spectrum. On the Riffel he only saw it once, and that was during a shower. The solar spectrum was the same on the Riffel as in London. He did not believe that aqueous vapor was present in the upper region; at all events, in the form in which it exists below. In the red part of the spectrum he found that the benzine and alcohol which had been found to exist in the atmosphere actually increased in strength in the higher regions, and he could only suppose that benzine and alcohol are not of terrestrial formation, but come to us from space. Dr. Glaisher said he had never failed up to five miles in getting a deposition of vapor, and there was no part of the earth's atmosphere probably in which there was no aqueous vapor. At a height of seven miles in a balloon he had seen cirrus clouds still higher, and there was a great difference between the state of the atmosphere in a free balloon and on a mountain side. Prof. S. P. Langley, of Allegheny, Pennsylvania, in a paper on the distribution of energy in the solar spectrum, stated that he had investigated the infra-red spectrum at a height of 13,000 ft. in a very dry region, and found that it extends very much farther than had been mapped heretofore. The wave lengths of the visible parts of the red end of the spectrum are only one-fourth of those in the infra-spectrum, so that three-fourths of the energy were invisible. His observations proved the existence of great gaps in the spectrum, and he was inclined to support Abney's conclusions on the existence of benzine and alcohol in space.

MEN of this age are not content with the success and achievements they have already made. We have now more rapid transit both by land and by sea than ever before, and yet it is all too slow for us. We can now accomplish the distance between New York and Liverpool in from six to eight days. Less than fifty years ago the time required was twice as great; and who knows but that fifty years hence it will be reduced approximately as much. It is now proposed to lessen the time of sailing at least two days by building a line of railroad through Nova Scotia and New Foundland, there to connect with a new line of steamship which will run to the western shores of Ireland. By this route the sea voyage will be but little over 1,000 miles, and the passenger from Chicago and the West will gain in time at least four days. A railroad company has already been formed, and will commence the building of the line of railway through the northeastern portion of this continent next year. The line as surveyed is said to possess scenic, beauties and attractions equal to that of any other road in the country. The project is a feasible one, and, no doubt, will meet the approval of the American and European people.

TO PREVENT THE SKIN FROM DISCOLORING AFTER A BLOW OR FALL.—Take a little dry starch or arrowroot, and merely moisten it with cold water, and lay it on the injured part. This must be done immediately, so as to prevent the action of the air upon the skin. However, it may be applied some hours afterwards with effect. I learned this when resident in France. It may already be known here, but have met with none among my own acquaintances, who seem to have heard of it. Raw meat is not always at hand, and some children have an insurmountable repugnance to let it be applied. I always make use of the above when my children meet with an accident, and find that it keeps down swelling, and cleanses and facilitates the healing of scratches, when they happen to fall on the gravel in the garden.

ANTIDOTE FOR WASP OR BEE STINGS.—Mr. Plant, of Stonham Aspel, Suffolk, writes to the Suffolk Chronicle: "During my life I have heard of many persons having been stung—some even to death—by wasps, etc. I have shared in the suffering to a great extent. On one occasion I was dreadfully stung by a wasp on my tongue and arms. I have invariably found the earliest application of hot water to instantly nullify the sting and prevent further suffering. I am happy to say many others who have tried this simple thing have found a perfect cure."

From the Farm House.

(Written for RURAL PRESS BY MAID-OF-ALL-WORK.)

The first rains have dashed in at the farm—a little early, to be sure, and, perhaps, with unfavorable premonitions; but who can have the heart to resist their fascinating ways? How sweet the breath of the clouds crowding over the hills! How refreshing the smell of the rain creeping up the dry fields, washing the dusty leaves of the great oaks, cleaning the fences, the barns and the dry-house roof! The housekeeper puts out her dish-pan to see how soft water feels again; the dog shakes himself with satisfaction as the soft drops rinse the burs out of his silky ears; the poultry puff out their feathers to the cleansing shower, and scratch complacently for worms. Only the cat shakes his paws dubiously, and hunts for the cleanest way to the house. When the sun shines out everything smiles with cleanliness. What a fine time to wash windows, trim up flower beds and clean yards. Let the smoke of burning bones, old boots and waste material of every kind preclude the air till there is no more of such abominations to be found anywhere. And the wagons and buggies have had a bath. Now is the time to give them their annual coat of paint, that they may live and be useful to a ripe old age. But spare the buggies till we have all had a ride, for now is the "Indian summer" of our content. The country roads are charming, the air is clear, the hills look near as in spring time, and the hint of green through the stubble is refreshing. It takes a great deal to interest some people. A writer comes from the East to write up our much over-estimated State. He has just finished a brilliant paper on Mexico. He has over-done himself; he is weary; he is homesick; he gets dust in his eyes and sees California as it is. He calmly describes its soil, its hills, its houses without a hint of coloring. Should we describe a rose in plain botanical terms, we have no rose at all. It has lost its gorgeous presence, its full, ripe beauty, its fragrance, its velvety touch.

Alas! Poor Rose!

California, without her exquisite air, her pale tints of coloring, her mists, her low white clouds, her floating shadows, and her placid climate, is stripped indeed. California needs a new artist who could paint in browns and yellows without continually pining for his greens and sighing for his vermilion. Eastern tourists must excuse us that we'll-treat the landscapes by an excessive use of white paint. Remember that our brown fields still frame our dwellings a part of each year. A few years later, when evergreen lawns surround each farmhouse, and our red and white cattle graze knee deep in evergreen millet, then our buildings will begin to appear in stone color and tones of brown. California is like the many truly great and good people who live in it. Its best qualities develop under acquaintance. What is more lovely than our usual Octobers? November goes east for a green robe, and December will probably send us in the house for a season to build the fire of comfort and light the lamp of content.

Just before the first rains, I heard a new twittering skyward, and looking out, I saw that the old trees in the farmyard was witnessing a return of its winter friends. First a few sable advance guards hopped about on the topmost boughs taking a survey of the premises. This meant a

Return of the Blackbirds.

Soon a dark cloud appeared in the east, sweeping up and down, darting sideways, spreading and contracting without a break, like a company on drill. With a signal every wing would close and every head be turned downward, and again with wonderful unison every wing would outspread and every bird soar upward. Suddenly the flock darted down from a giddy flight above and took overwhelming possession of the whole tree. Such chattering, such darting about, a flank movement to the windmill, a review on the fence, and they were settled for the winter.

Since our spell of wintry weather there is a new and alarming interest evinced in the affairs of the table. We conclude that three meals a day is the only rational plan of living. We return with enthusiasm to the dishes we decided were not fit to eat in the spring. The granger brings honey and pumpkins from the store, the young people cry out for preserves and the house wife cooks up a pot of beans. It not being exactly the season for fresh pork, the beans, by the way, are prepared after a hygienic plan, and they are excellent. Scald them thoroughly with soda, renew with fresh cold water and let them boil till they are soft enough to eat. Put in salt, a dash of pepper, a cup of thick cream, a tablespoonful of butter, and let them stand half an hour in a hot place. They can be eaten by the dyspeptic and will be slighted by none.

BITING THE NAILS.—It is a bad habit for one to get into, for the reason that those who become addicted to it forget themselves, wherever they may be, and when embarrassed they are especially apt to indulge it. The injury which is done in most cases to the fingers is one of deformity—who likes to see the stubby, uncouth finger-ends which inveterate nail-chewers show? We have the impression that the practice has a mischievous effect on a person's mouth, distorting its shape, perhaps thickening the lips, possibly giving an abnormal tendency of growth to the jaws and teeth.

Young Folks' Column.

Good Morning.

"He wakeneth morning by morning."—Isa. i., 4.

"O, I am so happy," a little girl said, And sprang like a lark from her snug little bed: "It's morning, bright morning! Good morning, papa O, give me a kiss for good morning, mamma! And only just look at my pretty canary, And hear how he's singing good morning to Mary; The sun, too, is shining right into my eyes, Good morning to you, Mr. Sun, as you rise So early to waken my birdie and me, And make us as happy as happy can be."

"And happy you may be, my dear little girl," Said mother, as gently she smoothen'd a curl; "As happy can be; but think of that One Who waken'd this morning, both you and the sun."

The little one turned her bright eyes with a nod, "Mamma, may I say, too, good morning to God?" "Yes, dear little darling, most surely you may; So kneel, as you do in the morning to pray."

Then solemnly kneeling and lifting her eyes, She gazed up earnestly into the skies; And, with her two hands nicely folded together, As gently she leaned on the lap of her mother, "Good morning, dear Father in heaven," she said, "I thank Thee for watching around me in bed, For taking good care of me all the dark night, And waking me up with this beautiful light."

An angel looked down in the sunshine and smiled, Beholding and hearing that beautiful child, While father and mother adored the grace By which, in dear Mary, God perfected praise, And thought on the words of the Son of His love, "Of such is the kingdom of heaven above."

—Fraternal Messenger.

Stories About Animals.

THE ELEPHANT.—The elephant of the Jardin des Plantes at Paris, says Mrs. Lee, used to play his visitors a trick which could not have been thought of but by an animal of much intelligence. His house opened upon an inclosure called the elephant's park, containing a pond, in which he would lay himself under the water, concealing every part of him except the very end of his trunk, a mere speck, that would hardly be noticed by a stranger to the animal's habits. A crowd would often assemble around the inclosure, and, not seeing him in it, would watch in expectation that he would soon issue from his house. But whilst they were gazing about, a copious sprinkling of water would fall upon them, and ladies and gentlemen, with their fine bonnets and coats, would run for shelter under the trees, looking up at the clear sky and wondering whence such a shower could come. Immediately afterwards, however, they would see the elephant rising slowly from his bath, evincing, as it seemed, an awkward joy at the trick that he had played.

THE SQUIRREL WHO LOVED MUSIC.—I have just read about a sportsman, who, one day, in the woods, sat very still, and began to whistle an air to a red squirrel on a tree. "In a twinkling," says he, "the little fellow sat up, leaned its head to one side, and listened. A moment after, he had scampered down the trunk, and when within a few yards, he sat up and listened again. Pretty soon he jumped upon the pile of rails on which I was, came within four feet of me, sat up, made an umbrella of his bushy tail, and looked straight at me, his little eyes beaming with pleasure. Then I changed the tune, and chut! away he skipped. But before long he came back to his seat on the rails, and, as I watched him, it actually seemed as if he were trying to pucker up his mouth to whistle. I changed the tune again, but this time he looked so funny, as he scampered off, that I burst out laughing, and he came back no more. I had much more enjoyment out of this squirrel than if I had shot him."

THE ALLIGATOR AT HIS MEALS.—An alligator's throat is an animated sewer. Everything which lodges in his open mouth goes down. He is a lazy dog, and, instead of hunting for something to eat, he lets his victims hunt for him. That is, he lies with his great mouth open, apparently dead, like the possum. Soon a bug crawls into it, then a fly, then several gnats and a colony of mosquitoes. The alligator doesn't close his mouth yet. He is waiting for a whole drove of things. He does his eating by wholesale. A little later a lizard will cool himself under the shade of his upper jaw. Then a few frogs will hop on to catch the mosquitoes. Then more mosquitoes and gnats will light on the frogs. Finally a whole village of insects and reptiles settle down for an afternoon picnic. Then all at once there is an earthquake. The big jaw falls, the alligator blinks one eye, gulps down the whole menagerie and opens his great front door for more.

A SPORTING HARE.—A French paper publishes an account of a practical joke which, unlike most practical jokes, has the merit of being amusing. An enthusiastic sportsman went to a breakfast given at the commencement of the shooting season. The talk was of game, when suddenly in rushed a servant exclaiming to the host that a hare had been seen moving about on the lawn. Out went the enthusiastic sportsman, gun in hand, fired at the hare and missed him. The hare, scratching its nose, stood up on its hind legs, presented a horse pistol at the sportsman and fired in return. No one was hurt; but the sportsman was naturally astounded, until at last it was explained to him that the hare was a performing animal which had been hired from a neighboring show. The sportsman's charge, had of course, been tampered with by the confidential servant.

GOOD HEALTH.

Patent Medicines.

All patent medicines are not good, nor are all of them bad. Some of them are composed of excellent materials, and are very valuable; a few, comparatively, are either really useless or dangerous. Far the most part of these compounds are based substantially on well-known formulas, the chief distinguishing feature being in coloring or flavoring. The money value of any one of these preparations represents the business skill of advertising and pushing.

For our part, we fail to see why the "Sarsaparilla," or "German Syrup," or "Catholicon," or other line of trade is not just as dignified and advantageous to the public at large as the manufacture of soda fountains, or lager beer or any of the many branches of employment that gratify men's tastes, or their whims or notions. The following figures will show the numbers of the several kinds of these mixtures or compounds:

There are fully 2,000 different corn cures sold by dealers. The number of balms for the lungs, rheumatism, consumption, etc., is 46; balsams, 96; stomach bitters, 106; cordials, 48; catarrh, asthma, skin, cough, rheumatic, heart, cholera, dyspepsia, ague and other cures, 137; drops, 48; elixirs, 77; extracts, 131; hair dyes, 23; hair tonics, 16; liniments, 151; lotions, 34; lozenges, 57; hair oils and cod liver oil preparations, 150; ointments, 87; pills, 312; plasters, 157; powders, 163; various remedies, 142; different kind of hair restorers, 68; salts, 29; salves, 75; snuff, 18; soaps, 129; specifics, 66; syrups, 188; tablets, 27; tonics, 51; troches, 32, and medicinal waters, 75. Besides these articles there are many others with extraordinary names, and to be a good salesman in such an establishment, it is necessary to remember all of the 5,000 different articles in the place.

RELATION OF BRAIN WORK TO BLOOD SUPPLY.

—Even if it is true that the larger and healthier physique affords more blood for brain use, it does not follow that the larger the supply the greater the amount of brain work possible. The argument assumes that the brain has no limit to its activity, except in the quantity of blood that can be prepared for it. But it needs no scientific education to know that there are other influences which limit the thinker's activity, and that these limitations are somewhere in the mysterious recesses of the brain, or in the forces of which the brain is the organ. The physical health of the brain worker may be perfect, his digestion unimpaired, his power to assimilate food the same, and yet he may not be able to concentrate his thoughts or carry on a complicated train of reasoning. The defect is not in his body; that is as healthy as ever; nor is it in any of the processes of blood making—these go on as before. The trouble lies in the brain itself, whose capacity for work is measured by some hidden standard of its own, and which gives warning when a cessation of brain work is imperative. The body is a furnace whose power of consuming fuel is greater than the capability of its boiler, the brain, to generate power. To keep the latter in good working condition, something more is necessary than building and feeding the fires. A supplementary but important consideration is, whether the steam beyond a certain point will not be productive of unpleasant consequences in the form of an explosion.—*Popular Science Monthly.*

FRIGHTENING CHILDREN.—Nothing can be worse for a child than to be frightened. The effect of the scare is slow to recover from; it remains (sometimes) until maturity, as is shown by many instances of morbid sensitiveness and excessive nervousness. Not unfrequently fear is employed as a means of discipline. Children are controlled by being made to believe that something terrible will happen to them and punished by being shut up in dark rooms, or by being put in places they stand in dread of. No one without vivid memory of his own childhood, can comprehend how entirely cruel such things are. We have often heard grown persons tell of the suffering they have endured, as children, under like circumstances, and recount the irreparable injury which they are sure they then received. No parent, no nurse, capable of alarming the young, is fitted for her position. Children, as nearly as possible, should be trained not to know the sense of fear, which, above everything else, is to be feared in their education, early and late.

SUNSHINE AND SLEEP.—Sleepless people—and they are many in America—should court the sun. The very worst soporific is laudanum, and the very best, sunshine. Therefore, it is very plain that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They shut the sunshine out of their houses and their hearts, they wear veils, they carry parasols, they do all possible to keep off the subtlest and yet most potent influence which is intended to give them strength and beauty and cheerfulness. Is it not time to change this, and so get color and roses in our pale cheeks, strength in our weak backs, and courage in our timid souls? The women of America are pale and delicate; they may be blooming and strong, and the sunlight will be a potent influence in this transformation.—*Rural New Yorker.*

DOMESTIC ECONOMY.

Celery as a Cure.

The habitual daily use of this vegetable is much more beneficial to man than most people are aware of. A writer who is familiar with its virtues says: "I have known many men and women who, from various causes, had become so much affected by nervousness that when they stretched out their hands they shook like aspen leaves on a windy day, and by a moderate daily use of the blanched footstalks of celery as a salad they became as strong and steady in limb as other people. I have known others so nervous that the least annoyance put them in a state of agitation, and they were in constant perplexity and fear, who were also effectually cured by a moderate use of blanched celery as a salad at meal time. I have known others to be cured of palpitation of the heart. Every body engaged in labor weakening to the nerves should use celery daily in the season and onions in its stead when not in season."

To this we may add that a prominent New York druggist draws in winter from his soda fountain a hot extract of celery, mixed with Liebig's meat extract, under the name of ox-celery. It is a nourishing drink at lunch time, far better than coffee or tea, and is doing a great deal in this neighborhood to promote temperance. We give celery almost daily to our canary birds, and it cures them of fits; they are little animals with very delicate nerves, easily frightened, and therefore they need such a remedy very much, and the relish with which they take it is a proof that their instinct guides them to eat what is good for them. A manufacturer of perfumery of our acquaintance, some years ago, commenced to prepare an extract of celery seed, put up in bottles, and intended to give strength to old or exhausted persons who, by over-indulgences, have reached such a state as to require restoratives.—*Journal of Chemistry.*

POLISHING WOODWORK.—Soft woods may be turned so smooth as to require no other polish than that which can be given by holding fine shavings of the same wood against them in the lathe. For polishing mahogany, walnut and some other woods, the following formula is given: Dissolve beeswax by heat in spirits of turpentine until the mixture becomes viscid. Apply with a clean cloth, and rub thoroughly with another flannel or cloth. Beeswax is sometimes alone used. For work in position, it must be melted and applied and rubbed as above. For work in the lathe, it can be applied by friction, the slight amount of wax melted being sufficient for the polish. The work should be thoroughly rubbed. Mahogany may be polished by rubbing first with linseed oil, and then by a cloth dipped in a very fine brick dust. Some hard woods have a natural polish, and do not require a polishing medium. A fine gloss can be produced by rubbing with linseed oil, and then holding shavings or turnings of the same material against the work in the lathe. A very perfect surface can be obtained with glass-paper, which, if followed by hard rubbing, will give a beautiful luster. Luster can also be given to carefully finished surfaces by applying a small quantity of thinned varnish, shellac or "fillers," by a cloth, and carefully and thoroughly rubbing.—*Comstock's "Interior and Interior Details."*

PINEAPPLE PREPARATIONS.—Over the peelings of two small pineapples, pour one quart of boiling water, which allow to steep until cold, then sweeten to taste, strain and bottle, corking tight, tying down the cork, and lay the bottle on its side. If placed in a warm place it will be ripe in 24 hours. A small piece of ginger placed in the bottle will improve the flavor. The whole pineapple can be used if required. This is a favorite tropical drink, and sold by women on the street corners. Pineapple skins boiled, allowed to cool, strained and the liquid sweetened, and with addition of lemon or limejuice, makes a delicious lemonade. Pineapple cut in slices and cooked in sugar, then candied, is a fine preserve. If chopped fine and stewed with sugar makes a splendid jam.

TO PICKLE SMALL YELLOW TOMATOES.—Let them lie in salt and water for three or four days, changing the brine if a scum rises; then rinse them with clear water and let them lie for a night in weak vinegar, or, say, half vinegar and half water. The next day prepare thus: To one peck of tomatoes allow half an ounce of whole cloves, a quarter of a pound of ground mustard, half an ounce of whole black pepper, and six good-sized onions, cut in slices. Put the tomatoes in a jar, putting a layer of onions and spice between the layers of tomatoes till the jars are full. Cover the whole with cold vinegar of good strength. In a week or ten days the pickles will be ready for the table.

TOMATO SALAD.—Tomato salad is an agreeable *entree*, and goes well with almost any dinner, but particularly well with fried or roast meats. To half a dozen medium-sized tomatoes, with the skins removed and the tomatoes sliced, add the yolks of two hard-boiled eggs, also one raw egg, well beaten and mixed with a tablespoonful of melted butter, a teaspoonful of sugar, with cayenne pepper and salt to suit the taste. When all these are mixed thoroughly, add half of a small cupful of vinegar.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week. 1 month. 3 mos. 12 mos:
Per line25 .80 \$2.20 \$5.00
Half inch (1 square) \$1.50 \$3.00 10.00 24.00
One inch 2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, October 21, 1882

TABLE OF CONTENTS.

EDITORIALS.—Mirror Lake, 297. The Week; The Afternoon Sun, 304. The Comet, 305. Depth of Covering Potatoes and the Rot, 309.
ILLUSTRATIONS.—Mirror Lake, Yosemite, 297. The California Chief Grain Cleaner, 301. The Comet, as Seen at Different Times, 305.
PISCICULTURE.—Carp Culture No. 1, 298.
THE APIARY.—The California Honey Product, Past and Present, 298.
POULTRY YARD.—Poultry and Our Fairs, 298.
ARBORICULTURE.—The Preparations, or early-bearing Walnut, No. 2, 299.
AGRICULTURAL NOTES, from the various counties of California and Nevada, 301.
PATRONS OF HUSBANDRY.—Annual Meeting of the State Grange of California; An Appeal from the Sisters; Lodi-Co-Operative Association, 300.
HOME CIRCLE.—The Bains at Rest (Poetry); The Power of Wisdom; A Plea for the Children; The Light of the Sky, 302. From the Farm House, 303.
YOUNG FOLKS' COLUMN.—Good Morning (Poetry); Stories About Animals, 303.
GOOD HEALTH.—Patent Medicines; Relation of Brain Work to Blood Supply; Frightening Children; Sunshine and Sleep, 303.
DOMESTIC ECONOMY.—Celery as a Cure; Polishing Woodwork; Pineapple Preparations; To Pickle Small Yellow Tomatoes; Tomato Salad, 303.
QUERIES AND REPLIES.—Notes on Tree Planting; Peaches for Drying; Jams and Dried Fruit Abroad, 304.
ENTOMOLOGICAL.—California Insect Pests, 305 and 306.

Business Announcements.

Flows and Seed Sowers, Baker & Hamilton, S. F.
"Buckeye" Seed Sowers, etc., Hawley Bros., S. F.
Harrows, Seeders and Cultivators, Batchelor & Wylie, S. F.
Calfskin Shoe, F. H. Wilson, Baltimore, Md.
Carriages, etc., W. T. Adel, San Jose, Cal.
Sewer Pipe, Tile, etc., N. Clark & Sons, S. F.
Vineyard Gang Plow, P. K. Stockton, St. Helena, Cal.
"Acme" Harrow, Nash & Bro., New York.
Household Sewing Machines, Mark Sheldon, S. F.

The Week.

Hardly had we praised the sunshine on Wednesday last before the storms returned and a heavy down-pour visited the greater part of the area of the State. On the Sierras the snow arrested the lumbermen, but the few days of warm weather we have just had has probably set them free again. Reports come from all quarter of damages to dried fruit, hay, grain, etc., and it is quite probable that in dried fruit and hay there may be considerable advance in rates. However, no one can foretell a California season. The grass is now springing forward with surprising rapidity, and the pastures will soon afford a good bite, if the northerners do not parch the tender growth or the frosts of the early winter blight it.

California is now a constant delight to the resident and the tourist. The hard, dustless roadways, the verdure stealing over the brown hills and plains, the mellow warmth of the sunshine, the transparent air which seems to fix no bounds upon the vision—oh, what a joy to linger without the doors, and revel in the vernal charms of a California October.

SANTA ROSA can lay some claim to being a manufacturing town. Near the depot are the woolen mills, the grist mills, the fruit-drying establishment, planing mills, the wine-tank manufactory, several tanneries, a carriage factory and a winery.

The Afternoon Sun.

The merciless dry heat of the afternoon sun is known by our orchardists to work serious damage to the exposed stems and trunks of shrubs and trees. The sun scald, with its blisters and cracks, with the life burned out of the sap wood, is indeed a sad affliction to a tree, and doubly injurious when it is remembered that the unhealthy wood is immediately seized upon by a throng of borers, which thus gain entrance to the vitals of the tree. To guard against the evil effects of this scald by afternoon sun, wise tree planters always shade the south and west sides of the young tree with a shake or with an apron of sacking, until the twigs spring from the stem and put forth a cloak of leaves to shelter the stem from the sunshine. It is a novel sight to an Eastern orchardist to see California fruit trees well feathered down their trunks, instead of the bare trunks which support trees in the moister climates.

The effects of sun burn, which California growers are wise to guard against, are also shunned by the wise tree grower in the Southern States. We find in the proceedings of the Georgia Horticultural Society a short essay by Dr. Samuel Hope on the work of the afternoon sun, which will be of interest to our horticultural readers as it presents the facts and the philosophy of the matter in a very forcible way:

The very marked effect on vegetation of a hot, dry afternoon is doubtless apparent to every close observer of the growth of plants or trees. As soon as night sets in and the dews descend, the wilted plant resumes again its wonted freshness and vigor.

To apply this rule to trees and watch results will convince all that the evening sun has a very marked effect on all those trees that are not protected by low-growing limbs or have not artificial protection, either by being boxed or wrapped with some material that will protect the trunk from the fierce rays of the afternoon sun.

The attention of the writer has long been directed to this subject by noticing trees decayed on the side exposed to the evening sun. Notably is this the case with cherry trees. Trees that had attained a diameter of three or four inches would have dead bark and decayed wood on the southwestern exposure, while the north and east side would be alive and sound. Of course this struggle for life at a sacrifice of one-third or one-half of the living structure being diseased and cut off could not long be maintained. Either death from a gradual decline or the sudden crash of a severe wind, breaking off the tree, would soon finish up the work commenced by a slower death.

Again, it will be noticed that pear or apple trees with high limbs, the trunk, instead of being sound and regularly formed, will be flat and irregular on the exposed side. This certainly indicates a great disturbance in the circulation of the sap and in the deposition of healthy woody structure. Another fact, plain to every observer, is found in the increased growth and vigor of many plants and vines growing on the northeastern side of a fence or wall, by which the melting rays of the evening sun are kept off. With raspberries this is particularly true—in fact, it is the only method by which they can be grown with certain success in this climate. The same rule will hold good with equal or even greater force with currants or gooseberries. Allow these plants or berries the benefit of the cool night air and the refreshing dews that we have in our climate, protect them from the evening sun, and you can grow them successfully.

The reason that the evening sun heats up the sap more than the morning sun is that the cool air of night, assisted by dew, cools off the entire trunk, and it requires hours, which consume the entire morning, to overcome this influence before the bark or trunk of the tree is thoroughly heated up. Small trees that have been shaded in nursery rows, of such species as cherry, peach or plum, both by smooth, bright and compact bark, will make no growth if trained high the first year unless protected. Frequently you will observe the sap oozing out around the trunk of cherry or plum trees in the form of gum, the effects of hot sun. The remedy is protection, either boxing the entire tree, or a half box so as to shield the exposed side. With cherry trees boxing is a necessity in many instances; in fact, with the lights before me, boxing all the cherry and plum trees would be attended with a certainty of producing strong, vigorous and well-grown trees, where now we have a difficult work to make them grow at all. Pear trees—in fact all fruit trees that have not shading branches to protect them—would be greatly benefited by boxing or other protection.

In the discussion which followed, Mr. P. Berckmans, the well-known horticulturist, emphasized the importance of the subject treated by Dr. Hape, and explained the physiological effect of the afternoon, or, as it is called, the "three o'clock sun," and its damage to plants. The sun's rays are at that time fiercest, and reflection even from a fence Mr. Berckmans found often dangerous. He instanced the effect upon raspberries planted on the sunny side of a fence. Dr. Hape thought that protection of some kind from this afternoon sun necessary, and that boxing or wrapping were good methods. Mr. Berckmans favored low training, and spoke of its good effect in shading the body of trees and plants from the great heat.

QUERIES AND REPLIES.

Notes on Tree Planting.

EDITORS PRESS:—In the year 1872 I planted out 30 white mulberry (*Morus alba*), 30 *Morus multicaulis*, 150 blue gum (*Eucalyptus globulus*), and 16 English or Cork elms, all on our hard black soil, having underneath at the depth of six feet a lime hardpan. It is one of the worst soils for arboriculture. I raised the gums from seed planted in October and set in March, all the roots being preserved in the ball of earth in which they grew. That is an important point. All the trees were irrigated twice a month, another important point here. The gums were set 8x11 ft. three rows. The others 8 ft. single row. All too close by half. The gums were irrigated only one year, the others four years. The first season the gums attained an average of 12 ft. high. Fortunately the following winter was mild—no freeze to kill the bluish green baby leaf, consequently there was a vigorous growth the second season, during which there was a large development of the dark green lance-shaped permanent leaves, which will endure any of our winter frosts. The trees now average 12 inches diameter and 60 ft. high. Since then, the frosts of the first winter in killing the baby leaf has stunted or killed all the gums I have tried to raise, some five varieties.

For timber purposes I have little use for blue gum. It is lucky and twisting. I made a wagon reach of a beautiful straight tree. It has twisted half round so I cannot use it, but I have hopes that it will complete the circle, when it will be as good as new. The timber is strong, burns well, but, rots quick when exposed to moisture. Without some preservative, it will not last as a post more than two years. A redwood tree of the same size would not last three times as long for the same purpose. Age renders redwood durable, and may have like effect on the gum-tree timber. In my opinion the blue gum makes the best wind-break, because it offers but little obstruction to the eyesight and to light winds, but takes from high winds their destructive effects.

My white mulberry trees have trunks 10 to 12 inches diameter, 10 to 12 ft. high, when they spread out into branches, making a beautiful spreading and well-balanced tree. For a few years it required careful staking to secure the upright trunk, so important to our ideas of beauty, but with the help of the eucalyptus wind-break, that can be easily secured for every tree. They are naturally cleanly, afford a dense shade, look cheerful and lively at the end of a four-month dronth. They afford in abundance a berry eagerly sought for by birds, chickens and pigs. The timber, although short, is hard and strong, takes a fine polish, and is among the most durable known.

As a shade tree they surpass any other. My *Morus multicaulis* with the same care are three-fourths less in size. Unlike the black locust and cork elms, the mulberry family do not send sprouts from the roots.

The tree is raised from cuttings of the previous year's growth most generally, but may be easily raised from seed, the plant attaining the height of a foot the first year. My English elms are planted along the vineyard fence. They grew fast with irrigation; all the worse for the vines, rendered sterile for 25 feet. I tried to poison them with salt, then niter inserted in holes bored in their trunks. At last I dug them up, and since then have dug up every third day sprouts amounting to many thousand during the summer.

In conclusion, I believe if the mulberry tree is devoted to silk culture it will aid greatly in establishing habits of observation and industry in our youths, and this may prove of greater benefit to the rising generation than any other species of tree grown in the State.—D. A. LEARNED, Stockton, Oct. 9, 1882.

Peaches for Drying.

EDITORS PRESS: You will greatly oblige an old reader of your paper by answering the following questions: 1st. Can dried peaches be profitably dried? 2d. How much longer will it take to pit 100 lbs. of clingstone than 100 lbs. of freestone peaches, and what will be the difference in quality and weight when dried? 3d. Which do the canners prefer clingstone or freestone peaches? In Vol. 19, page 18 in the RURAL PRESS, a Fresno canner seems to prefer the freestone peach; while the Reed Union and Santa Barbara Press say that the clingstone are the best for canning. 4th. Will the "Myrobolan" plum grow from cuttings? I think that I read in a paper some time ago that they would, and that the nurserymen desired to keep the fact a secret. 5th. Is the "Susquehanna" a good bearer in California? 6th. Which is the largest peach the Foster or Late Crawford? M. C. HALL, San Francisco, Cal.

EDITORS PRESS:—In compliance with your request, I send you answers (as far as I am able) to questions asked by your correspondent.

1. Can clingstone peaches be profitably dried, and which are the best for that purpose? They can be profitably dried, if properly dried and neatly packed. The best for drying are the largest and finest, ripe and rich in flavor, of varieties free from curl or mildew, especially the latter, as it impairs the quality of the fruit and makes it more difficult to pare, and consequently more expensive to handle. The most profitable are unquestionably the freestone, as they are handled with greater ease, and without waste, except in the matter of peeling and pitting. The latest possible variety is the best for drying or canning, as a variety coming in after the rush of earlier peaches, plums and pears gives the drier and the canner more time to work them off. By avoiding this rush and consequent confusion a great saving is effected.

2. If pitted by hand the clingstone will take

one-third longer time to pit than the freestone; but if a pitter is used on the former, it will not take as long by one-third. As regards the quality of the two varieties, there is but little difference. The cling, as a rule, possesses more of the delicious peachy aroma and retains it longer than does the freestone, but not sufficiently marked to make it any more salable or profitable as a dried fruit than the finer flavored freestone, as a dried peach is always a dried peach with the buyer if it is neatly dried and packed. Consequently the preference will always be given to the freestone for drying purposes in all stone fruit. But for drying, to make attractive fruit, care should be taken in selecting varieties free from red at the pit, as any discoloration tends to make the fruit less attractive.

3. Which the canners prefer, is easily answered. If they have all freestone, they prefer clings, if all clings, they prefer freestones. So we are forced to the conclusion that they prefer both. But what they do prefer is, as above stated, a very late peach to fill up the gap between the rush of the early peaches, plums and pears, and the closing season, and the man who is fortunate enough to produce a seedling peach that will supply this pressing need, will never regret his venture.

4. Will the Myrobolan plum grow from the cutting? It will as readily as the rose. I stated that fact several months ago, in an article published in the PRESS, and I think I expressed the belief that it was the coming stock to work on. It is strong, vigorous, long-lived and free from disease, and the natural stock to work the plum and prune on, and the French use it extensively to work the apricot on. In this relation, Downing, in treating on the cultivation of the apricot, states that this tree is almost always budded on the plum (on which, in July, it takes readily), as it is found more hardy and durable than upon its own root. Many nurserymen bud the apricot on the peach, but the trees so produced are of a very inferior quality—short lived, more liable to disease, and the fruit of second-rate flavor. Budded on the plum, they are well adapted to strong soils, in which they always hold their fruit better than in the light, sandy soils. He further says: When budded on the plum this tree is but little liable to disease, and may be considered a hardy fruit tree.

It is very evident that the Myrobolan is the plum alluded to, as nearly all other plums throw out suckers from the roots, a stock that no honest nurseryman will knowingly sell. Please excuse this digression.

5. Is the Susquehanna a good bearer in California? I am not aware that there is any good peach in California that is not a good bearer in any locality where peaches will bear at all.

6. Which is the largest peach, the Foster or the Late Crawford? I cannot tell, not having both in bearing; but my impression is there is not much difference in the size grown on the same land. WM. H. JESSUP.

Haywards.

Jams and Dried Fruit Abroad.

EDITORS PRESS:—A good deal of prejudice exists in the minds of the English public in regard to canned goods of any description. They fear there is "death in the pot" from occasional cases of poisoning from corroding of the tins. For our canned fruits a taste will have to be created before the demand becomes general, but not so with jams. Fruit put up in this way, in jars or bottles, will find only too ready a sale at remunerative prices. I learned this particularly during my recent visit to England, when I was told by a competent authority that the market there for apricot jam was unlimited, and it is, of course, a less bulky product than the canned article. From experiments we have made in our home this season, I am confident that a jam made of the Petite d'Agen prune would meet with like favor. It needs no sugar, and makes a most luscious preserve, and so with peaches and other fruits if made into jam. England will buy all we can supply, if necessary. Dried fruits are but little known there, but from my own knowledge, and as the result of inquiry, I believe that an immense demand can be created for them in the mother country, and in preference to canned goods. It needs but that samples be sent over in the care of responsible parties that public meetings be called and the press interested—samples being cooked and prepared in the proper manner—and the thing is done.—LEONARD COATES, Napa, Cal.

Apple Products.

EDITORS PRESS:—Can you inform me where I can obtain a work treating on cider and its products, jelly, boiled cider, vinegar, etc.—WM. BULLARD, Chicago, Ill.

We know of no book on these subjects. There is a comprehensive treatise on making vinegar of all kinds entitled a "Treatise on the Manufacture of Vinegar" by H. Daussance, published by Baird of Philadelphia, 1831. Perhaps our correspondents can help Mr. Bullard and other readers by giving their methods with the different apple products. We shall be glad to publish all such contributions for the general good.

TO THE OLD HOME.—Herman F. Dexter, cashier for Dewey & Co., who has been constantly connected with the office for years, started on a visit to his parents and friends in Orange, Mass., on Tuesday last. He received the worthy testimonial of a fine gold watch, inscribed "From Dewey & Co. and their associates."

The Comet.

Just now hundreds of thousands of people are interested in the magnificent comet which is visible in the eastern heavens at sunrise. Prof. George Davidson, of the U. S. Coast and Geodetic Survey, who, with a fine telescope, observed the comet from the top of Mt. Tamalpais, says of it:

One of the atmospheric phenomena exhibited by the nucleus, was its white light being decomposed into a spectrum—blue, white and red—by its rays passing through the prism of air at that low altitude. This same phenomenon is sometimes remarkably brilliant with Venus near the western horizon. Immediately upon the discovery of the comet, I made observations for its position by observing its altitude and azimuth, and noting the times of observation with a chronometer whose error was well known. (Want of time prevents these observations being reduced.) Near noon of the same day, Mr. Pratt, of the Coast Survey, and myself, got observations of the declination of the comet. It was plainly visible all day to the unassisted eye. [So far as known, these are the earliest instrumental observations on the comet by competent observers.—ED] On the 20th, before sunrise, I got other observations for altitude and azimuth, and at noon obtained its meridian transit in the meridian instrument, while Mr. Pratt observed its declination in the Zenith telescope. It was then clearly visible to the naked eye, but its brightness was diminished.

In the morning the nucleus was but slightly diminished in brightness, but the tail had developed in length to about three degrees, although its width was nearly the same at the extremity. At the nucleus the envelope where merging into the tail was not so broad. On the morning of the 21st, the comet presented a most brilliant spectacle. The nucleus was not so large or bright, but the tail was lengthened to five degrees, with a breadth of one-third of a degree at the free extremity. It was contracted near the envelope, and the bright bounding lines of the tail were straight. I made observations for altitude and azimuth, as on previous mornings, and near noon, at meridian transit, its right ascension and declination were determined by Mr. Pratt and myself. The nucleus and part of the tail were then visible to the naked eye.

On the morning of the 22d, the brightness of the nucleus was still more diminished, but the tail lengthened to about six or seven degrees, and the general effect, as a spectacle, was increased, but when the sun rose the comet nearly faded out of sight. There was no sight of a shadow on the nucleus. I after obtained observations for altitude and azimuth, and at a meridian transit determined its right ascension and an approximately close declination. It was not visible to the naked eye.

After sunrise the comet soon faded out to the keenest eyesight; and at its meridian transit we failed to find it in the meridian instrument and in the larger zenith telescope. On the morning of the 24th there was a remarkable change in the form of the tail. It was slightly increased in length, and about the same width as heretofore at the end; but the eastern white streak of the tail, or cone, was very much curved outward within a degree of the head, while the eastern line of the tail was straight. It seemed to me that two very faint streaks of light projected from the head, nearly at right angles to the axis of the cone of the tail. Observations were not continued after this date, and the weather was not clear enough for favorable study of the comet's appearance. The remarkable apparent developments of the tail in length may be owing to the two considerations: First, the smoky atmosphere of the first day or two; second, the prospective view of the comet when more directly in line between the sun and the earth at the earlier rates. I could not leave my duties at this station to observe for position and physical peculiarities at my San Francisco observatory; but I add the position of the comet as determined on several dates at this station.

U. S. Coast and Geodetic Survey station, Table mountain, latitude 37 degrees, 55 minutes, 20 seconds, north. Longitude west of Washington, 3 hours, .02 minutes, 10.96 seconds. Elevation above the ocean, 2,604 ft.

TABLE MT. MEAN TIME	A. R. COMET.	DECL. COMET.
Meridian Passage	Hrs. Min. Sec.	Deg. Min. Sec.
Sept 20 AM, 11h, 15m, 18.7s	11 13 37.7	84h 0 39 58
" 21 " 11h, 06m, 2.36s	11 .08 37.2	84h 1 24 11
" 22 " 10h, 58m, 10.8s	11 .04 21.2	84h 2 .07

The observations of previous and subsequent dates out of the meridian have not been reduced.

Since the above paper was written, some further observations have been made. Prof. Davidson has kindly made for us a series of sketches of the comet as observed on different days. Four of these sketches we have hastily engraved, to illustrate its appearance at different periods.

Fig. 1 of the engravings shows the comet as first seen on September 19th at 5 A. M. It was then three-fourths of a degree long and half a degree wide; nucleus, 10 seconds by 17 seconds.

Fig. 2 shows it on September 21st at 4:30 A. M. It was then three degrees long and half a degree wide.

Fig. 3 shows it on September 24th at 4:30 A. M., when it was eight degrees long. This shows the curved eastern border, and also the rays at right angles at the point.

Fig. 4 represents it at 4:15 A. M. on October 7th. The length then was 12° to 15°; width, 3° to 1°; exceedingly brilliant. The nucleus sometimes appears separated into two parts (atmosphere not steady), and certainly is not

THE TELEPHONE UNDER WATER.—When the vessel, *La Provence*, which sank in the Bosphorus, was being raised, the telephone was added to the diver's equipment. One of the glasses of the helmet was replaced by a copper

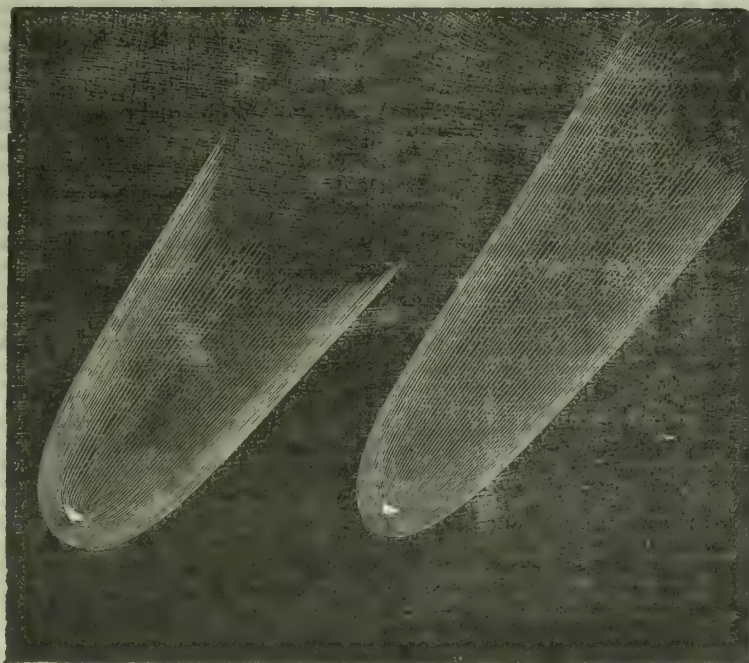


FIG. 1—COMET ON SEPT. 19TH. FIG. 2—AS SEEN SEPT. 20TH.

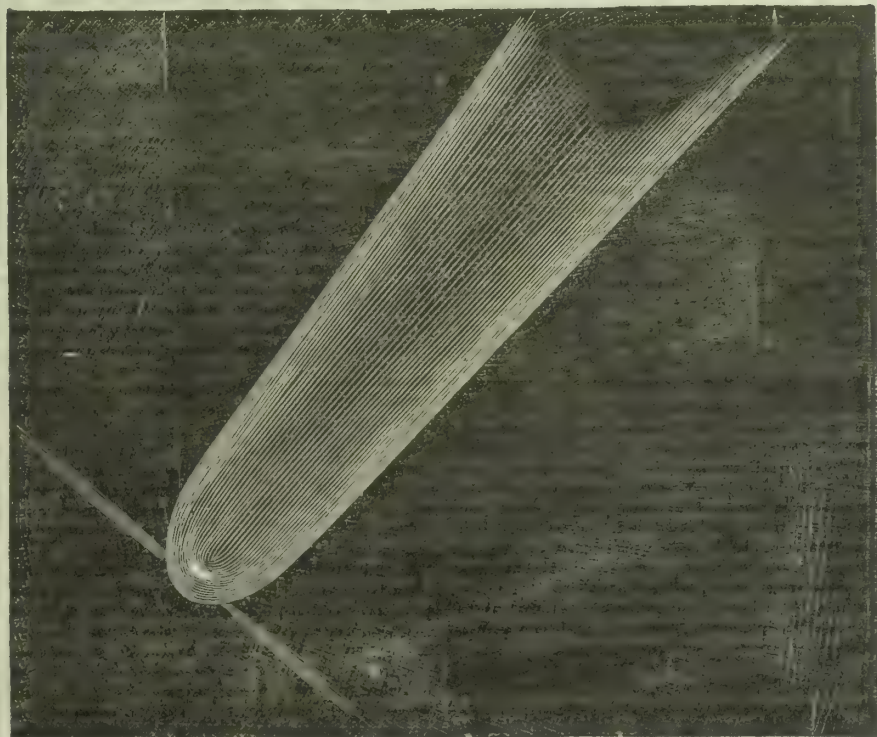


FIG. 3—RAYS AT RIGHT ANGLES NEAR NUCLEUS, SEPT. 24TH.

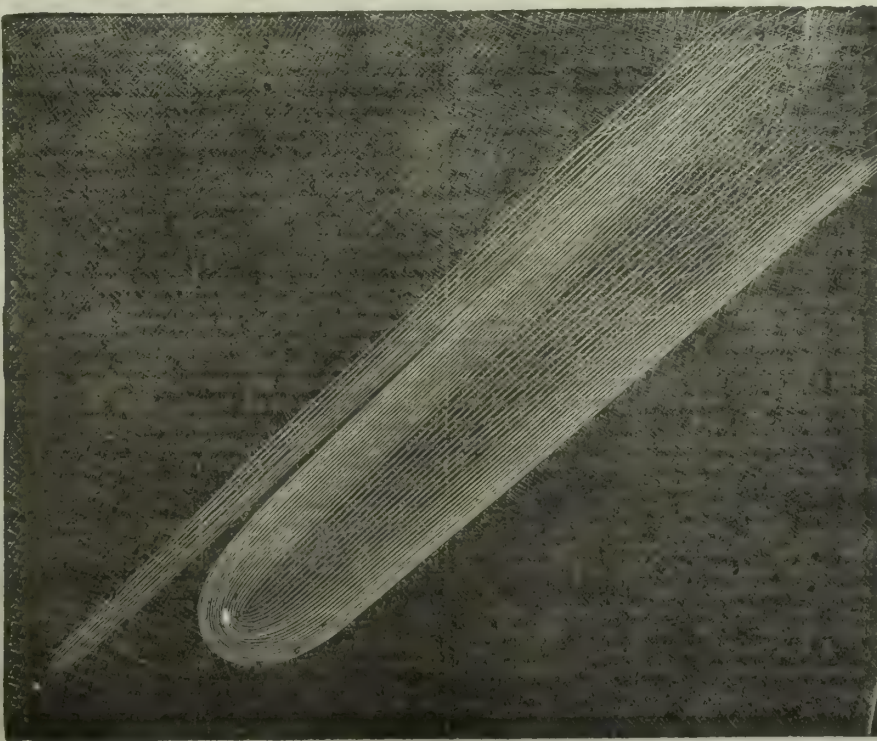


FIG. 4 COMET AND SECONDARY COMET ON OCTOBER 7TH.

symmetrical with focus of envelope. There is now shown a secondary comet—very faint, but certain, and with its head near a small star, one and a half or two degrees from the large nucleus. This is shown in the engraving. These cuts, of course, do not show the proportionate length of tail.

plate, in which a telephone was inserted, so that the diver had only to turn his head slightly in order to receive his instructions and report what he had seen. The adoption of this means of communication in diving operations will, in case of danger or accident, tend to insure safety to lives that otherwise would be sacrificed.

ENTOMOLOGICAL.

California Insect Pests.

Chief Executive Horticultural Officer Matthew Cooke, of Sacramento, October 5th, addressed the State Grange at Stockton on "Insect Pests." The address kept the profound attention of the Grange for over an hour and a half, and for it Mr. Cooke received the warmest thanks of the Grange members. The following is a synopsis of the document:

Mr. Cooke began by referring to the neglect that prevails of study on the science of entomology, and pointed out the usefulness and necessity of a thorough understanding of it to the farmer and fruit grower, and especially of microscopic study.

Under present circumstances, it is absolutely necessary that the enterprising husbandman should be fully acquainted with the teachings of this beautiful but neglected science, the science of entomology. Therefore, I hope you will not deem it a transgression on your valuable time if I endeavor to advocate her cause in order to place her in the position in the institutions of learning, i. e., the public schools, and to make her a favorite in the family circle, which I consider not only her privilege, but her just right.

The inquiry may be made, "Why has the study of the science of entomology been neglected?" The answer may be given, objects that are easy of examination and available, without what may be termed unnecessary exertion, are those we are first inclined to study. For instance, other branches of zoology furnish us with the beasts of the field, the birds of the air and the fishes of the sea. The vegetable kingdom has scattered around us her natural productions, furnishing us with the necessary support and comforts of life, regaling us with their fragrance and charming us with their beauty. Specimens of many of the species referred to are available for study without having to spend valuable time, and the dependence on mechanical accessories to assist in discovering their presence, while specimens for the study of many of the species of insects which entomology teaches can only be discovered by the aid of the microscope, they being amongst the minutest of the works of the creation; and further, when it is taken into consideration that it seems an instant in such creatures to avoid the inquiring eye of man, we may readily imagine why the study of this science has been neglected. Again, in the past "the silly outcry of the ignorant and vulgar, who are always ready to laugh at what they do not understand" was raised against the student who attempted to make insect life a study.

He was treated as a mere trifter, a dabbler in childish pursuits, or his motives were attacked by the mercenary individual, who, finding his ground untenable for legitimate discussion, adopted ridicule and slander, the cheapest argument that can be employed in controversy, for it does not require truth for its foundation, and but a low order of talent for its display.

Another reason may be assigned: In our youthful days, in a large majority of cases, we learned to abhor insects and consider them fit subjects for detestation, and, consequently, in our more mature years we have made but little effort to learn their natural history, until such conditions occurred as those which we are at present fully confronted with, namely: Our fields are in some cases devastated by the army-worm, Hessian fly, wire worm, cut worms, grasshoppers, etc., etc.; our orchards infested by the codlin moth, scale insects, saw flies, various species of borers, etc.; our vineyards infested by the phylloxera, vine moths, flea beetles, etc.; our gardens infested by aphides (plank-lice), caterpillars, etc.; our animals infested by insect parasites—sheep by the acari or scab mite, *Oestrus ovis*, or bot fly, etc.; our horned cattle by the *Hypoderma bovis* or ox bot fly, etc.; our horses by the *Gastrophilus equi*, the horse bot fly; our granaries by the weevil, *Culandra granaria* and by the minute moth *Tinea granella*, etc.; our store-houses by the fruit moth, and our dwellings by the clothes moth, etc., etc. That those conditions exist in California at the present time is unfortunately a reality. That many persons engaged in the industries represented here have within the last five years suffered great loss, indirectly if not directly, from the attacks of insect pests is unfortunately too well known to require any argument to substantiate any such assertion.

It may be asked: To what cause can we attribute the spread of those evils? The answer may be given: Negligence on our part to study the natural history of such insects that were doing us injury, so that we could understandingly make a war upon them for their extermination, or at least to prevent their ravages and spread.

It must be admitted that ignorance of the natural history of insects may not only lead us astray, as to applying proper remedies, at the proper time, but as all insects are not injurious, indeed many are beneficial, we may destroy those which are beneficial, or, in other words, those which are our friends, instead of those which are injurious.

Mankind are apt to magnify the merits of the science or pursuit they have adopted, and you may think that the statements I have made are highly colored, but I candidly tell you that under present circumstances entomological information is an imperative necessity for the proper management of the farm, orchard, vineyard,

garden and all branches of industry for vegetable production.

In support of my appeal for favor for the science which I have taken the liberty of representing as a neglected damsel, I will state what I consider to be a fit comparison in regard to the threatened danger to your property.

Much has been said of the dangers threatening the land in our beautiful valleys by the miners sending down their torrents of slickens.

But I assure you, my friends, that the dangers by which your industries are threatened, by the invasion of the insect pests, the slickens danger is, in comparison, as a small mountain brook compared with the body of water passing down the Sacramento river when up to high water mark.

The damage done to property by injurious insects is not local, but reaches from the beautiful valleys to the mountain tops, from the north of the State to the south, and from the Sierras to the sea. In order to combat those enemies of your industries, take this neglected damsel, place her in your institutions of learning, make her part of your family circle, where her beautiful teachings may be studied, and the natural history learned of the insect or insects destroying your property; then you are prepared to go to work for their extermination, having a complete knowledge how and when to strike the blow for victory.

Mr. Cook pointed out the necessity of understanding fully the habits, growth, etc., of the army worm, the Hessian fly, wire worm, cut worm, grasshopper, codlin moth, scale insects, saw flies and borers; as also of the vine moth, phylloxera, beetles, caterpillars, plant lice, etc., and also of the animal infesting scale mite, bot, or fly, etc. He called attention to the loss of crops of grain and fruit from insect pests and their destructive action upon plants and domestic animals. Insect pest has become a curse in California. Here are all the conditions necessary to their prosperity and increase, and to negligence the spread of the evil is chiefly attributable, as well as to the general ignorance of the natural history of insects and lack of knowledge as to remedies to check their ravages, and concerning such as are beneficial and not detrimental to earth products. Entomological information is a necessity in this day to the proper management of farm, orchard and vineyard. The dangers threatening from insect pests to land products are greater than any others. These dangers are not local, but threaten every section of the State—mountain, valley and coast alike. Kirby says insect life is a universal empire. The insects injurious to crops in California he then enumerated. The army worm is the larva of a night flying moth. The eggs are laid near the roots of perennial grasses, along the inner base of the terminal blades, and are doubled and glued along the grooves in rows of from 5 to 20; each female deposits 100 eggs, that hatch in 8 or 10 days, and the caterpillar reaches full growth in about 30 days, when it descends into the earth three or four inches and builds a cell, wherein it passes its metamorphoses. These caterpillars he described, as also the moth, as he had seen them near Sacramento in corn, barley, turnips, alfalfa, etc., and where to prevent their spread trenches were dug for their capture. Dusting bnhach on them in the trenches proved very effective, but the burning of dry straw or hay more so. The habit of the army worm is in grass in lowlands, from whence it goes to the high lands after a season favorable to it. Thus nearly all great army worm years are wet ones, with the preceding year unusually dry.

The Hessian Fly

He had not seen in Sacramento, but had been told of its appearance. It is a question as to whether it is indigenous to this country. It first appeared in America in 1776, on Staten Island and at Flatbush. In 1787 it was found west of the Alleghany mountains. Wheat, rye, barley and grass it attacks, and in places it has forced the abandonment of wheat growing. It lays its eggs in the small creases of young wheat leaves. The eggs are about 1-50th of an inch in length and hatch in less than 15 days. The maggot produced is of a pale red color, and crawls down the leaf and works down between it and the main stalk to a point a little below the ground, where they become stationary until their transformation takes place. They are there nourished by the sap and thus weaken and impoverish the plant. In 40 days maturity is reached. This pest produces two broods a year—spring and autumn. It is not believed that it emigrates, but it steadily spreads from the original point of introduction. It is not believed by Dr. Thomas that it will reach the Pacific States, but that statement may be hazardous. It has become acclimated in the upper St. Lawrence and in the Mississippi valleys. Its spread westward is very slow, but it has reached Kansas. Precaution must be taken, however, in California to prevent its importation.

The Wire Worm

Is the larva of the snapping beetle, skip-jack beetle, etc. The larva remains in that state about three years. Wherever grasses will grow the wire worm may be found, and they abound in the roots of the coarsest sedge and other wild grasses on the borders of marshes, and in the most delicate pastures. They do great damage to crops, especially corn, and feed on the roots of barley, cabbage, wheat, potatoes, syc, asparagus, currants, oats, etc., and on dahlias, pinks, carnations, etc. Many remedies for the pest have been given, most of them being ineffective. Hand picking is effective,

as also the use of slices of potatoes, apples, lettuce, etc., as traps. A half of a potato with the eyes cut out, covered with an inch of loam, catches the pest. Dr. Thomas advises the application of salt, lime, soot, etc., to the soil. These applications, where offative, were probably applied just before the great mass of the worms passed into the pupa state. Rotation in crops and the growth of vegetables on noxious to the pest are recommended by Dr. Thomas—as white mustard.

The Cut Worm

Is a species that eats near the ground. When full grown it descends a few inches below the surface and makes an earthen cocoon, wherein it passes through its transformation. The moth or parent of the worm is of a dingy gray or brown, of rather thick body, from three-quarters to one inch in length. The shoulders are tufted, and the males have a tuft on the last segment of the abdomen. The best remedy in gardens is to dig about the plant and destroy the larva. Clean cultivation and extra seed are the best remedies. Ten species of the moth of the cut worm are known in California.

Grasshopper

Plague history is well known. The larva or grub, known as the large white grub of the May beetle, June beetle, goldsmith beetle, are found in several parts of California. The beetles feed on the leaves of fruit trees. They fly, and feed at night, and the damage they do is often overlooked by those unacquainted with the history of the insect. There are 10 species of leaf-eating beetles in California—two of the May beetles, two of the silky-leaf chafers (the rose bug), four of vine-chafers and two of June bugs. Place a sheet on the ground after dark, shake the tree, and the beetles will fall on the white cloth, and may be gathered and destroyed. In fields apply the same remedies as for the wire worm.

The Store-Room

And granary is next considered. Here is found the wheat weevil, a well-known pest that devours stored grain. The eggs are deposited after the storage of the grain. On hatching, the grub burrows in the wheat and devours it. Kiln drying and ventilation and occasional moving of the grain are recommended. Bnhach can be used very effectively. Granaries should be thoroughly cleaned and whitewashed with a wash having in it some kerosene, or apply the kerosene to all joints and cracks before whitewashing. He said that in southern California in one section, at a mill, when the weather is such that the wheat heats before getting to the store-rooms, within six weeks from the time it is out the weevil appears.

The Horse Bot Fly

Deposits its eggs on the inner part of the knees and shoulders. The bite causes the horse to lick the spot, and so the eggs enter the mouth and thence go to the stomach, where the larva hatch and fasten on the lining of the stomach. Ten species are known here, two of which attack the horse. One species attacks horned cattle by piercing the skin and depositing the egg. When cattle are attacked they rush for the nearest water, with heads and necks extended. The buzzing of the insect terrifies the cattle, and it is said it renders them unmanageable.

Sheep

Pests he next considered, and first he treated of scab. It is caused by a small mite called the scab mite, and at one time known as "sheep itch." It is easily distinguished from the itch mite of man, as it has only slender mandibles and feelers to pierce the skin, which it cannot enter, and so they are not subcutaneous. The eggs are laid on the skin, and hatch in about 14 days. Inflammation follows the piercing process, exudation follows, and then the scab forms. The animal rubs the parts, and thus the fleece takes on its ragged appearance. In summer the blow-fly complicates the disease, and maggots burrow under the scab. Tobacco washes and a dip of sulphur and lime are remedies. The sheep has its bot-fly, also, the larva of which are deposited in the nostrils, and go thence up to the frontal parts, and irritate and feed on the mucus. Once there it remains till spring, and then works downward, irritating the membrane, and finally falls to the ground, burrows, and shortly is transformed into a chrysalis. In California it remains six or eight weeks, and then comes out as a fly resembling the house-fly, but larger. Tarring the nose is said to prevent deposition of the larva, and that putting tar up the nose will cause dislodgment of the maggot by sneezing. Moist, low lands with thick undergrowth are favorable to the pest.

The Dried Fruit Moth

Is not, as some suppose, the codlin moth or apple worm. Blower's remedy is the best, who covers the shelves and windows around the packing house with bnhach.

The honey-bee at times is infested with insect parasites. The bee moth is its worst enemy. It has two broods each season. The moth can be found around the hives at night nearly all summer. By day it hides in the crevices of the hives. The worm, when hatched, makes a silken tube for protection, cuts to the wax, feeds on it, and destroys the young bees as it goes. Raising the front of the hive and placing there a woolen rag induces the larva to find it a cozy retreat, where it may be caught and killed. Moveable frame hives and vigilance will work extermination.

The Carpet or Woolen Moth.

The fur and the hair moth, he next considered, as found by the housewife, who well knows their ability to do damage. He described their

formation, growth and habits. About the middle of May strenuous efforts should be made to destroy the eggs and young. Lay open the closets, remove their contents, take up carpets and tapestry. Expose the whole to the air and sun for some hours, and thoroughly brush, beat or shake them. Brush out floor and wall cracks with spirits of turpentine, straw powdered black or cayenne pepper under the edges of carpets, and put sheets of paper, sprinkled with turpentine, camphor, leaves of tobacco, snuff or bnhach among the clothes to be laid away for the summer. Moths can be killed by fumigating the room with tobacco smoke or sulphur, or by exposing them to a heat of 150° Fahr.

A Host of Enemies

The potato has its enemy in a species of blister beetle. In Lassen county it did much damage in 1881. Turnips have a pest in the shape of a striped bug; next is the 12-spotted D, and next the striped turnip flea beetle. Peas and beans are infested by orcuttus, the cabbage bug, or the caterpillar of the southern cabbage butterfly, and by the cabbage-plant louse. Garden corn has its corn-worm, and carrots, melons and persimmons have each their parasite. Nearly all flowers and shrubs have their insect parasite. The plant louse infests nearly all plants or shrubs, and the scale insect infests some. Hot-house plants have their pests, and our finest foliage has its enemy, moth, scale, weevil, etc. So, too, are the oleander, acacia, rose and cactus attacked by a species of scale. We have the leaf-cutting bee, the cock chaffer, vine chaffer, mole, cricket, gooseberry worm, currant-bush borer, and sawfly.

The Woolly Aph's

Is a great pest to fruit growers—white-looking blotches seen on limbs and trunks of trees. It lives on the roots in winter and ascends the tree in spring. The mother produces without the presence of the male. In 21 days 95 young will be the result of a single aphid. Each aphid produces 10 broods per year. The first generation being one, the second is 100, the third 10,000, the tenth one quintillion (1,000,000,000,000,000,000). The sting of this louse makes the tree hard, knotty, dry, brittle and covers it with protuberances. Coal oil is effective, but not safe for the tree. A tobacco decoction at 130° temperature on application is effective. A trench about the tree, with lime in it to slack in water, and then being covered up with earth, is said to be a safe remedy. The apple-leaf plant louse is plentiful in the Sacramento valley orchards. They are a dark green color, and completely cover the surface of the leaves. Such trees, when dormant, should be washed with an alkaline solution of concentrated lye—one pound to each gallon of water. Spray the leaves and fruit in early summer with a solution of whale-oil soap, but whale-oil soap and sulphur mixed is a preferable remedy—one pound of soap and sulphur to each gallon of water. This pest is certain to spread alarmingly if not checked.

On Apple Trees

You may notice some with band-like appendages on last year's growth. If of oval shape, they are the eggs of the tent caterpillar. When not feeding on the foliage, they gather in their tents, and can there be destroyed by a torch made of rags soaked in turpentine. Other appendages, more ring-like, around the new growth, are the eggs of the *Oligocampa constricta* and *O. syriatica*. They feed on the young foliage, grow rapidly and when full-grown measure one and three-quarter inches. They do great injury to orchards. It cost Mr. De Long, of Marin county, \$1,600 to wrest his orchard crop from them. Last year, however, he picked the eggs at a cost of \$1.50 per ounce. Each ounce had 600 rings, averaging 300 eggs per ring, equalling 60,000,000 caterpillars. Last year a parasite—a tachina fly—attacked this pest and partly destroyed it, and also a parasite, a species of brucan, that reduced the pest greatly. A pretty caterpillar is found in apple trees known as the tussock moth. It has a wide tussock of white hair from the fourth to the seventh segment. On each side the first segment and on the upper part of the 11th is a pencil of long black hairs, knobbed at the top. It does great damage to fruit and foliage. A looper, geometer or measuring-worm caterpillar is found in the orchard in April, or shortly after. It attacks the leaves, and they appear as if eaten by a small insect. This caterpillar has but 10 legs—six on the first three segments, two pro-legs on the ninth segment and two anal pro-legs on the last segment. It is probably the canker worm. Various devices to destroy the pest have been tried. Troughs filled with liquid put around the tree prevent the female from ascending. Mr. Thomas recommends a half-inch rope nailed around the tree and a band of tin four or five inches wide nailed over the rope, the top being even with the rope. The females cannot pass up and deposit the eggs in the cavity between the rope, and there they can be destroyed. Six pounds of arsenic boiled in 150 gallons of water was used in spraying in one orchard and exterminated the pests.

A Species of Aph's

Infests pear tree leaves. Apply the remedy for apple leaf aphid. Pear slugs feed on the epidermis of the leaves, and live on the ribs of the leaf. The following year the tree will not bear a full crop. Dry dust or powdered lime thrown on the leaves, or sulphur and powdered lime, destroy them. Thorough washing with whale-oil soap and sulphur is best. The codling moth infests in many localities the fruit of the apple, pear and quince trees. This pest was unknown

in California until 1874. It was brought from the East in apples shown at the State fair in 1873 it is believed. It first appeared, at least, near Sacramento in the summer of 1874. Its spread has been rapid. It is now found in thirty counties. It is the worst of the insect pests to exterminate. Success can only be had by the united efforts of fruit-growers. Some have interfered with the steps taken under the law to check the spread, and the result is a great injury, as can plainly be seen at present in San Francisco, by examining the infested fruit offered and being shipped broadcast.

The Peach

Has its parasitic enemy. This season a new one has appeared—a small caterpillar a little over one-fourth inch long. It makes its home close to the pit when feeding. One fruit grower, who opposed the insect quarantine law, sent a basket of peaches to market which Mr. Cooke found to be teeming with this worm. The codlin moth, Mr. Cooke has positive proof, has been in the peach crops this year. Last spring he found a new caterpillar producing a moth much resembling the peach-eating one. The tarantula, or spider hawk, has attacked one peach orchard, two successive years. The pear-slug attacks the cherry tree foliage. This year a false caterpillar was found in cherries—probably the larva of a sawfly. Apricots this year were infested by what appears to be fungi. The red spider, or red mite, has spread greatly, and reached the almond tree. The lye and water wash has been successfully used in some cases—two pounds concentrated lye to each gallon. A decoction of tobacco leaves—half pound to the gallon, with one pound of concentrated lye added—was used successfully by W. B. West, of Stockton. Spraying with whale-oil soap and sulphur, one pound of each to a gallon, is a successful remedy.

Scale Insects.

He next treated of the San Jose scale—a pernicious pest to all deciduous trees except the black Tartarian cherry. It attacks the Osage orange, and some ornamental trees and some vegetables. The Santa Cruz scale attacks willow, apple and pear trees. The black scale infests all deciduous trees, and one species attacks elm and honey locust. The cottony-oushion scale infests all the deciduous fruit and ornamental trees. The red scale infests citrus trees, as now do the black scale, soft orange scale and the cottony-oushion scale. Olive trees, two years ago, were attacked by the black scale, but united effort demonstrated that it can be driven from the olive. Owners of orchards should each year grow some tobacco for remedial uses. It can be raised for two cents per pound. Thirty pounds of dry leaf boiled in 30 gallons of water, and then 30 gallons added, washed 100 olive trees. Tobacco decoction added to soap washes makes them more effective.

The Vineyard Pests

Are phylloxera, vine moths, flea beetles, false chinch bugs, etc. The phylloxera is best fortified against extermination, as it locates in the roots of the vines. The investigations of the Viticultural Commission, Mr. Cooke believes, will evolve a remedy effective and cheaper than those recommended by European savants. Vine caterpillars, etc., have injured the vine foliage in several sections. Hand picking overcame them at Briggs', near Davisville. Blowers whipped them by capture of the moth early in the season, cultivation and the use of a corrugated roller to destroy the chrysalids. Mr. Cooke described a caterpillar he found recently in southern California belonging to the genus known (translation) as "I love the vine." Here he found numerous large hawks feeding on the caterpillars. He advises that the canes of the vines be raised to allow the hawk to hunt for his prey. This vineyard should be cleaned each year, with the aid of the hawks, yet it had been resolved there most unwisely to do nothing this year. This policy Mr. Cooke roundly condemns. He refers to many small beetles sent him that had been found eating vine foliage, and says they are the *halicta chalybea*, or grape flea beetle, and do great damage at the East, and should not be allowed to spread here. Straw or hay spread about vines induces the false chinch-bug to retire therein at night. The straw must then be raked up and burned before sunrise. Sprinkling some hay with kerosene, and raking the hay from the vine over it, cut off the escape of the insect, which it at first made in considerable numbers, into the ground. Clean cultivation and vigilance alone will defeat the spread of these pests. The strawberry has its parasites, which have been discovered this season. So, too, has the raspberry and blackberry, the rose scale affecting the last two. Parasites (grubs) have been found in the hop plant, that eat the root of the plant. He has seen also the larva of caterpillars feeding on hop vines, but has not yet seen any signs of the hop moth. Borers do great harm. The various kinds he described at length. To check them, keep the trunk of the tree clean, and wash with strong soft soap and sulphur or whale-oil soap and sulphur. In conclusion, he said he had described only a part of the host of insect pests threatening California productive interests, and only a part of the pests that annoy and do us personal injury. He urged upon his hearers the necessity of enforcing the laws and rules enacted to exterminate insect pests and protect horticultural interests, and that all would aid in spreading abroad information on the subject, and in doing all that can be done to educate the people on this important subject.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS.

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making

arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. G. Cockshutt, Redlands.....	20
C. W. Kidder, Redlands.....	10
J. F. Welsh, Redlands.....	20
E. W. Brown, Redlands.....	10
Israel Beal, Redlands.....	10
C. E. Tuedell, Redlands.....	20
R. B. Morton & Co., Redlands.....	20
C. A. Smith, Redlands.....	10
C. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. E. Seymour, Redlands.....	20
P. E. Brown, Redlands.....	10
A. G. Simms, Redlands.....	20
Samson Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Casady, Redlands.....	10
Orsen Van Leuven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	20
A. S. White.....	20
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
G. W. Boggs, Riverside.....	20
A. W. Boggs, Riverside.....	10
S. H. Averill, Riverside.....	10
J. S. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Annabel, Riverside.....	20
J. P. Greeves, Riverside.....	10
D. U. Findlay, Riverside.....	10
G. O. Saunders, Riverside.....	20
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. B. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
S. H. Averill, Riverside.....	10
B. F. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. B. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	10
Mrs. Sarah J. Morey, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Sparks, Grundy Centre, Iowa.....	30
F. F. Morrison.....	10
A. T. Dewey, San Francisco.....	12
W. B. Ewer, San Francisco.....	12
B. F. Watrous.....	10
H. L. Rutgers.....	20
J. W. Bashford.....	5
S. Comey.....	5
Mrs. E. Brown, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cutts, Carson, City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20
Total sold.....	1,004

Judson & Brown (San Bernardino, P.O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.

Commission Merchants.

Grangers Business Association, SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REMARKS.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

TOBACCO AND CIGARS.

412 FRONT STREET.

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

JAS. P. HULME,

Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

110 Davis Street, near Market,

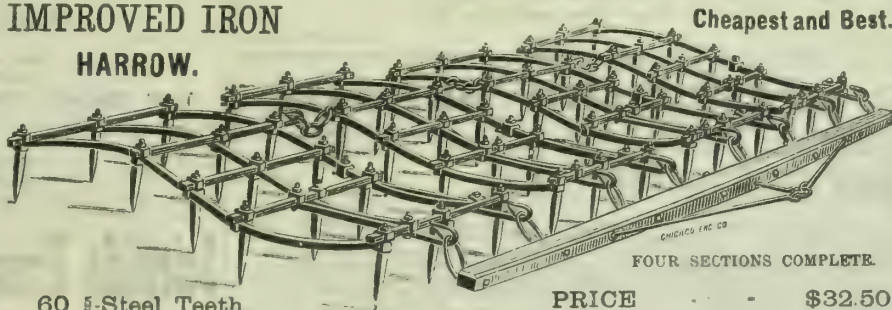
SAN FRANCISCO.

THE
MONARCH
OF THEIMPROVED IRON
HARROW.

FIELD.

BEST!

60 1/2-Steel Teeth.



Cheapest and Best.

NO
SHRINKING,
SWELLING,
OR
Rotting Out.

PRICE - \$32.50

DURABLE!

No. 1. has three sections, 45 1/2 steel teeth; cuts 9 feet wide. This is a light size for two horses. Weight, 168 lbs. Price, \$25.00.
No. 2 (represented in the cut) has four sections, 60 1/2-steel teeth; cuts 12 feet wide. This is our standard style for two horses (generally used). Weight, 230 lbs. Price, \$32.50.
No. 3 has five sections, 75 1/2-steel teeth; cuts 15 feet wide. This is our 3-horse Harrow; can leave off one section and use two horses with the same draft-bar. Weight, 291 lbs. Price, \$37.50.
No. 4 has six sections, 90 1/2-steel teeth; cuts 18 feet. For this size we use four horses abreast, with two draft-bars coupled together at the ends; adapted for large farms. Weight, 336 lbs. Price, \$45.00.
The No. 4 IRON HARROW is simply two No. 1 harrows with the draft-bars coupled together, thus making a large four-horse harrow suitable for large farms. These harrows have been in use all over the Pacific Coast for two years, and give the best of satisfaction. The frame is indestructible, made entirely of iron, and locked firmly together by the teeth passing through malleable iron clamps, and having screw-threaded shanks on their upper ends, which bolt the framework securely together. This mode of constructing a harrow frame dispenses with drilling or punching holes through the bars of the frame, thereby securing much greater strength and durability. It is indestructible. No shrinking, swelling or rotting of frame-work. It is constructed in narrow sections, each acting independently; will adapt itself to any uneven surface of the ground, and will cut the soil better and more evenly than any other harrow. Constructed on correct mechanical principles; each section has a center-draft, and each tooth cuts a separate track. No one tooth in line with another. This safety hook obviates the necessity for unhooking to turn round. Four different sizes to suit customers. The Teeth are solid steel.

STRONGEST AND BEST HARROW MADE.

The IRON HARROW can be taken apart and packed very closely for shipment. We ship them over the entire coast. They are the most successful harrow ever introduced to the farmers. We have received a great number of testimonials. They all speak very highly of the Iron Harrow.
"Your Harrow is a good one."—M. Madden. "They give perfect satisfaction."—Jas. Cass & Co. "Your Iron Harrow is a good one, and fully met my expectations."—Dr. E. F. Moulton.
"I like your Iron Harrow very well."—Milton Carpenter. "I tried your Iron Harrow the other day, and it beats them all. My manager says it is the best."—D. Freeman.
"We like your Iron Harrow very much."—Steele Bros. Address

BYRON JACKSON,

San Francisco, Cal.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1938 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and

120 Washington St., S. F.

Prompt Returns. Advance Liberally on Consignments.

SEND YOUR CONSIGNMENTS TO



"THE OLDEST HOUSE"

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

CHEAP CASH GROCERIES

— AT —
NEUMAN'S.

All kinds of Fancy and Staple Groceries, wholesale and Retail, at their Stores,

323 to 331 Sixth St., 1307 Polk St.,

— AND —
1144 AND 1146 FOLSOM ST., S. F.

Goods delivered to any part of the city, or to any railroad, steamer or vessel, free of charge.

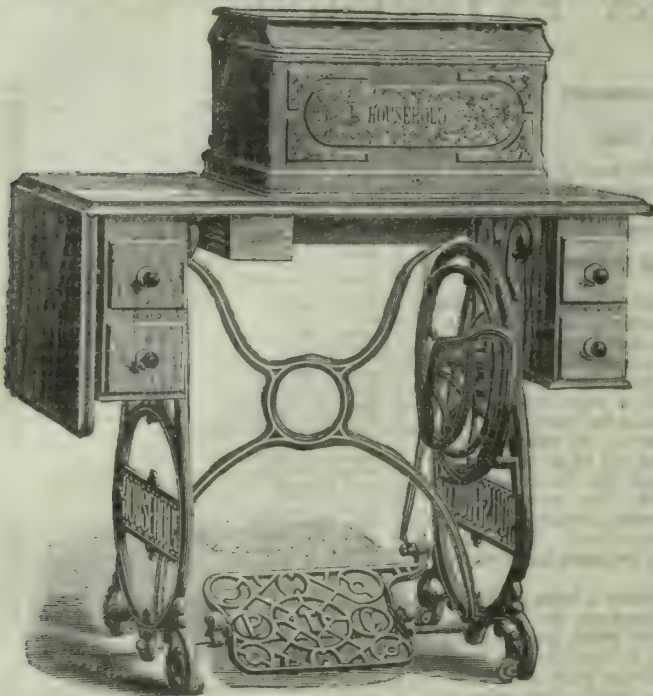
Country Orders Specially Solicited.

All such orders must be accompanied by a check or cash. All goods promptly delivered and warranted as to quality. Orders most respectfully solicited.

COPP'S

AMERICAN SETTLER'S GUIDE,
A Popular Exposition of our Public Land System.

Send to the office of this paper and get a copy of this popular book.
PRICE, 25 cents, postpaid.

HOUSEHOLD, NO. 4.

COMPLETE,
\$58.00.

With full set of

Attachments and In-
struction Book,

Delivered, Freight Paid, to
any R. R. Station or Steam-
er Landing in California or
Nevada.

OTHER STYLES:

No. 1 \$45.00
No. 2 50.00
No. 3 55.00
No. 5 60.00

The "HOUSEHOLD"

Is the finest finished ma-
chine ever made.

MONEY REFUNDED

If not satisfactory.

MARK SHELTON,

General Agent,

9, 11 & 13 First Street,
SAN FRANCISCO.

Catalogue Free

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50% to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Grabbe, C. Greninger, T. L. Grigsby, D. Emerson, M. M. Estee, Prof. Husman, Beringer Bros., and others, Napa county. I. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dressel, James Shaw and others, Sonoma county. B. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wyckoff, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

P. K. STOCKTON,

St. Helena, Napa County,

CALIFORNIA.

PACIFIC COAST LAND BUREAU.

President, Wendell Easton, Vice President and General Manager, Geo. W. Friok, Treasurer, Anglo-California Bank, Secretary, F. B. Wilde, 22 Montgomery Street, San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock raising or dairying down to fruit culture. On the east of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale. The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$5.50 an acre; \$40 acres fine grazing land, 7 miles from San Luis Obispo, \$8 an acre, 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

DISSOLUTION OF CO-PARTNERSHIP.**OFFICE OF
JACKSON & TRUMAN.**

Notice is hereby given that the partnership heretofore existing between us is dissolved by mutual consent. Mr. Byron Jackson will continue his business in the same place, No. 625 Sixth Street, manufacturing his Self Feeders, Elevators, Derricks, Engines, Windmills, Harrows, etc.

Mr. L. J. Truman will be found at 327 Market Street, and will continue the manufacture and sale of Hay, Hide, Hop and all kinds of Baling Presses, Excavators, Baling Ties, Wire, etc.

Mr. Byron Jackson is authorized to collect all accounts owing the late firm, and to receipt in full for the same.

BYRON JACKSON,
L. J. TRUMAN.

**BOONE & MILLER,
Attorneys & Counsellors-at-Law,**

Rooms 7, 8 and 9

No. 320 California Street, S. F.

(Over Wells Fargo & Co.'s Bank)

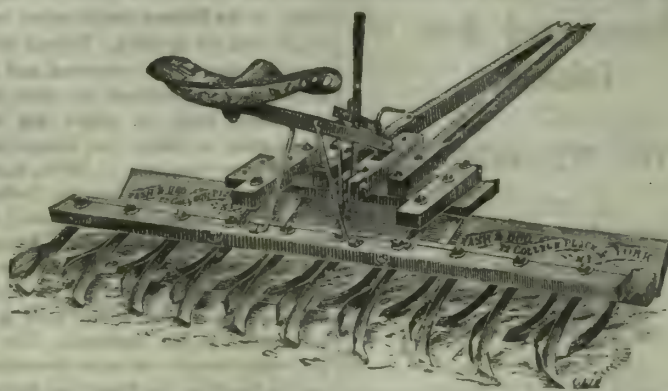
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

This paper is printed with ink furnished by Ohas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorety, 527 Commercial St., P. F.

"ACME"**PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.**

For the Orchard, Vineyard, Nursery and Grain Field.



Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,

22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. F. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.

N. CLARK & SONS,

Proprietors of the

Pacific Sewer Pipe & Drain Tile Works,

At Sacramento, Cal.

MANUFACTURERS AND DEALERS IN

Water, Sewer and Chimney Pipe,

DRAIN AND IRRIGATING TILE,

Chimney Tops, Fire Brick, Fire Clay,

STONEWARE GARDEN VASES,

PLAIN AND RUSTIC FLOWER POTS,

Hanging Baskets, Etc.

SAN FRANCISCO OFFICES,

1310 Market Street and 22 California Street,

**DEWEY & CO.'S**

Scientific Press



Patent Agency.

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

Illustrated Catalogue, Photograph and Lecture, 10c.

MAGIC LANTERNS AND VIEWS

Magic Lanterns and Slides WANTED.

HARBACH ORGANINA CO., 809 FILBERT STREET,

AUTOMATIC CABINET. Play any Tune.

ORGANS \$5.

Musical Wonder Catalogue, FREE.

PHILADELPHIA, PA.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

530 California St. SAN FRANCISCO

HEAR YE DEAF.

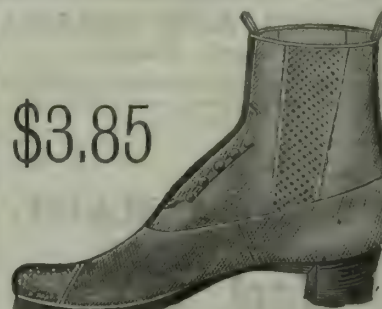
Garmore's Artificial Ear Drum.

"As invented and worn by him perfectly restoring the hearing. The only device of the kind. The best of all. Are not observable, and cannot be perceived without a special device. Circular Free. CAUTION: Beware of cheap imitations. Mine is the only successful artificial Ear Drum manufactured." JOHN GARMORE, 10th & Race St., Cincinnati, O.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 2 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 163 Tremont Street, Boston, Mass.

Dewey & Co. { 252 Market St. } Patent Agt's

\$3.85



This cut represents a No. 1 CALF SKIN SHOE made in GAITER or LACE, all sizes, which we are manufacturing with a view to meeting the wants of a large class of people who must have the best shoe for the least money. It is guaranteed as to STYLE, FINISH and QUALITY, and will compare favorably with any \$5 shoe in the market. In order to introduce our goods, we will send FREE to any address for the low sum of \$2.85 a pair, thereby saving to the consumer the large profits of the jobber and retailer. This ONE PAIR AND BE CONVINCED. F. H. WILSON, 232 West Baltimore St., Baltimore, Md.

Depth of Covering Potatoes and the Rot.

The effect of bringing the tubers under a very deep layer of soil to escape the rot or blight is described by a foreign journal. It seems that J. L. Jensen, director of the "Bureau Ceres" at Copenhagen, has published a pamphlet giving the results of his experiments to discover a means of rescuing the potato from the disease. He believes he has found a way to save a large percentage, and that is by deeply covering the growing tubers with the soil, hoeing up the adjacent soil over the hill, which we imagine is not greatly different from the "hill culture," which was at one time general, but which has lately given way to "flat culture." However, the Danish investigator puts forth his "discovery" and we shall give the essentials of it old or new. He first says:

The disease is solely due to the attack of a parasitic fungus, *Peronospora (Phytophthora) infestans*. When the summer has somewhat advanced this fungus produces the well-known dark brown spots on the foliage of the potato, where it develops its "seeds," the so-called spores. The fungus-seeds are often so numerous that a single plant, according to counts and computations, successively can bear 20,000,000 to 30,000,000 of spores. Falling to the ground, these spores are carried down with rain-water to the tubers, upon the surface of which they germinate. The spout-fibers penetrate the skin of the potato tubers, and develop under the skin a dense tissue, and as a consequence of this, the potato is "sick," i. e., covered with brown spots, and at last becomes smutty-brown upon the entire surface, has a bad taste and is in process of rotting.

If these spores have to be carried down by rain-water from the leaves to the tubers, it is wonderful that the disease should afflict the California crop, for the main part of it never has a drop of rain falling on it from planting to digging time. However, this is the use of the thick layer of soil:

Luckily the soil has the property of impeding to a great extent the progress of the spores, operating as a filter. The object to be sought, then, is to throw up upon the tubers a covering of earth of sufficient thickness to prevent the spores from filtering, or only allowing an insignificant minority to filter through to reach the tubers. By means of systematic experiments in the open field, and several series of corresponding investigations in the laboratory, I have shown that when a five-inch layer of earth is heaped up upon the uppermost tubers, only very few will become diseased, be the attack ever so violent.

Now for the results of Mr. Jensen's experiments. He has them accurately recorded. In a potato-field or garden where there are many diseased potatoes the tubers under, say, 20 plants are to be examined in the following way: The soil is removed by a small trowel or similar suitable device, until the uppermost tubers are reached; these are picked up and put in a pail or basket. Next, the second layer is taken up and put by itself, and finally the remaining tubers are dug and put in a third vessel. Consequently we have separated the uppermost, intermediate, and lowermost tubers from each potato plant dug. Then all the tubers in each pail or vessel are counted, and the diseased one separately. The result will show that the upper tubers are considerably more diseased than the middle, and these again considerably more than the lower tubers; in other words, the deeper the potatoes have been covered, the fewer diseased tubers will be found amongst them. At three examinations made by Mr. Jensen, himself, of which I and II were made at Copenhagen, and III at Paris, the results stood as follows:

	I	II	III
	per	per	per
	cent.	cent.	cent.
Of the uppermost tubers were diseased.	82	49	49
" intermediate "	30	30	17
" lowermost "	3	3	12

By examination III the soil was very clayey, and the tubers had set very high, so that the lower layer of tubers were only covered with about three inches of soil. The difference was therefore, in this case, although very great, not so decided as by I and II. By a systematically executed protective molding, even the most violent attacks of disease may be so far checked that, as a rule, there will be only one or two per cent. of diseased tubers.

A wooden peg, about eight inches long, pointed at one end, and from the other end marked with an inch-scale, is first provided. Ten plants, about which the soil at hilling up has been made so high that the upper surface of the uppermost tubers are covered with three and one-half inches or more of soil are then examined. How far such a covering exists is ascertained by sticking the peg into the ground in the center of the plants to be examined, to such a depth that the starting point of the scale be on a line with the surface of the ground. If, next, the soil is scraped aside from above until the uppermost tubers are exposed, the thickness of the earth-covering may be read off from the scale. The tubers from the 10 thus examined plants are dug and put in a basket or the like by themselves. Ten other plants, at which the covering of the uppermost tubers is between one-half and two inches thick, are next examined in like manner, dug and put in another basket. After this the percentage of disease is ascertained. To find plants with a covering of the last named depth is always easy, for it is just such covering that is the rule by molding. On the other hand, it may often be difficult to find plants with three and one-half or four inches of covering. If, however, the potatoes are moderately high-hilled, there will always be found a few plants with an earth covering of the said thickness.

It will, by such examination, be seen that the high-hilled plants have essentially fewer diseased tubers than the lower or flatter style

of growing. The experiment described above is simple, and should be made by some of our growers, who have a taste for investigation. Of course it must be remembered that the hilling up system of potato-growing occasions most waste of moisture by evaporations, and is consequently a dangerous style of growing in this State.

BUSINESS CHANGE.—James A. Anderson, of the nursery firm of Williamson & Co., having sold his interest to the firm of W. R. Strong & Co., and a consolidation of the two firms having been effected, the business will hereafter be conducted under the firm name of W. R. Strong & Co., but Robert Williamson, the original founder and continuous manager of the nurseries, will still have the general management of the same. The headquarters and chief office is at Nos. 106, 108 and 110 J Street, Sacramento, Cal. The firm has an orchard and branch nursery at Penryn, in Placer county, where they are constantly testing and proving the adaptability of fruits to our climate and soils, and as they are also extensively engaged in the fruit packing and shipping business, they count themselves competent to judge of the best kind of fruit to grow for profit. They are constantly experimenting with new varieties, and makes it a point not to recommend and send out any new fruit until they have fully tested them themselves and proved them worthy of cultivation. The nurseries, so far, have been kept clear of the scale-bug pest, and they are determined by constant vigilance to keep it so.

AGRICULTURAL DEPARTMENT STATISTICS.—The Department of Agriculture reports that the average yield of oats will be somewhat higher than last year or in 1879. The product is nearly as large as that of wheat, probably about 480,000,000 bushels. The yield of rye, averaged from State returns, is 14 7-10 bushels, making a crop of 20,000,000 bushels, or nearly the same as reported by the Census Bureau. The indicated average yield of barley is about 23 bushels per acre, aggregating 45,000,000 bushels. California, New York and Wisconsin together produce more than half, or 27,000,000 bushels. The product in 1879 was 44,000,000 bushels. Buckwheat is good for nearly an average product of 11,000,000 to 12,000,000 bushels. The average production of potatoes is 81 per cent. Returns indicate a probable yield of 80 bushels per acre on an acreage of nearly 2,000,000 acres. The total value of exports of domestic breadstuffs during the nine months ending September 30th was \$134,512,779, and for the corresponding period of 1881, \$177,453,638.

HANDSOME FRUIT.—We are indebted to Dr. S. F. Chapin, of San Jose, for a lot of beautiful fruit specimens from his orchard in San Jose. There was a selection of apples and pears and all were grown without irrigation with a rainfall of 12 inches for the season. The fruit was large sized, full fleshed, crisp and juicy, showing that it had not lacked for moisture. The reason why Dr. Chapin has done so well with so slight a rainfall is no doubt because he has kept up such constant and thorough cultivation in his orchard. The fruit is wholly untouched by insects, which shows that Dr. Chapin can fight the pests himself as well as urge others to fight them.

SEEDERS.—Attention is asked to the advertisement of Batchelor & Wylie's lock-lever seeder with spring teeth. It registers so as to show just the amount of grain sown. It has a breadth of seven feet and six feet, and sows wheat, barley, oats and flax. It is easily handled and accurately regulated. It is mounted on 48-inch wheel, and is very easily propelled. Another style of seeder by the same firm is a self-adjustable frame-seeder, easily controlled and clean while in motion. These tools are worth examination.

INTERESTING EXPERIMENTS.—Some important experiments are about to be made in Cleveland, Ohio, to determine more accurately than ever before the velocity of light. The experiments will be conducted under the supervision of Prof. Albert A. Michelson, and extensive preparations have been made to obtain accurate results. The work will undoubtedly be closely watched by scientists interested in the subject, and as the velocity of light has an important bearing upon astronomical calculations, the experiments, if faithfully carried out, will be of considerable value.

PIPE, CHIMNEYS, ETC.—N. Clark & Sons, of Sacramento, manufacturers of vitrified sewer pipe tile, firebrick, chimney flues, etc., who have been for 20 years in the business, with a manufactory at Sacramento, have lately bought out Jno. B. Owens, 22 California street, and will continue to carry a large stock of all kinds of pipe, drain tile, etc. The location near the Oakland ferry will be found convenient to people coming from the country.

NEW PAPER.—The *Record of National City*, San Diego county, is a new paper in a rapidly growing town. The *Record* is an independent paper, energetically devoted to local interests, and has a promising future before it.

TREES.—We call attention to the advertisement of various kinds of fruit trees by Milton Thomas, of Los Angeles. Mr. Thomas has been propagating and growing his trees with usual care, and we doubt not his announcement of the stock will be of interest to many.

Verses from Col. Wilder.

The venerable President of the American Pomological Society, Col. M. P. Wilder, having been urgently requested by a contemporary for "ten lines of his best thoughts," answered in the following stanzas, taking as their motto the advice he has so long and constantly urged through the press and in public addresses: "Plant the most perfect and mature seed of our very best fruits, and as the means of more rapid progress, cross-fertilize our finest kinds for still greater excellence."

Plant the best seeds of every good fruit,
Good fruits to raise, all lands to suit,
Fruits which shall live, their blessings to shed
On millions of souls when we shall be dead.

These are creations that do the world good,
Treasures and pleasures with health in our food,
Pleasures which leave in the memory no sting,
No grief in the soul, no stain on Time's wing.

For fruitage and flowers let praises arise
From earth's utmost bound to heav'n's highest skies,
Songs of rejoicing where'er they are found,
Songs of thanksgiving where'er they abound.

A NEW NORTH AMERICAN ROSE.—Dr. George Engelmann describes, in the *Bulletin of the Torrey Botanical Club*, a new species of rose that appears to present peculiar botanical and horticultural features. It was discovered by a party of botanists, consisting of Dr. Parry and Messrs. M. E. Jones and C. G. Pringle, while they were riding along a road skirting the shores of All Saints' bay, in Lower California. Forming, as it did, a most conspicuous and agreeable feature in the arid landscape, with its finely-divided foliage and showy pink or white flowers, it at once attracted the attention of the whole party. It has been named *Rosa minutifolia* by Dr. Engelmann, who describes it as "a most striking and lovely species, distinguished from all other roses by its minutely deeply-incised leaflets." The species is quite peculiar among its American congeners, and even among the roses of the old world, so that it is difficult to determine its true position. As seeds have recently been collected, we may hope to soon see the plant in cultivation.

A NEW PREVENTIVE FOR SLIPPING.—A European engineer, C. Heinrich, has invented a new apparatus, instead of the sand box now in use, for preventing locomotive wheels from slipping. It consists of a narrow tube, running from the hot water reservoir to the drivers, so that a small jet of hot water can be played upon the track, cleaning and drying the track at the same time, thereby giving the drivers their full power to propel the train. It has been used with most satisfactory results on the Motan road, of Reschetzka, Hungary.

SPIRITS of turpentine are now made from sawdust and refuse of the sawmill. It is extracted by a sweating process, and yields 14 gallons of spirits, 3 to 4 gallons of resin, and a quantity of tar per cord. The spirits produced have a different odor from that produced by distillation.

COTTON seed oil is now coming into use as an illuminator, said to be superior to lard oil, making a pure, white light and emitting no smoke. As far as the test has gone, it is especially useful for mining purposes, as it will not congeal as quickly as the lard oil.

OF VALUE TO A NEWCOMER.—George Shrader writes from Los Angeles: "I think the *RURAL PRESS* is the most reliable agricultural paper on the coast and of great value to a newcomer like myself."

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

Would Have Been in the Grave.

A lady in Tecumseh, Neb., writing to Dr. STARKEY & PALLEN, says: "I wish to thank you for receiving so much benefit from your Compound Oxygen. Only for this I would be in the grave. I could not sleep; had no rest; was really bordering on insanity. I was alarmed. Now I sit up until 10 o'clock, and enjoy music and company. My daughter is recovering her voice. Will continue Oxygen. May Heaven's choicest blessings rest upon you and yours." Treatise on Compound Oxygen, containing large reports of cases and full information, sent free. Address, Dr. STARKEY & PALLEN, 1109 and 1111 Girard street, Philadelphia.

All orders for the Compound Oxygen Home Treatment directed to H. E. Matthews, 606 Montgomery Street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

A Word to Subscribers.

Prompt renewal of subscriptions is the strongest support that newspaper publishers feel. It is, so to speak, "the most sustaining part" of a newspaper diet. We have much to be pleased at in connection with our large list of subscribers, yet there are some whom we trust can favor us more promptly in forwarding the renewal of their subscriptions, and we feel the necessity of soliciting all who like our paper, and are pleased to support us in our efforts to produce a worthy and progressive journal, to do the best possible in forwarding their subscriptions promptly and aid us in securing new ones.

Promptness Displayed, Etc.

Messrs. DREW & Co., Patent Agents:—The Canadian patent obtained through you is at hand. This makes three patents received within a month. The ability, energy and promptness displayed by your firm must certainly be gratifying to your numerous patrons—as it assuredly is to
Yours respectfully,
THORPE & BELLOLI

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct, or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on or address H. F. D., at this office.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1882:

252 Market Street, Elevator 12 Front,
SAN FRANCISCO.

Branch Offices in all Foreign Countries.

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE ON APPLICATION

Geo. H. Strong,

W. B. Ewer,

A. T. Dewey

W. T. ADEL,

City Carriage Manufactory,

No. 263 First Street (opp. N. Y. Exchange),
SAN JOSE.

Family Carriages, Rockaways, Top and
Open Buggies,

Light and Heavy Express Wagons,

Made of the best-selected and thoroughly seasoned timber and warranted.

Driving Carts, with open seats and spring shafts, the only cart in the market that takes away the jolt. Send for circular and price list.

Jobbing, Carriage Trimming, Painting and
Blacksmithing Neatly Done.

Prices as Low as the Lowest.

Orders Will Receive Prompt Attention

IMPROVED EGG FOOD—Try it for Poultry;
1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2 50; 25 lbs, \$5.
B. F. WELLINGTON, 425 Washington St., S. F.

Lands for Sale and to Let.

Fruit and Homestead Lands

FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

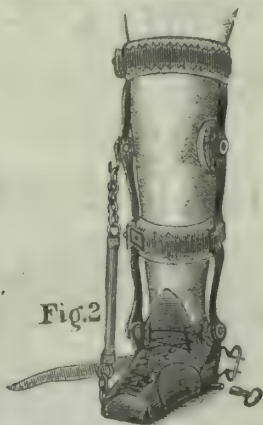
Good Crops Every Season Without Irrigation.

Free by mail specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of
SANTA CRUZ COUNTY.
Address "Exchange & Mart," Santa Cruz, Cal.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.



AUTENRIETH'S CELEBRATED

CLUB-FOOT SHOE.

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

DO Not Fail to send for our FALL Price-List for 1882.

Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address
MONTGOMERY WARD & CO.,
327 and 329 Wabash Avenue, Chicago, Ill.

YOUR NAME

On 50 large size CARDS. Remembrance, Souvenir, Hand Baguet, &c. No. 24111, 10c, 11 pks. \$1. Please send 20c. for album of 100 samples and list of 200 elegant premiums and full Price-List. 20 fine Gilt Bevel Edge Cards, turned corner, 10c. Your Name in this interesting Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,500 ft in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Hill's Improved Horse Powers. Plows. Cultivators. " Improved Granger Gang. " Side Hill Gang. " Improved Seed Sowers. " Improved Single Sod and Tule Plow. " Double Deep Tiller. Hill's Improved Headers. " Single Plows. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the latest Practical Improvements, which are regularly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY.

Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

D. C. MOORE, M. D.,

MRS. E. D. MOORE, M. D.,

OF THE
Trail Hygienic Medical and Surgical Sanitarium
Have returned from a tour in the States and resumed Chronic case and general family practice, including obstructions, at 1629 Market St. 3rd Floor. Cancer, Consumption, Bright's Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion and all Chronic and desperate cases a specialty.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

Mission Rock Dock and Grain Warehouse,

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

OHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors

Office—218 California Street, Room 3.

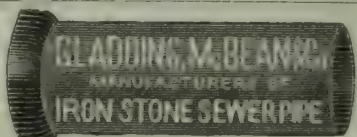
Educational.

STOCKTON BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address
P. O. Box, No. 15. F. E. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, E. C. Atkinson, Sac'to, Cal.



For the Drainage or Irrigation of Lands.

TERRA COTTA

CHIMNEY PIPE & TOPS

Vases, Flower Pots, Fire Bricks, &c.
MANUFACTORY AT LINCOLN, CAL.

SEND FOR ILLUSTRATED CATALOGUE

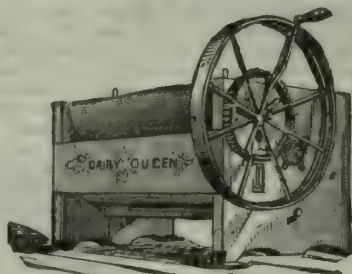
1310 Market Street, SAN FRANCISCO.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.

RECEIVED TWO DIPLOMAS



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN, Janesville, Cal.,

Or Jas. L. Haley, Janesville, Lassen Co., Cal., Benicia Agricultural Works, Benicia, Cal.

McLEOD'S XXX

Squirrel Poison,

Reasons of its Superiority:

1. Squirrels will eat it any time in the Year.
2. It does not Lose its Strength, by Exposure to the Air.
3. It is Cheaper than the Farmer can manufacture it.

Address,
A. J. McLEOD,

Livermore, Alameda Co., CALIFORNIA.

REISTER'S PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies' equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer, Chico, Butte County, CALIFORNIA

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

B. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and Importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$3 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and Importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 110, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

O. J. ALBEE, Santa Clara, Cal. Breeder of high-class standard Poultry: Amer. can Sebrights, Langshans and Brown Leghorns. Choice birds for sale in pairs, trios, or breeding pens. Write for prices.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

L. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

Moore's Prepared

The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Silos, Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

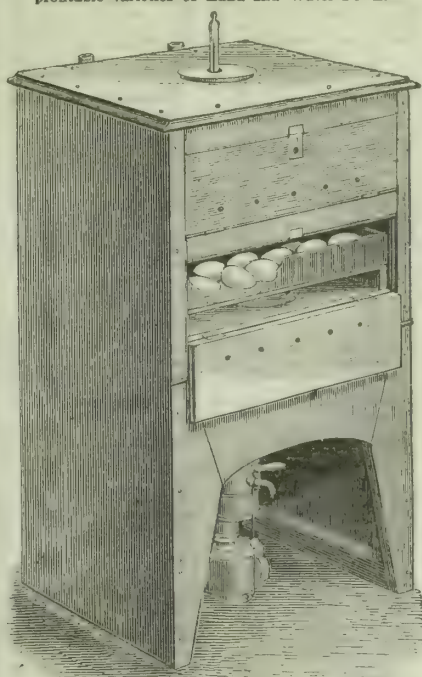
Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,5 to 9 California, and 108 to 112 Market Streets, San Francisco
BAGS, TENTS, HOSE, TWINES.**IMPORTANT!!!**

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & SON

GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

**AGENT FOR THE PACIFIC INCUBATOR,**

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

JONESA POLAND CHINA FARM.

ELIAS GALLUP, Hanford, Tulare Co., Cal.
Breeder of pure bred Poland China pigs of the Black Beauty, Black Bess, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.



Calvert's Carbolic
SHEEP WASH.
\$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON S. F., Sole Agent for Pacific Coast.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Doas, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

LAND
Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

CAUTION!

TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls,
Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address
G. G. WICKSON, 319 Market St., S. F.

LAUREL RANCH.

Thoroughbred

Spanish Merino**SHEEP.**

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to
CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco

LANGSHANS.

My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported Eggs for hatching.

MRS. J. RAYNOR,
1416 Folsom St., S. F.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FALKNER, BELL & CO.,** San Francisco

FOR SALE.

17 H. 1/2 Spanish, Half Saxony Bucks. 1 Leicester Buck. 8 Leicester Ewes. Apply to

ASHTON & HOLCOMB,

413 Montgomery Street, SAN FRANCISCO

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$5; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
L. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. GRESSEY.....Merced Co
SENECA EWEL.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS of EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER
Cashier and Manager.

San Francisco, Jan. 15, 1882.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. R. Y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882.

Send for Catalogues.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

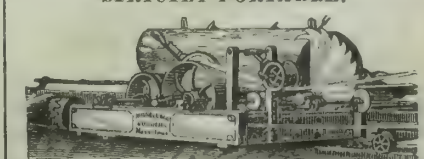
Baden Station - - San Mateo Co.

Poultry and Stock Book

A new manual and reference book on all subjects connected with successful Poultry and Stock raising on the Pacific Coast. A New Edition, over 100 pages, profusely illustrated, with handsome, life-like illustrations of the different varieties of poultry and live stock. Price by mail, 50 cents. Address **PACIFIC RURAL PRESS** Office, San Francisco. January, 1882.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills.

Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO., Agents for the Pacific Coast.

Dewey & Co. 262 Market Street, Patent Agts

News in Brief.

Ducks are plentiful on the lakes and sloughs of Southern California.

Two whales were captured by the Monterey Whaling Co. last week.

A TELEGRAPH cable is to be laid under Lake Superior next summer.

CHICAGO is rejoicing over the arrival of a band of Oregon sheep.

THE commission of over 350 postmasters will expire at the next session of Congress.

THE average death rate from yellow fever in Mien and Camargo, Mexico, is 11 daily.

THE British ship *Bremen* from Liverpool went ashore on Farallone island, and is a total loss.

FLOATING ice has caused a suspension of navigation on the Volga and Kama rivers in Russia.

INGERSOLL still charges the Government with attempting to bribe the jury in the Star Route cases.

THE Vanderbilt party's special train ran at the rate of 59 miles an hour from Burlington to Chicago.

THE Committee on the Channel Tunnel have made a report unfavorable to the project, as dangerous to England.

A FARMERS' ditch company of Orangethorpe has been incorporated in Los Angeles for distributing water for agricultural purposes.

THE Australian cricket team took £11,000 hard cash with it from England, as the result of its professional tour through that country.

THE retirement from active service, by the operation of the law, of Major-General McDowell, October 15th, is officially announced to the army.

FROM three grapevines growing in a Washington street vineyard at Los Angeles, 360 lbs. of grapes were picked, and the vines were not stripped.

FARMERS on the Swinomish, W. T., are puzzled over the appearance of a short, thick, yellowish worm which has been operating among the grain this season, destroying the roots when green.

SHINGLES are in such demand at Seattle, W. T., and have risen so in price that an importation of 250,000 is being made from California, the only importation in at least a quarter of a century.

THE National Dress Society of Great Britain offers a prize of £30 for "the design of a female garment combining ease, elegance, comfort and health." The "divided skirt" has been condemned.

AFTER a thorough discussion, the Congress of Jurists at Cassel has unanimously answered the important and much-debated question, "Is the State bound to indemnify condemned persons when acquitted on a second trial?" in the affirmative.

Injurious Insects in Oregon.

Oregon fruit growers are waking up to the fact that injurious insects are spreading rapidly through their orchards. Our Horticultural Officer, Mr. Cooke, was applied to lately for all information concerning the progress of the insect war in California, and he sent them full accounts of our anti-insect laws, etc. They are preparing for a vigorous campaign before the Oregon Legislature. The Oregon State Horticultural Society has issued an address, in which it is shown that: "Large and valuable parts of the State are already badly infested, and they are rapidly spreading over more territory. Whence came those insects? Most of them were imported on trees, scions and vines, but a large proportion came from California, hid in the fruit and in the crevices of boxes, scattering broadcast over the land something as much to be dreaded in orchards as the yellow fever or small-pox would be in your families and homes. The system of fruit growing, as practiced by a large number of your orchardists, may be termed the go-as-you-please order, and has produced a chaos from which order can only be restored by the aid of legislation, and such legislation can be obtained, and the object of this meeting is to construct a solid foundation upon which can be organized a united warfare for the extermination of those evils which, through negligence, have been allowed to spread throughout the orchard and fruit-growing counties. Let it be distinctly understood that no longer will orchard property be allowed to be kept, as it were, for the express purpose of propagating insect pests, and to spread contagion in the neighborhood where such property is located. Such places should at once be declared a public nuisance. The shipments of fruits or other transportable material infested by insect pests should no longer be allowed without incurring the penalties of the law."

The "Rural" in Country Homes.

EDITORS PRESS:—In our travels through the upper and central portions of this great State, organizing Union Sunday schools, we frequently come across your valuable paper, and, as far as we are able to judge, it is favorably received by the farmers, and is doing good service. We hail with pleasure the introduction of such papers into the homes of our people as the PACIFIC RURAL PRESS. Its influence is wise and salutary, and its past history is no doubt an earnest of what may be expected in the future. May its power and efficiency increase, until the light from its weekly repository of knowledge shall illuminate the happy hearthstone of every household in the Golden State. I. W. SNOWDEN, San Jose, Cal.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 18, 1882.

LIVERPOOL, Oct. 17.—The spot market is higher, at 9s 2d @ 9s 5d. Cargoes, higher, at 4s 9d @ 4s 10d for just shipped, and 4s 6d for nearly due and off coast. Receipts for the past 3 days, 315,000 cts, including 225,000 American.

The Foreign Review.

LONDON, Oct. 16.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The weather continues favorable. Some provincial markets are a shilling higher for fine dry Wheat, but in the London market prices are unchanged. Flour is dull, but quotations are nominally unaltered. Malting barley is in steady demand. Oats, hardening. The foreign Wheat trade is in a state of suspension. Prices remain the same, except for Red Winter, which is about 6d higher. Flour is quotably unaltered. Stocks are very heavy and imports are likely to continue on a large scale. Malting barley is dearer, the available supply being very small. Off-coast cargoes are very quiet, buyers acting with great caution. There were 15 fresh arrivals; 7 cargoes have been sold, 6 withdrawn and 11 remain, 9 of which are American. Over 20 cargoes are due this week. The sales of English Wheat for the past week amount to 14,807 quarters, at 39s 2d per quarter, against 61,378 quarters, at 47s 1d for the corresponding period of last year.

Freights and Charters.

Charters continue fairly active, at 22 5s for iron vessels in the United Kingdom, which has been the rate for about two weeks. The engagements for the week past were 13 vessels, of a register of 19,672, or a carrying capacity of 29,608 short tons, or 690,160 cts. The chartered Wheat fleet now in port has a register of 69,044, or an export capacity of 103,566 short tons, or 2,071,320 cts, against 89,040 tons at the same time last year. There is also a chartered bark of 970 tons at San Diego. The disengaged tonnage in port continues excessive, being 70,253 register, or a carrying capacity of 106,879 short tons, or 2,107,580 cts, against 13,024 tons at the same time last year. There is also a disengaged register of 7,536 at Wilmington. Tonnage now on the way to this port has a register of 240,382, against 368,364 at the same time in 1881, and 201,763 in 1880. Notwithstanding this formidable showing of tonnage, freights are steady. The ship *Tam O'Shanter*, 1,603 tons, is chartered for Wheat to Liverpool direct, 22; British iron ship *Lady Cairns*, 1,265 tons, Cork, 22 5s; British iron ship *Steelfield*, 1,315 tons; Liverpool or Havre, 22 3s 6d; British iron bark *Embleton*, 1,200 tons, Cork or continent, 22 7s 6d; British iron ship *Wiltshire*, 1,461 tons, Cork or continent, 22 7s 6d, rechartered.

Eastern Wool Markets.

PHILADELPHIA, October 17th.—Wool, quiet and strong, but without material change.

BOSTON, October 17th.—Wool steady, but in moderate demand for all kinds, and prices continue to be sustained with fair average transactions. Ohio and Pennsylvania fleeces are quoted at 41¢ @ 42¢ for X and 42¢ @ 44¢ for XX and above. Michigan X fleeces are firm at 38¢ @ 40¢. Combings and delaine fleeces are in demand. Sales, 4½¢ @ 4c for fine delaine, 46¢ @ 50¢ for fine and medium combing; unwashed steady and in demand at 25¢ @ 30¢ for fine and medium grades, and 18¢ @ 24¢ for low and coarse. In California Spring Wool the sales have been moderate and principally at 25¢ @ 30¢ for all California. There is no inquiry for washed wools, which are firm and in steady demand. Choice Eastern and Maine superiors, 45¢ @ 50¢; common and good superiors, 28¢ @ 40¢. There is no desirable assortment of foreign wools on the market and very little has been gone.

New York, October 14th.—In California produce there is a fair movement at steady prices. Wool, steady, with sales of 85,000 lbs of Spring at 25¢ @ 31¢.

Eastern Grain and Provision Markets.

CHICAGO, October 17th.—Wheat weak and lower; regular, 96¢ October; 97¢ November; Winter, 94¢; Spring 90¢. Corn, weak and lower; 64¢ cash; 67¢ November; 62¢ year. Pork, weak and lower, 24 1/2¢ October; 25 1/2¢ November. Lard, weak; 13 1/2¢ October; 13 3/4¢ November; 11 1/2¢ year.

New York Hop Market.

New York, October 14th.—Hops, very firm; sales including a small lot of California at 70¢.

New York Dried Fruit Markets.

New York, October 14th.—Dried apples meet a fair call; prices firm. A fine lot of California sun-dried plums are held at 15¢.

BAGS.—Prices remain about the same. Standard California Wheat Bags, in round lots, are held at 8½¢ @ 9¢; jobbing lots 1¢ higher. Potato Gunnies, 17½¢. Wool Bags, 42½¢ @ 45¢, as to weight. Burlaps, 7½¢ for 40-inch; 8½¢ for 45-inch; 12½¢ for 60-inch. Hop Cloth, 11¢ @ 11½¢. Oak Land Bags, *Sussex*; Dundee, *Sussex*.

BARLEY.—Business is pretty dull, but there has been a slight recovery in price of Feed. Brewing and Malting continue quiet and steady. Feed is quotable at \$1.27½ @ \$1.31½; Brewing, \$1.35 @ \$1.40; Chevalier, \$1.35 @ \$1.50. Sales on the Grain Exchange of 400 No. 1 Feed, December, \$1.35 @ 1/2¢.

BEANS.—Receipts are very generally stored. The largest day's receipts of the season came in on Tuesday (5,095 sacks), and went into store for advance prices.

CORN.—Yellow Corn is freely offered and weak, though there is a good demand for White.

DAIRY PRODUCE.—The prices for Butter seem to be on the down grade, and on Tuesday were about 2½¢ lower than on Monday. In drin or pickled roll there is no change, however. Oleomargarine has come into the market under its proper name, and sells in drins at 25¢. A sale of 20,000 lbs is reported for Australia. The factory in this city is said to have a capacity of 18,000 lbs daily. Cheese seems to be pretty firm, the best California holding still at 14¢.

EGGS.—Shippers in the country, now that the market is falling, are sending down freely, thus weakening the market. When the market was up they held back supplies.

FEED.—Bran is weaker. Good shipments of Hay bring top figures, but a good deal is coming in in a damaged condition.

FRESH MEAT.—Beef is steady, Mutton plentiful, and live Hogs have declined a little.

FRUIT.—A few Peaches, with Apples, Meons, and Grapes, make up the market, with unchanged prices.

HOPS.—The tendency is upward, though prices as yet are unchanged.

OATS.—Oats are coming in slowly, and holders are gradually advancing prices.

ONIONS.—There are large supplies on hand, and prices are weak.

POTATOES.—There are free arrivals, and, while Sweet potatoes are doing better, others continue somewhat weak.

PROVISIONS.—Prices are pretty steady, Bacon only dropping a shade.

POULTRY AND GAME.—Poultry remains unchanged, with the exception of Ducks, which have gone up. Prices of Game have declined a little under liberal supplies.

VEGETABLES.—Vegetables are rather dull, with no special changes to note.

WHEAT.—The Wheat market is quiet but firm, owing to a rise in both spot and cargo lots at Liverpool. The shippers continue to do most of their buying in the country for future delivery, so that the volume of business in San Francisco is slowly but steadily growing less. No. 1 is quotable at \$1.65, No. 2 at \$1.62½ and extra choice at \$1.67½. As an example of the method pursued by exporters in buying in the country, it is reported, by the *Call*, that a San Francisco shipper has bought, for \$35,000, about 25,000 cts, the full yield of the Bosquejo ranch, near Chico. Sales on the Grain Exchange of 300 tons No. 2, October, \$1.61, and 600 November, \$1.63.

WOOL.—Prices show no perceptible change. As we stated last week, there are large stocks on hand; they are estimated at about 4,000,000 lbs. Trade is fair.

Domestic Produce.

WHOLESALE.		WEDNESDAY M., Oct. 18, 1883	
BEANS & PEAS.			
Bayo, cts.	35	Early Rose.....	90 @ 1 00
Castor.....	25 @ 4 00	Petaluma, cts.....	@ —
.....	50 @ 4 00	Tomatoes.....	1 00 @ 1 15
Pea.....	87 1/2 @ 4 00
Red.....	3 00	" Kidney.....	— @ —
.....	—	" Peachblow.....	— @ —
Pink.....	— @ 3 00	Jersey Blue.....	— @ —
Large White.....	3 50 @ 4 00	Cuffey Co.....	— @ —
Small White.....	3 50 @ 4 00	River, red.....	90 @ 1 00
Lima.....	25 @ 4 50	Chile.....	1 00 @ 1 15
Field Peas, 5 lb eye.....	25 @ 5 00	do, Oregon.....	— @ —
.....	62 @ 25	do, Oregon.....	1 00 @ 1 15
BROOM CORN			
Southern.....	3 @ 6	Salt Lake.....	12 1/2 @ 25
Northern.....	4 @ 6	Sweet.....	12 1/2 @ 25
POULTRY & GAME.			
California.....	4 @ 4 1/2	Hens, doz.....	8 00 @ 7 50
German.....	5 @ 7	Roosters.....	5 50 @ 5 00
DAIRY PRODUCE, ETC.			
Cal. Fresh Roll, 1 lb.	40 @ 42	Broilers.....	4 00 @ 7 50
do Fancy Branda.	40 @ 45	Ducks, tame, doz.....	10 00 @ 8 00
Pickle Roll.....	30 @ 32 1/2	do, Mallard.....	4 50 @ 6 00
Firkin, new.....	25 @ 31 1/2	do, Teal.....	1 50 @ 2 00
Eastern.....	20 @ 25	do, Spruce.....	50 @ 60
New York.....	@ —	Goose, pair.....	1 25 @ 50
CHEESE.			
Cheddar, Cal., 5 lb.	13 1/2 @ 14	do, young.....	1 50 @ 2 00
Cal. Fresh, doz.....	40 @ 45	Wild Gray, doz.....	3 00 @ 5 00
Ducks.....	— @ —	White do.....	50 @ 1 00
Oregon, by exp's.....	25 @ 30	Turkey.....	16 @ 17
Pickled here.....	— @ —	do, Dressed.....	— @ —
Utah.....	27 1/2 @ 32	Turkey Feather.....	10 @ 20
FEED.			
Bran.....	21 @ 20	Boys, Eng.....	75 @ 90
Corn Meal.....	21 @ 20	do, Common.....	50 @ 75
Hay.....	21 @ 20	Qual, dos.....	1 25 @ 1 37 1/2
Kidlings.....	21 @ 20	Rabbit.....	1 50 @ 1 75
Oil Cake Meal.....	21 @ 20	Hare.....	2 00 @ 2 25
Straw.....	21 @ 20	Venison.....	3 @ 4

Leather.

[WHOLESALE.]		WEDNESDAY, M., Oct. 18, 1882.	
Sole Leather, heavy, D.	30	@	22
Light	35	@	25
Jodot, 9 to 10 Kil, doz.	35	@	25
11 to 13 Kil	40	@	26
14 to 16 Kil	45	@	27
Second Choice, 11 to 16 Kil	40	@	25
Simon Ulmo, Females, 12 to 13 Kil	52	@	26
11 to 15 Kil	60	@	24
16 to 17 Kil	66	@	28
Simon, 18 Kil	—	@	27
24 Kil	—	@	30
Kips, French B.	85	@	1 20
Cal, doz.	55	@	50
French Sheep, all colors	12	@	15
Eastern Calf for Backs, B.	1 00	@	1 25
Sheep Roams for Topping, all colors, doz.	50	@	10
For Linings	3 00	@	5 50
Cal. Russian Sheep, doz.	—	@	4 50
Boat Laps, French Calf, pair	—	@	4 00
Good French Calf	4 75	@	5 00
Best Jodot Calf	35	@	36
Leather, Harness, B.	45	@	40
Fair Bridle, doz.	45	@	36
Skirting, B.	30	@	36
Wells, doz.	17	@	20
Buff, B.	19	@	20
Wax Side	19	@	20

General Merchandise.

WHOLESALE.		WEDNESDAY M., Oct. 18, 1882.	
CANDLES.		Cement, Rosen-	
Crystal Wax, 1 lb.	25 @ 18	Portland, 1 75 @ 2 00	
Paraffine, 1 lb.	25 @ 18	do, 1 75 @ 2 00	
Patent Sperm, 1 lb.	25 @ 28		
CANNED GOODS.		OILS.	
Assorted Pic Fruits.		Assorted sizes, keg 3 75 @ 4 00	
2 lb cans.....	2 25 @		
Table do.....	3 50 @	Pacific Glue Co.	
Jams and Jellies.....	7 75 @	Neatsfoot, No. 1	10 @ 01 00
Pickles, 1/2 gal.....	3 25 @	Cassor, No. 1.....	— @ 01 05
Sardines, q box.....	1 67 @	No. 2.....	— @ 01 05
Hf Boxes.....	2 50 @ 1 90	Baker's A.....	— @ 01 30
Merry, Paul & Co.		Oliver, Plagnoli.....	5 25 @ 01 35
Preserved Beef		Possel.....	4 75 @ 01 25
2 lb. doz.....	3 25 @ 3	Palm, B.....	9 @ —
do, 6 doz.....	6 50 @ 3	Linsseed, Raw, bbl	— @ 00 50
Preserved Mutton		Cocoanut.....	60 @ —
2 lb. doz.....	3 25 @ 3 50	China nut, cas.....	68 @ 00 69
Beef Tongue.....	7 75 @ 00 00	Sperm.....	1 40 @ —
Preserved Ham,		Coast Whales.....	35 @ —
2 lb. doz.....	5 50 @ 00 50	Polar.....	— @ 01 00
Deviled Ham, 1 lb.		Petrol.....	18 @ 01 20
do Ham & 1/2 doz 2 50 @		Petroleum (100°)	23 @ 00 35
Boneless Figs Feet		PAINTS.	
3 lbs.....	3 50 @ 3 75	Pure White Lead.	7 75 @ 3
2 lbs.....	2 75 @	Whiting.....	1 10 @ —
Spiced Ham.....	3 50 @	Putty.....	4 @ 3
Head Cheese 3 Rm 3 50 @		Chalk.....	1 10 @ —
COAL-Jobbing.		Paria White.....	2 10 @ —
Australian, ton.....	— @ 8 00	Ochre.....	3 @ —
Ocoa Bay.....	— @ 6 00	Venetian Red.....	3 @ —
Bellingham Bay.....	— @ 6 00	Averil mixed Paint.....	— @ —
Seattle.....	— @ 6 00	White & Tinta.....	2 00 @ 02 00
Cumby.....	— @ 13 00	Green, Blue and	
Mt Diablo.....	— @ —	Ch Yellow.....	3 00 @ 03 50
Lehigh.....	— @ —	Light Red.....	3 00 @ 03 50
Liverpool.....	— @ —	Metallic Red 1 30 @ 01 60	
West Hartley.....	— @ 8 00	IRON.	
Scotch.....	— @ 8 00	China Mixed, B.....	4 @ 5
Shannon.....	— @ —	Hawian.....	4 @ 6
Vancouver Id.....	— @ —	SALT.	
Wellington.....	— @ 9 00	Cal. Bay, ton.....	11 00 @ 22 00
Charcoal, sack.....	— @ —	Common.....	6 50 @ 14 00
Coke, bush.....	— @ —	Carmen Id.....	14 00 @ 22 00
COFFEE.		Liverpool.....	10 00 @ 20 00
Sandwich Is.....	— @ —	HOPS.	
Costa Rica.....	12 @ 14	Castle, B.....	9 @ 10
Guatemala.....	12 @ 14	Common brands.....	11 @ 6
Java.....	18 @ 20	Fancy Brands.....	7 @ 8
Manilla.....	15 @ —	SPICES.	
Ground, in c.....	— @ 23 1/2	Gloves, B.....	37 @ 40
TEA.		Cassia.....	31 @ 30
Sac to Dry Cod.....	— @ 7	Nutmegs.....	85 @ 90
do in Cases.....	— @ 7 1/2	Pepper Grain.....	15 @ 16
Eastern Cod.....	7 @ 7 1/2	Pimento.....	16 @ 17
Salmon, bbls.....	7 00 @ 7 50	Mustard, Cal & B	
Hf bbls.....	3 50 @ 4 00	Glass.....	— @ 25
1 lb cans.....	1 12 @ 1 23 1/2	ETC.	
Pick Cod, bbl.....	— @ —	Cal. Cube B.....	— @ 15 1/2
Hf bbls.....	— @ —	Powdered.....	— @ 13 1/2
Mackerel, No. 1		Fine Crushed.....	— @ 12 1/2
Hf bbls.....	8 50 @ 9 00	Granulated.....	— @ 12
In Kits.....	1 65 @ 1 70	Golden C.....	— @ 10 1/2
Ex Mess.....	3 00 @ 3 25	Syrup.....	65 @ 30
Boxed Herring.....	3 00 @ 3 50	Young Hyson.....	25 @ 30
Boston Smoked		TEA.	
Herring.....	65 @ — 70	Moyns, etc.....	40 @ 65
LIME, etc.		Country pkd Gun-	
Plaster, Golden		powder & Im-	
Gate Mills.....	3 00 @ 3 25	Portland.....	35 @ 75
La Pk Plaster.....	— @ —	Hyson.....	30 @ 35 1/2
do.....	10 00 @ 12 50	Foo-Chow O.....	27 1/2 @ 32
Lime, State Cruz		Japan, medium.....	35 @ 37
bbl.....	1 25 @ 1 50		

IMPROVED EUREKA GANG PLOW, WITH LAND GAUGE.

FIRST PREMIUM

At the State Fairs of 1877, 1878, 1879, 1880, 1881 and 1882, and numerous County Fairs.

This implement has received more State and County Fair Premiums, has been successful in more plowing contests, and has met with a more extensive sale, than any Gang Plow ever invented.

It has been the plow against which all dealers and manufacturers interested in the sale of other Gangs have waged their fiercest war, and the one by which inventors have measured their efforts, well knowing that if they could make a more satisfactory implement than the Eureka, they could justly claim to have the best.

The efforts in this direction, both by Eastern and California Inventors, have been strenuous and unremitting, and possibly might have been crowned with success, but for certain stumbling blocks in the shape of broad patents, covering all essential points, whose validity they have compelled us to establish in the courts.

Among these is the Land Gauge Attachment that enables the driver to give the plow more or less land while in motion; the device for changing the plane of the wheels, and the detachable hubs of the wheels, which can be easily and cheaply renewed when worn out.

The Mold Boards are extra heavy, and of double thickness in front where the wear comes, and are so hard that a file will not scratch them. The Shares are of cast cast-steel, tough and strong, and can be drawn, sharpened and welded by any man capable of welding wrought iron. Care must be taken to work them at a low red heat, rather lower than that required for common cast steel, and in tempering them they should be allowed to lie in the water until entirely cold. Temper them at a dark heat.

The Landside is a strip of steel that can be cheaply replaced when worn out. N. B.—In sending for Extra Shares be careful to state whether S. P. No. 2 or 3 is wanted. S. P. No. 2 is 10-inch, and S. P. No. 3 is 12-inch.

We also furnish the Eureka Gang with "DIAMOND" BOTTOMS. Particular attention is called to these Bottoms, which have several features that are new and valuable. The Landside is provided, near its forward end, with a peculiarly formed dove-tail lock that assists greatly in retaining the Share in its place. The lock, however, is not depended on to wholly hold the Share, but bolts also are used in the ordinary manner. The Bottom of the Landside (the part that always wears out first) is a detachable steel bar that can be replaced, when worn, for a trifle, and the Landside is again as good as new. This method of construction ensures a light and yet a very strong plow, and one that will last much longer than an ordinary bottom. They are called "Diamond Bottoms" because the figures designating the various parts and sizes are placed in a sunk diamond-shaped panel (<>). In ordering, please be careful to state that you want plows or parts marked "Diamond 1," or "Diamond 2," or "3," etc. We have other plows marked by the figures 1, 2 and 3, etc., and if the customer does not expressly say DIAMOND in his order the wrong article may be sent.

SLIP-SHARE BOTTOMS are preferred by many, as the Share employs but one bolt, that is easily got at in addition to the lug slot, to fasten it on, and is the only Slip-share that has proven to be wholly satisfactory. Its use enables the construction of very strong and yet light Bottoms, which are very firmly attached to the iron beam. These bottoms have patent iron center mold boards that are chemically hardened, and the Shares are either our own hand make or else the best cast cast-steel.

CAUTION.—All of our Gangs are made under patents covering the Lifting Lever and the Crank Axle. Judgment in the courts has been obtained against one infringer, and others will be prosecuted in due season. We do not know of a two-wheeled Gang in the State that does not infringe our rights. We therefore warn all parties against making, selling or using Gangs infringing patents. The Eureka is also made with a Hillside Attachment, by means of which the axle can be set obliquely across the beams with a lever, thus making the wheels lead up the hill to counteract any tendency the plow may have to slide down hill. The Eureka will continue in the future to be kept up to the high standard of excellence that has characterized it in the past, and the farming community can rest assured that any invention of real merit or utility that may be made on Gang Plows will be secured for it.

Price, Complete with Land Gauge, \$110.

IMPROVED GEM BELT SEED SOWER.

Advantages

OF THE

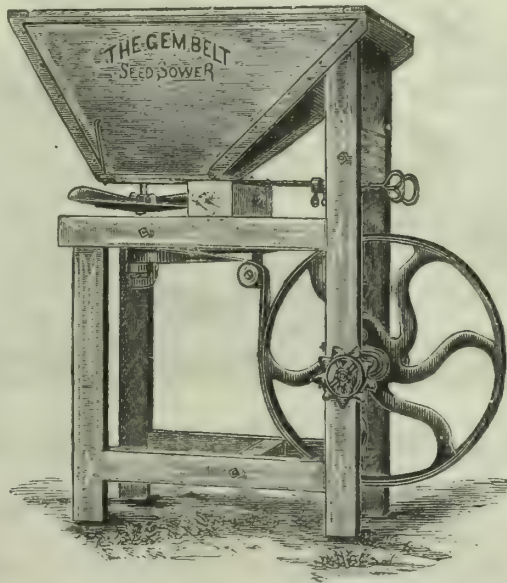
GEM BELT:

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the Wagon; therefore one may be closed when sowing by a fence, ditch or land that is not to be sown.

The Distributor of the GEM whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.

The Gem does not Throw the Seed up into the Air.

To be blown about by the wind, but throws it sharply to the right or left.



The Reasons Why

THE DISTRIBUTOR OF THE

GEM BELT SOWER

Is run by a quarter turn belt, as shown in the engraving, instead of gearing:

The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast running parts, and the evenness with which it sows the grain.

The Gem Sows Blue-Stoned Grain Perfectly.

THE GEM

Sows about Sixty Feet Wide.

DIRECTIONS FOR USING THE GEM SEED SOWER:

Bolt the cast iron rim wheel on the inside of the hind wheel of an ordinary-sized wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the machine to the bottom of the wagon, the disk facing outward; fill the Hopper with grain, and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon), the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean and free from straws, etc.

It is impossible to give directions as to how much the opening should be opened to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and the speed of the team. If the machine is attached to a wheel smaller than 4 ft., 6 in., or 5 ft., and the team walks fast, it will sow too thin behind. We find many attach the machine to Header Wagons; this is objectionable, as they pull hard over plowed ground, and to sow even the horses are compelled to walk slower.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 lbs. \$25 00 | No. 3 Gem, to run with all gears, weight 165 lbs. \$35 00
No. 2 Gem, to run with belt gear, weight 154 lbs. 30 00 | No. 3 only made to order.

The GEM SEED SOWER can only be obtained from us, as we are the Sole Manufacturers.

San Francisco.

BAKER & HAMILTON.

Sacramento.

News in Brief.

Ducks are plentiful on the lakes and sloughs of Southern California.

Two whales were captured by the Monterey Whaling Co. last week.

A TELEGRAPH cable is to be laid under Lake Superior next summer.

CHICAGO is rejoicing over the arrival of a band of Oregon sheep.

The commission of over 350 postmasters will expire at the next session of Congress.

The average death rate from yellow fever in Mien and Camargo, Mexico, is 11 daily.

The British ship *Bremen* from Liverpool went ashore on Farallone island, and is a total loss.

FLOATING ice has caused a suspension of navigation on the Volga and Kama rivers in Russia.

INGERSOLL still charges the Government with attempting to bribe the jury in the Star Route cases.

The Vanderbilt party's special train ran at the rate of 59 miles an hour from Burlington to Chicago.

The Committee on the Channel Tunnel have made a report unfavorable to the project, as dangerous to England.

A FARMERS' ditch company of Orangethorpe has been incorporated in Los Angeles for distributing water for agricultural purposes.

The Australian cricket team took £11,000 hard cash with it from England, as the result of its professional tour through that country.

The retirement from active service, by the operation of the law, of Major-General McDowell, October 15th, is officially announced to the army.

FROM three grapevines growing in a Washington street vineyard at Los Angeles, 360 lbs. of grapes were picked, and the vines were not stripped.

FARMERS on the Swinomish, W. T., are puzzled over the appearance of a short, thick, yellowish worm which has been operating among the grain this season, destroying the roots when green.

SHINGLES are in such demand at Seattle, W. T., and have risen so in price that an importation of 250,000 is being made from California, the only importation in at least a quarter of a century.

THE National Dress Society of Great Britain offers a prize of £30 for "the design of a female garment combining ease, elegance, comfort and health." The "divided skirt" has been condemned.

AFTER a thorough discussion, the Congress of Jurists at Caswell has unanimously answered the important and much-debated question, "Is the State bound to indemnify condemned persons when acquitted on a second trial?" in the affirmative.

Injurious Insects in Oregon.

Oregon fruit growers are waking up to the fact that injurious insects are spreading rapidly through their orchards. Our Horticultural Officer, Mr. Cooke, was applied to lately for all information concerning the progress of the insect war in California, and he sent them full accounts of our anti-insect laws, etc. They are preparing for a vigorous campaign before the Oregon Legislature. The Oregon State Horticultural Society has issued an address, in which it is shown that: "Large and valuable parts of the State are already badly infested, and they are rapidly spreading over more territory. Whence came those insects? Most of them were imported on trees, scions and vines, but a large proportion came from California, hid in the fruit and in the crevices of boxes, scattering broadcast over the land something as much to be dreaded in orchards as the yellow fever or small-pox would be in your families and homes. The system of fruit growing, as practiced by a large number of your orchardists, may be termed the go-as-you-please order, and has produced a chaos from which order can only be restored by the aid of legislation, and such legislation can be obtained, and the object of this meeting is to construct a solid foundation upon which can be organized a united warfare for the extermination of those evils which, through negligence, have been allowed to spread throughout the orchard and fruit-growing counties. Let it be distinctly understood that no longer will orchard property be allowed to be kept, as it were, for the express purpose of propagating insect pests, and to spread contagion in the neighborhood where such property is located. Such places should at once be declared a public nuisance. The shipments of fruits or other transportable material infested by insect pests should no longer be allowed without incurring the penalties of the law."

The "Rural" in Country Homes.

EDITORS PRESS:—In our travels through the upper and central portions of this great State, organizing Union Sunday schools, we frequently come across your valuable paper, and, as far as we are able to judge, it is favorably received by the farmers, and is doing good service. We hail with pleasure the introduction of such papers into the homes of our people as the PACIFIC RURAL PRESS. Its influence is wise and salutary, and its past history is no doubt an earnest of what may be expected in the future. May its power and efficiency increase, until the light from its weekly repository of knowledge shall illuminate the happy hearthstone of every household in the Golden State. I. W. SNOWDEN, San Jose, Cal.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 18, 1882.

LIVERPOOL, Oct. 17.—The spot market is higher, at 9s 2d @ 9s 5d. Cargoes, higher, at 44s 9d @ 46s for just shipped, and 44s 6d for nearly due and off coast. Receipts for the past 3 days, 315,000 cts, including 225,000 American.

The Foreign Review.

LONDON, Oct. 16.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The weather continues favorable. Some provincial markets are a shilling higher for fine dry wheat, but in the London market prices are unchanged. Flour is dull, but quotations are nominally unaltered. Malt barley is in steady demand. Oats, hardening. The foreign wheat trade is in a state of suspension. Prices remain the same, except for Red Winter, which is about 6d higher. Flour is notably unaltered. Stocks are very heavy and imports are likely to continue on a large scale. Maize is about 2s dearer, the available supply being very small. Off-coast cargoes are very quiet, buyers acting with great caution. There were 15 fresh arrivals; 7 cargoes have been sold, 6 withdrawn and 11 remain, 9 of which are American. Over 20 cargoes are due this week. The sales of English Wheat for the past week amounted to 14,807 quarters, at 39s 2d per quarter, against 61,378 quarters, at 47s 1d for the corresponding period of last year.

Freights and Charters.

Charters continue fairly active, at 22s for iron vessels in the United Kingdom, which has been the rate for about two weeks. The engagements for the week past were 13 vessels, of a register of 19,072, or a carrying capacity of 29,508 short tons, or 690,160 cts. The chartered Wheat fleet now in port has a register of 69,044, or an export capacity of 103,566 short tons, or 2,071,320 cts, against 89,040 tons at the same time last year. There is also a chartered bark of 970 tons at San Diego. The disengaged tonnage in port continues excessive, being 70,258 register, or a carrying capacity of 106,379 short tons, or 2,107,580 cts, against 13,024 tons at the same time last year. There is also a disengaged register of 7,535 at Wilmington. Tonnage now on the way to this port has a register of 240,382, against 303,684 at the same time in 1881, and 201,763 in 1880. Notwithstanding this formidable showing of tonnage, freights are steady. The ship *Tam O'Shanter*, 1,403 tons, is chartered for Wheat to Liverpool direct, 22s; British iron ship *Lady Cairns*, 1,265 tons, Cork, 22s 6d; British iron ship *Steelfield*, 1,315 tons; Liverpool or Havre, 22s 6d; British iron bark *Embleton*, 1,200 tons, Cork or Continent, 22s 6d; British iron ship *Wiltshire*, 1,461 tons, Cork or Continent, 22s 6d, rechartered.

Eastern Wool Markets.

PHILADELPHIA, October 17th.—Wool, quiet and strong, but without material change.
BOSTON, October 17th.—Wool steady, but in moderate demand for all kinds, and prices continue to be sustained with fair average transactions. Ohio and Pennsylvania fleeces are quoted at 41¢ @ 92¢ for X and 42¢ @ 44¢ for XX and above. Michigan X fleeces are firm at 38¢ @ 40¢. Combing and delaine fleeces are in demand. Sales, 44¢ @ 46¢ for fine delaine, 46¢ @ 50¢ for fine and medium combing; unwashed steady and in demand at 26¢ @ 30¢ for fine and medium grades, and 18¢ @ 24¢ for low and coarse. In California Spring Wool the sales have been moderate and principally at 25¢ @ 35¢ for all California. There is no inquiry for pulled wools, which are firm and in steady demand. Choice Eastern and Maine superiors, 45¢ @ 50¢; common and good superiors, 28¢ @ 40¢. There is no desirable assortment of foreign wools on the market and very little has been done.

NEW YORK, October 14th.—In California products there is a fair movement at steady prices. Wool, steady, with sales of 83,000 lbs of Spring at 25¢ @ 31¢.

Eastern Grain and Provision Markets.

CHICAGO, October 17th.—Wheat weak and lower; regular, 96¢ October; 97¢ November; Winter, 96¢; Spring 96¢. Corn, weak and lower; 68¢ cash; 67¢ November; 68¢ year. Pork, weak and lower, 24.25 October; 22.35 November. Lard, weak; 13 October; 12.32 November; 11.60 year.

New York Hop Market.

NEW YORK, October 14th.—Hops, very firm; sales including a small lot of California at 70¢.

New York Dried Fruit Markets.

NEW YORK, October 14th.—Dried apples meet a fair call; prices firm. A fine lot of California sun-dried plums are held at 15¢.

BAGS.—Prices remain about the same. Standard Calcutta Wheat Bags, in round lots, are held at 8¢ @ 9¢; jobbing lots 1¢ higher. Potato Gunnies, 17¢. Wool Bags, 42¢ @ 45¢, as to weight. Burlaps, 7¢ for 40-inch; 8¢ @ 9¢ for 45-inch; 12¢ for 60-inch. Hop Cloth, 11¢ @ 11½¢. Oakland Bags, 8¢ @ 8½¢; Dundee, 8¢ @ 8½¢.

BARLEY.—Business is pretty dull, but there has been a slight recovery in price of Feed. Brewing and Chevalier continue quiet and steady. Feed is quotable at \$1.27½ @ \$1.31; Brewing, \$1.35 @ \$1.40; Chevalier, \$1.85 @ \$1.60. Sales on the Grain Exchange of 400 No. 1 Feed, December, \$1.31½.

BEANS.—Receipts are very generally stored. The largest day's receipts of the season came in on Tuesday (5,096 cwt), and went into store for advance prices.

CORN.—Yellow Corn is freely offered and weak, though there is a good demand for White.

DAIRY PRODUCE.—The prices for Butter seem to be on the down grade, and on Tuesday were about 2½¢ lower than on Monday. In firkin or pickled roll there is no change, however. Oleomargarine has come into the market under its proper name, and sells in firkins at 25¢. A sale of 20,000 lbs is reported for Australia. The factory in this city is said to have a capacity of 18,000 lbs daily. Cheese seems to be pretty firm, the best California holding still at 14¢.

EGGS.—Shippers in the country, now that the market is falling, are sending down freely, thus weakening the market. When the market was up they held back supplies.

FEED.—Barley is weaker. Good shipments of Hay bring top figures, but a good deal is coming in in a damaged condition.

FRESH MEAT.—Beef is steady, Mutton plentiful, and live Hogs have declined a little.

FRUIT.—A few Peaches, with Apples, Melons, and Grapes, make up the market, with unchanged prices.

HOPS.—The tendency is upward, though prices as yet are unchanged.

OATS.—Oats are coming in slowly, and holders are gradually advancing prices.

ONIONS.—There are large supplies on hand, and prices are weak.

POTATOES.—There are free arrivals, and, while Sweeties are doing better, others continue somewhat weak.

PROVISIONS.—Prices are pretty steady, Bacon only dropping a shade.

POULTRY AND GAME.—Poultry remains unchanged, with the exception of Ducks, which have gone up. Prices of Game have declined a little under liberal supplies.

VEGETABLES.—Vegetables are rather dull, with no special changes to note.

WHEAT.—The Wheat market is quiet but firm, owing to a rise in both spot and cargo lots at Liverpool. The shippers continue to do most of their buying in the country for future delivery, so that the volume of business in San Francisco is slowly but steadily growing less. No. 1 is quotable at \$1.65, No. 2 at \$1.62½ and extra choice at \$1.67½. As an example of the method pursued by exporters in buying in the country, it is reported, by the *Call*, that a San Francisco shipper has bought, for \$35,000, about 25,000 cts, the full yield of the Bosquejo ranch, near Chico. Sales on the Grain Exchange of 300 tons No. 2, October, \$1.01, and 500 November, \$1.63.

WOOL.—Prices show no perceptible change. As we stated last week, there are large stocks on hand; they are estimated at about 4,000,000 lbs. Trade is fair.

Domestic Produce.

WHOLESALE.	WEDNESDAY M., Oct. 18, 1882.
BEANS & PEAS.	
Bayo, cts.	37 1/2
Butter.	3 25 @ 3 50
Castor.	3 50 @ 4 00
Pea.	3 75 @ 4 00
Red.	3 50 @ 4 00
Large White.	3 50 @ 4 00
Small White.	3 50 @ 4 00
Lima.	2 50 @ 3 00
Field Peas, blk eye 25	2 50 @ 3 00
do, green.	2 50 @ 3 00
BROOM CORN.	
Southern.	3 00 @ 3 50
Northern.	4 00 @ 4 50
CHICORY.	
California.	4 00 @ 4 50
German.	6 00 @ 6 50
DAIRY PRODUCE, ETC.	
Cal. Fresh Roll B.	40 @ 42 1/2
do, Fancy Branda.	45 @ 47 1/2
Pickle Roll.	30 @ 32 1/2
Firkin, new.	29 @ 31 1/2
Eastern.	20 @ 25
New York.	20 @ 25
CHEESE, Cal. B.	13 1/2 @ 14
do, Dutch.	40 @ 45
do, Oregon.	25 @ 30
do, Eastern, by ex.	25 @ 30
Pickled here.	27 1/2 @ 30
Utah.	27 1/2 @ 30
FEED.	
Barley, feed, cts.	17 1/2 @ 18 1/2
Corn Meal.	12 00 @ 13 00
Hay.	12 00 @ 13 00
Middlings.	28 00 @ 29 00
Oil Cake Meal.	22 00 @ 23 00
Straw, bales.	55 @ 60
FEEDING.	
Extra, City Mills.	5 25 @ 5 50
do, Country Mills.	4 75 @ 5 00
do, Oregon.	4 75 @ 5 00
do, Walla Walla.	4 50 @ 5 00
Superfine.	3 50 @ 4 00
FEED MEAT.	
Beef, 1st quality.	8 1/2 @ 9 1/2
Second.	8 1/2 @ 9 1/2
Third.	8 1/2 @ 9 1/2
Mutton.	4 1/2 @ 5 1/2
Spring Lamb.	6 1/2 @ 7 1/2
Pork, undressed.	5 1/2 @ 6 1/2
Dressed.	10 1/2 @ 11 1/2
Yeast.	7 1/2 @ 8 1/2
Milk, Calves.	9 1/2 @ 10 1/2
do, choice.	9 1/2 @ 10 1/2
GRAIN ETC.	
Barley, feed, cts.	17 1/2 @ 18 1/2
do, Brewing.	1 3/4 @ 1 1/2
Oatmeal.	1 1/2 @ 1 3/4
Buckwheat.	1 1/2 @ 1 3/4
Corn, White.	62 1/2 @ 65
Yellow.	62 1/2 @ 65
Small Round.	60 @ 62 1/2
Oats.	1 80 @ 1 62 1/2
Milling.	61 1/2 @ 62 1/2
Rye.	1 1/2 @ 1 3/4
Wheat, No. 1.	1 62 1/2 @ 1 65
do, No. 2.	1 62 1/2 @ 1 65
do, No. 3.	1 50 @ 1 62 1/2
Choice Milling.	1 62 1/2 @ 1 65
HIDES.	
Hides, dry.	15 @ 19 1/2
Wet salted.	14 1/2 @ 18 1/2
HOEY, ETC.	
Beeswax, lb.	23 @ 25
Honey in comb.	12 @ 15
Extracted, light.	10 @ 11
do, dark.	5 @ 6
HOPS.	
Oregon.	60 @ 62 1/2
Cal.	60 @ 62 1/2
Wash. Ter.	60 @ 62 1/2
Old Hops.	60 @ 62 1/2
NUTS—Jobbing.	
Walnuts, Cal.	10 @ 11
do, Chile.	7 1/2 @ 8
Almonds, hd shd.	15 @ 17
Soft shell.	15 @ 17
Brazil.	10 @ 12
Pecans.	14 @ 15
Peanuts.	7 @ 8
Filberts.	14 @ 15
ONIONS.	
Red.	30 @ 40
Silverskin.	65 @ 65
POTATOES.	
New, cts.	— @ —

Leather.

WHOLESALE.	WEDNESDAY M., Oct. 18, 1882.
Sole Leather, heavy, lb.	30 @ 32
Light.	25 @ 28
Jodot, 9 to 10 Kil, doz.	35 @ 40
11 to 13 Kil.	50 @ 60
14 to 16 Kil.	65 @ 75
Second Choice, 11 to 13 Kil.	40 @ 45
Simon, Ulmo, Females, 12 to 13 Kil.	52 @ 55
11 to 15 Kil.	60 @ 64
16 to 17 Kil.	60 @ 68
Simon, 18 Kil.	— @ 67
20 Kil.	— @ 60
24 Kil.	— @ 65
Kips, French B.	85 @ 1 20
Cal. doz.	— @ 55
French Sheep, all colors.	12 @ 15
Eastern Calf for Backs, lb.	1 00 @ 1 25
Sheep Roans for Topping, all colors, doz.	9 00 @ 10 00
For linings.	6 50 @ 10 00
Cal. Russet Sheep Linings.	3 00 @ 5 50
Boat Legs, French Calf, pair.	— @ 4 50
Best Jodot Calf.	4 75 @ 5 00
Leather, Harness, lb.	35 @ 40
Fair Bridle, doz.	45 @ 60
Skirting, lb.	33 @ 37
Wet, doz.	30 @ 36
Buff, lb.	17 @ 20
Wax Side.	19 @ 20

General Merchandise.

WHOLESALE.	WEDNESDAY M., Oct. 18, 1882.
Cement, Roson.	
Cement, 1 75 @ 3 00	
Portland, 3 75 @ 4 00	
PAINTS.	
Asphalt sizes, doz.	75 @ 1 00
PAINTS.	
Pacific Blue Co's	
Neatfoot, No. 1	00 @ 1 00
Castor, No. 1	— @ 1 05
do, No. 2	— @ 95
Baker's A.	— @ 95
Oil, Plaster	5 @ 25
Possel	4 75 @ 25
Palm, lb.	9 @ —
Linseed, Raw, bbl	— @ 60
Boiled	— @ 65
Cocunut	80 @ —
Chestnut, lb.	68 @ 69
Sperm, nut, cs.	— @ 60
Coast Whales	35 @ —
Polar	— @ —
Lard	— @ 100
Petroleum (110°)	18 @ 22
Petroleum (150°)	38 @ 35
Pure White Lead	7 1/2 @ 8
Whiting	14 @ —
Putty	4 @ 5
Chalk	14 @ —
Paris White	2 @ —
Cherry	34 @ —
Averi mixed Paint	3 1/2 @ —
White & Tints	3 00 @ 2 00
Green, Blue and	— @ —
Ch Yellow	3 00 @ 3 50
Light Red	3 00 @ 3 50
Metallic Blue	1 50 @ 1 60
CHALK.	
China Mixed, lb.	4 1/2 @ 5
Hawaiian	4 @ 5
Cal. Bay, salt.	14 00 @ 22 00
do, mixed	6 50 @ 14 00
Carnes	10 00 @ 22 00
Liverpool salt	14 00 @ 20 00
SOAP.	
Castle, lb.	9 @ 10
Common brands	4 @ 6
Fancy Brands	7 @ 8
SPICES.	
Cloves, lb.	37 1/2 @ 40
Cassia	85 @ 90
Nutmegs	15 @ 16
Pepper Grain	15 @ 16
Pimento	16 @ 17
Mustard, Cal & lb	— @ 25
Glass.	— @ 25
SUGAR, ETC.	
Cal. Cube B.	— @ 15
Powdered	— @ 15
Fine Crushed	— @ 12
Granulated	— @ 12
Golden C.	— @ 104
Cal Syrup, lb.	65 @ 68
Hawaiian Molasses	25 @ 30
TEA.	
Young Hyson	40 @ 65
Moyune, etc.	— @ 65
Country pkd Gun	— @ 75
powder & Im-	35 @ 75
Land & Flakes	— @ 75
ton	10 00 @ 12 50
Lime, Santa Cruz	— @ 34
bbl.	1 25 @ 1 50
Japan, medium	35 @ 37

Fruits and Vegetables.

[WHOLESALE.]		WEDNESDAY M., Oct. 18, 1882.	
FRUIT MARKET.			
Apples, bk.	35	@	1 55
do, Basket.	40	@	60
Appricots, bk.	50	@	75
Bananas, bunch.	2 50	@	4 00
Blackberries	—	@	10 00
Cantaloupes, crt.	50	@	75
Casaba, each.	—	@	12 1/2
Cherry Plum, lb.	25	@	75
Cocoanuts, 100.	6 00	@	7 00
Crabapples, bak.	—	@	50
Crabberries, bbl.	15 00	@	17 00
Currants, chst.	4 00	@	5 00
Figs, box.	50	@	60
Gooseberries	4	@	8
Grapes, bk.	40	@	50
do, Rose Park	60	@	80
do, Muscat	50	@	60
do, B. Ham'g.	60	@	80
do, Tokay	50	@	60
do, Isabella	70	@	75
Limes, Mex.	8 00	@	9 00
do, Cal. box.	75	@	8 00
Lemons, Cal.	50	@	60
Sicily, box.	—	@	8 00
Australian	—	@	8 00
Nectarines	—	@	5 00
Oranges, Cal. bx.	50	@	6 00
do, Tahiti M.	35	@	40
do, Mexican	15 00	@	17 00
do, Loreto	—	@	10
Peaches, box.	50	@	1 25
do, Smocks	50	@	60
Pears, bak.	45	@	1 00
do, Bartlett, bx.	1 50	@	2 00
do, do, bak.	1 00	@	1 25
Pineapples, doz.	8 00	@	8 50
Plums	40	@	60
Quinces, bak.	—	@	40
do, box.	75	@	1 25
Rhubarb	—	@	40
do, box.	75	@	1 25
Raspberries, chst.	8 00	@	10 00
Straw'ry, chst.	8 00	@	10 00
Wal'nut'ns, 100.	4 00	@	6 00
VEGETABLES.			
Artichokes, bk.	25	@	50
Asparagus, box.	—	@	00
Asparagus, ch.	—	@	00
Cabbage, doz.	87 1/2	@	1 00
Carrots, bk.	40	@	60
Caulliflowr, doz	1 00	@	1 25
Corn, green, sk.	1 00	@	1 25
Cucumbers, bx.	40	@	50
Eggplant, box.	75	@	1 00
Garlic, lb.	—	@	24
do, 100	1	@	11
Lettuce, doz.	—	@	00
Mushrooms, bk.	—	@	00
Okra, green, lb.	—	@	4
Parsa, green, lb.	24	@	34
Parsnips, lb.	—	@	1
Peppers, sk.	50	@	75
do, doz.	—	@	00
Rhubarb, bx.	25	@	75
Squash, Marrow	—	@	00
fat, ton.	8 00	@	10 00
String Beans.	2	@	44
do, wax.	2	@	4
do, Lima, lb.	24	@	34
Sweet'corn Squash,	—	@	00
do, box.	40	@	50
Tomatoes, box.	10	@	25
Turnips, ch.	75	@	1 00

IMPROVED EUREKA GANG PLOW, WITH LAND GAUGE.

FIRST PREMIUM

At the State Fairs of 1877, 1878, 1879, 1880, 1881 and 1882, and numerous County Fairs.

This implement has received more State and County Fair Premiums, has been successful in more plowing contests, and has met with a more extensive sale, than any Gang Plow ever invented.

It has been the plow against which all dealers and manufacturers interested in the sale of other Gangs have waged their fiercest war, and the one by which inventors have measured their efforts, well knowing that if they could make a more satisfactory implement than the Eureka, they could justly claim to have the best.

The efforts in this direction, both by Eastern and California Inventors, have been strenuous and unremitting, and possibly might have been crowned with success, but for certain stumbling blocks in the shape of broad patents, covering all essential points, whose validity they have compelled us to establish in the courts.

Among these is the Land Gauge Attachment that enables the driver to give the plow more or less land while in motion; the device for changing the plane of the wheels, and the detachable hubs of the wheels, which can be easily and cheaply renewed when worn out.

The Mold Boards are extra heavy, and of double thickness in front where the wear comes, and are so hard that a file will not scratch them. The Shares are of cast-steel, tough and strong, and can be drawn, sharpened and welded by any man capable of welding wrought iron. Care must be taken to work them at a low red heat, rather lower than that required for common cast steel, and in tempering them they should be allowed to lie in the water until entirely cold. Temper them at a dark heat.

The Landside is a strip of steel that can be cheaply replaced when worn out.

N. B.—In sending for Extra Shares be careful to state whether S. P. No. 2 or 3 is wanted. S. P. No. 2 is 10-inch, and S. P. No. 3 is 12-inch.

We also furnish the Eureka Gang with "DIAMOND" BOTTOMS. Particular attention is called to these Bottoms, which have several features that are new and valuable. The Landside is provided, near its forward end, with a peculiarly formed dove-tail lock that assists greatly in retaining the Share in its place. The lock, however, is not depended on to wholly hold the Share, but bolts also are used in the ordinary manner. The Bottom of the Landside (the part that always wears out first) is a detachable steel bar that can be replaced, when worn, for a trifle, and the Landside is again as good as new. This method of construction ensures a light and yet a very strong plow, and one that will last much longer than an ordinary bottom. They are called "Diamond Bottoms" because the figures designating the various parts and sizes are placed in a sunk diamond-shaped panel (<>). In ordering, please be careful to state that you want plows or parts marked "Diamond 1," or "Diamond 2," or "3," etc. We have other plows marked by the figures 1, 2 and 3, etc., and if the customer does not expressly say DIAMOND in his order the wrong article may be sent.

SLIP-SHARE BOTTOMS are preferred by many, as the Share employs but one bolt, that is easily got at in addition to the lug slot, to fasten it on, and is the only Slip-share that has proven to be wholly satisfactory. Its use enables the construction of very strong and yet light Bottoms, which are very firmly attached to the iron beam. These bottoms have patent iron center mold boards that are chemically hardened, and the Shares are either our own hand make or else the best cast-steel.

CAUTION.—All of our Gangs are made under patents covering the Lifting Lever and the Crank Axle. Judgment in the courts has been obtained against one infringer, and others will be prosecuted in due season. We do not know of a two-wheeled Gang in the State that does not infringe our rights. We therefore warn all parties against making, selling or using Gangs infringing patents. The Eureka is also made with a Hilloide Attachment, by means of which the axle can be set obliquely across the beams with a lever, thus making the wheels lead up the hill to counteract any tendency the plow may have to slide down hill. The Eureka will continue in the future to be kept up to the high standard of excellence that has characterized it in the past, and the farming community can rest assured that any invention of real merit or utility that may be made on Gang Plows will be secured for it.

Price, Complete with Land Gauge, \$110.

IMPROVED GEM BELT SEED SOWER.

Advantages

OF THE

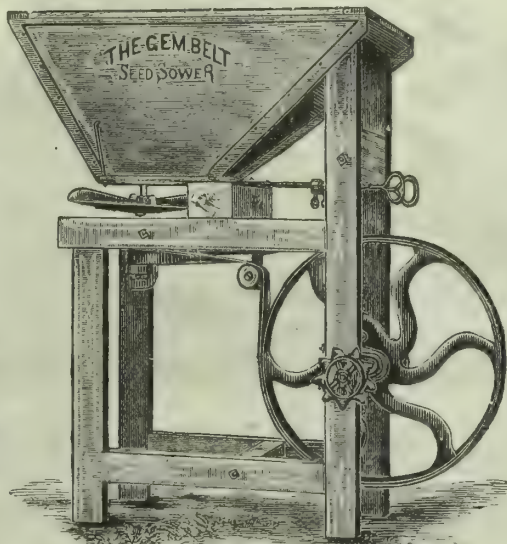
GEM BELT:

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the Wagon; therefore one may be closed when sowing by a fence, ditch or land that is not to be sown.

The Distributor of the GEM whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.

The Gem does not Throw the Seed up into the Air.

To be blown about by the wind, but throws it sharply to the right or left.



The Reasons Why

THE DISTRIBUTOR OF THE

GEM BELT SOWER

Is run by a quarter turn belt, as shown in the engraving, instead of gearing:

The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast running parts, and the evenness with which it sows the grain.

The Gem Sows Blue-Stoned Grain Perfectly.

THE GEM

Sows about Sixty Feet Wide.

DIRECTIONS FOR USING THE GEM SEED SOWER:

Bolt the cast iron rim wheel on the inside of the hind wheel of an ordinary-sized wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the machine to the bottom of the wagon, the disk facing outward; fill the Hopper with grain, and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon), the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean and free from straws, etc.

It is impossible to give directions as to how much the opening should be opened to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and the speed of the team. If the machine is attached to a wheel smaller than 4 ft., 6 in., or 5 ft., and the team walks fast, it will sow too thin behind. We find many attach the machine to Header Wagons; this is objectionable, as they pull hard over plowed ground, and to sow even the horses are compelled to walk slower.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 lbs. \$25 00 | No. 3 Gem, to run with all gears, weight 165 lbs. \$35 00
No. 2 Gem, to run with belt gear, weight 154 lbs. 30 00 | No. 3 only made to order.

The GEM SEED SOWER can only be obtained from us, as we are the Sole Manufacturers.

San Francisco.

BAKER & HAMILTON.

Sacramento.

BEAUREGARD'S PATENT CHANNEL-IRON HARROW.

Manufactured by the Benicia Agricultural Works.

No Thread or Teeth to
Break off,
or Nuts to get Loose.



Is the Boss of the Field.
It combines Strength,
Lightness of Draft and
Durability.

Light, Strong, Durable, Cheap, and Indestructible, Best Iron Harrow Made.

It possesses many advantages over other Iron Harrows now in the market. The frame is made of channel or U-shaped iron of good quality combining both Strength and Lightness. The teeth are made on our special order, of that peculiar pattern to best secure durability, and, like the frame, made light to insure ease of draft. They are driven through the frames and then securely fastened by a clip. The operator is thus enabled to lower them as they wear off, so that they can be kept even at the point and utilized nearly the whole length. The Harrow is usually made in three sections—of 24 teeth each—working independently of each other and adapting themselves to uneven surfaces; pulverizing all the soil alike, and connected, as the cut will show, by a Draft Bar.

This Harrow meets the wants of our farmers in an implement that weather cannot effect, that sun and rain cannot injure, that does its work of pulverization of every inch of the soil in the best possible manner, and at the same time is of light draft for the team.

THERE IS NO THREAD CUT ON END OF TEETH—WHICH WEAKENS THEM, NOR NUTS TO LOOSE OFF, as is the case with other Iron Harrows, but, as before stated, all the objections in other patterns have been obviated in the **Beauregard Patent Channel-Iron Harrow**, and it is now pronounced by practical farmers who have tried all other kinds to be the most successful Harrow in the field that has been introduced on this Coast, and from its merits alone there has sprung up a large trade and active demand. It is an indispensable implement. It surpasses all other Iron Harrows in every particular, costs less for repairs, while the teeth can be replaced in a moment.

OUR CLAIMS have been, and are daily being substantiated by farmers all over the Coast.

Don't make a mistake in ordering, but remember that **BEAUREGARD'S PATENT CHANNEL-IRON HARROW** is the **Best, Cheapest and Lightest Draft.**

PRICES:

1 Section, with 24 Teeth.....	\$14 00	3 Sections, with 72 Teeth and Draft Bar.....	\$42 00
2 Sections, with 48 Teeth and Draft Bar.....	28 00	4 Sections, with 96 Teeth and Draft Bar.....	56 00

Two Sections will cut 9 feet wide; Three Sections will cut 12 feet wide; Four Sections will cut 15 feet wide.
For further particulars, Address

BENICIA AGRICULTURAL WORKS, Benicia, Cal.,

Or BAKER & HAMILTON, Agents, S. F. and Sacramento.



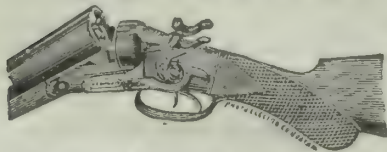
Is the Best Pump in the World. Another
New Improvement is Lewis Patent
Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$8. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,
111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office

THE DAVIS GUN.



The best Shooting Gun for the price. Fine Stub Twist
Barrels. Patented Gun. Patent Torpedo Bombing Gun.
Choke Bored like the Famous Parker
Gun. Every barrel has a record of its shooting
12-Gauge, \$32. 16-Gauge, \$27. Muzzle Loaders, \$15. Send for
Circular and mention this paper. E. T. ALLEN, Sole
Agent, Importer of Firearms and Sporting Goods, 106 Mar-
ket Street, San Francisco, Cal.

CANCER Scientifically Treated and
Radically Cured. No knife,
no caustic, no pain. Book sent
free, containing convincing testi-
monials from responsible persons. Address, **DR. J. McLEISH**, No. 217 West Fourth Street, Cincinnati, O.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. STOCKTON.

Rates, \$1.25 to \$3.00.

Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

To Fish Raisers.

I am now ready to sell Carp which were imported by me
from Germany in 1872. In lots to suit. Address
J. A. POPPE, Sonoma, Cal.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

CHEAPEST.

BOOTH'S SURE DEATH

BEST.

To Squirrels, Gophers, Birds,
Mice, Etc.



Endorsed by the Grange and all others who have
used it

**INFALLIBLE SQUIRREL and GOPHER
EXTERMINATOR.**

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,

San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

ANNUAL STATISTICIAN of 1882.—"It is the most complete
and accurate work of its kind in the world."—S. F. Call.
Address L. P. McCarty, 502 Taylor St. Price, \$4.

Agents can now grasp a fortune. Outfit worth \$10
sent free. Full particulars address E. G. Kimbrough & Co.,
10 Barclay St., N. Y.



A Rapid and Permanent cure or

DYSPEPSIA, INDIGESTION,

Or Rising of Food After Eating.

LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased
Stomach. An immediate relief for CRAMPS, COLIC,
CHOLERA MORBUS, FLUX, or looseness of the Bowels.
A mild and safe invigorant for Delicate Females. An
excellent Appetizer and Renovator of the Digestive
organs; also checks CHILLS and FEVER.

N. B.—Correspondence solicited from Wholesale Drug-
gists and Liquor Dealers. Agents wanted for Pacific
States.

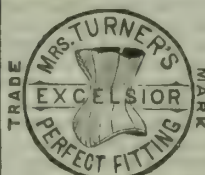
WILLIAMS & CO.,

Sole Proprietors and Manufacturers,

295 Cutter Street, CINCINNATI, OHIO.

MRS. C. V. TURNER,

Inventor and Manufacturer of the



EXCELSIOR

Perfect Fitting

CORSET,

(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice
the above Corset.

Rules for self-measurement sent on application, and a
Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St.,
SAN JOSE, CAL.

All parties are cautioned against making or causing
to be made the above Corset without my License Stamp,
under full penalty of the law.

FOR

MUSICAL SOCIETIES.

Glee and Chorus, easy and difficult, are found in
Emerson's **CHORUS BOOK** (\$1.00), Perkins
AMERICAN GLEE BOOK (\$1.50), Childs
FESTIVAL CHORUS BOOK (\$1.25), Perkins'
GLEE AND CHORUS BOOK (\$1.), **GER-
MAN FOUR-PART SONGS** (\$1.50), and
Zerrahn's **INDEX** (\$1.)

Easy Glee and Part Songs are found in abundance
in Perkins' new **CHORAL CHOIR** (\$1.) and his new
PEERLESS (75 cts.), also in Emerson's **HERALD
OF PRAISE** (\$1.) and **IDEAL** (75 cts.)

1,000 or more separate Octavo Choruses, Glee
and Anthems, each 6 to 10 cents.

First rate Anthems are found in Perkins' **ANTHEM
HARP** (\$1.25), Emerson's **BOOK OF ANTHEMS**
(\$1.25), **AMERICAN ANTHEM BOOK** (\$1.25), and
GEM GLEANER (50 cts.), by Chadwick.

Scenic Cantatas, as **JOSEPH'S BONDAGE**,
(\$1.00), by Chadwick, **BE-BAZZAR** (\$1.), by But-
terfield, and the classic **DON MUNIO** (\$1.50), **COM-
ALA** (80 cts.) and **CHRISTMAS** (80 cts.), by Gut-
ter-son

Send for lists and descriptions.
Any book mailed for retail price.

OLIVER DITSON & CO., Boston.

C. H. DITSON & CO., 843 Broadway, New York.



ASTHMA. The greatest
proof of the genuine merit of
an article can be found in the
amount of patronage it re-
ceives, and the thousands of
testimonials respecting Dr.
Hairs Asthma Cure, proves
most conclusively that it is
all that it is represented to be.
Dr. Hairs' Treatise on Asthma
and Hay Fever contains a
list of cures from every State
and Territory in the United
States, also from every Dominion
of Canada, England and Scotland. Treatise sent
free, address Dr. B. W. HAIR & SON, Cincinnati, Ohio.

Attention, Housekeepers!!

The immense stock of

**Furniture, Carpets, Crockery and House-
hold Goods of**

A. EASTON,

Will be offered at 10 cts from OCTOBER 1st until JAN-
UARY 1st. Bargains for all.

El Dorado Street, One Door South of Main,
STOCKTON, CAL.

Seeds, Plants, Etc.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD.

For sale at low prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at 50 cents each. Send for Catalogue and prices to

C. W. REED & CO.,
Sacramento, Cal.

HOLLAND BULBS



ROSES AND
PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO.
SEEDSMEN,
Rochester, N.Y. & Chicago, Ill.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.

Box 275.

Fruit and Ornamental Trees

OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

FRUIT TREES FOR SALE

Bellevue Nursery.

25,000 Pear Trees, mostly Bartlett; 20,000 Apricot; 15,000 Apple. Also Peach, Plum, Prune, Nectarine, English Walnut and Orange Trees. The above Trees have made a good growth, and are free from disease or any scale or other parasites. For further particulars address P. O. Box 304, Los Angeles, Cal. MILTON THOMAS.

FOR SALE.

Moor Park Apricot & French Prune Trees.

One year's growth in the graft, thrifty, and of good size. Free from pests and will be dug by hand. Address

STODDART & SANDERS,
Saratoga, Santa Clara Cal

TREES AND SEEDS TRUE TO NAME

APPLES—Red, Yellow, Green, etc. PEACHES—Early, Late, etc. ALMONDS—Early, Late, etc. APRICOTS—Early, Late, etc. PLUMS—Early, Late, etc. PRUNES—Early, Late, etc. NECTARINES—Early, Late, etc. PEAR TREES—Early, Late, etc. CHERRY TREES—Early, Late, etc. WALNUT TREES—Early, Late, etc. ORANGE TREES—Early, Late, etc. CITRUS TREES—Early, Late, etc. For further particulars address W. A. SANDERS, Saratoga, Cal.

SILVER TREE OF CAPE OF GOOD HOPE.

(Leucadendron Argentum.)

Fresh seed direct from the "Cape" can be supplied by the undersigned at \$2.00 per ounce, free by mail. This beautiful tree is undoubtedly hardy in the southern portion of the State.

JOHN SAUL,
Washington, D. C.

Napa Valley Nurseries.

FRUIT TREES, GRAPE CUTTINGS, \$3.50 per 1,000. Rooted Vines, Riparia and other stock. Unirrigated and healthy. For particulars and prices, address, LEONARD COATES, Napa City, Cal.

THE NEW PATENT

California Refrigerator.

Will keep meat and food at an equal temperature without ice. All sizes made to order. Address,

HOBBY & ELLSWORTH,

317 J Street, - - SACRAMENTO, CAL.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

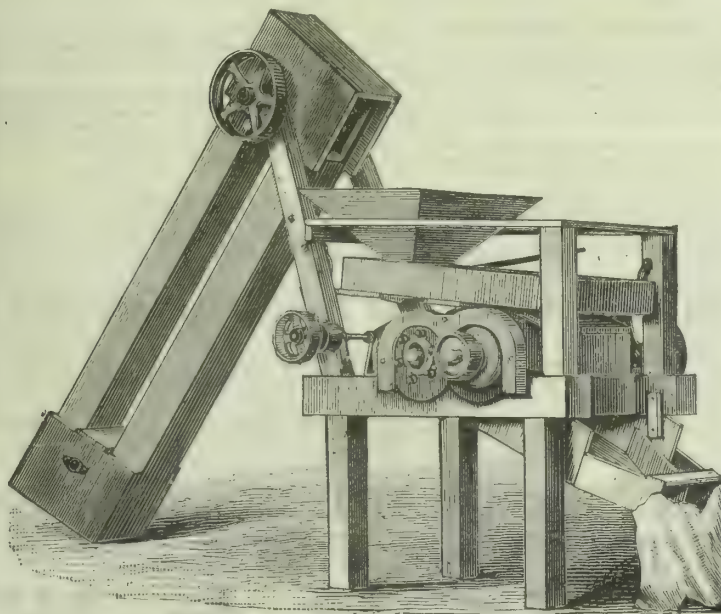
WAREHOUSES—
115, 117 & 119 Kinzie St.
104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,
CHICAGO, ILL.

SEEDS

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.



STILL AT THE HEAD!

Has again Received Premium at State Fair.

This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

PRESCOTT HOUSE.



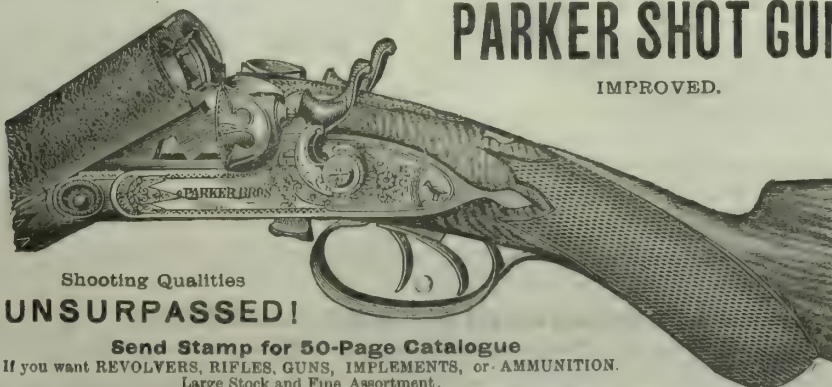
S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

PARKER SHOT GUN.

IMPROVED.



Shooting Qualities
UNSURPASSED!

Send Stamp for 50-Page Catalogue
If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION.
Large Stock and Fine Assortment.

Send for Circular and Prices, and mention this paper.

E. T. ALLEN, Agent for the Pacific Coast.

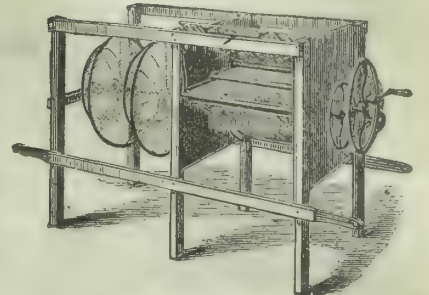
NO. 416 MARKET STREET,

SAN FRANCISCO, CAL.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 10 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50;
25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

Best Truck Silver Medal.
Best Hose Cart Silver Medal.
4-Spring Wagon, With Top Silver Medal.
Best Milk Wagon Silver Medal

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - SAN FRANCISCO.

HORTON & KENNEDY'S
FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency, LINTFORTH, RICE & CO., 323 & 325 Market St., S. F.

JOHN ELLIS.

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

LADIES

Why pay such enormous prices for Sewing Machines when you can buy as good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. H. P. ANDREW, Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.

Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on or address H. F. D., this office,

HAWLEY BROS. HARDWARE CO.,

Successors to

Marcus C. Hawley & Co.

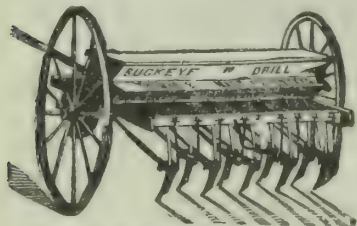
A Word to Farmers About the "Buckeye" Drill.



DEERE'S GANG PLOW.

Points of Superiority in the Deere's Gang Plow—Perfection in Every Point.

Construction—The beams, frame and wheels are all iron—stronger and more durable than any other.
Vibrating Tongue—The tongue and clevis are attached to the beams by a swivel bolt, giving it free vertical motion, relieving the horses' necks of all pressure, and affording as natural draft from the end of the tongue as from the end of the beams.
Land Adjustment—The land is adjusted by holes in the clevis in the natural way, and by moving the rear end of the tongue. When properly hitched the pole chains hang loose.
Operation—There are no complications of levers and gearing, one lever only being required to operate the plow in the ground at various depths; and the same lever in connection with a lug on the hub, lifts the plows clear of the ground for turning at the ends, without effort of the operator.



"BUCKEYE" SEED DRILL.

The agents for another Drill are advertising it as "the best," and we wish to caution farmers that they be not misled, and induced to purchase any other than the "BUCKEYE," which is acknowledged THE BEST EVERYWHERE by practical farmers. The Drill to which we refer has an old-style periphery feed, and is not an improvement over any of the ordinary Ohio Drills.

The manufacturers attempted to evade the patents of some of the acknowledged inferior drills, but it is not an improvement even over them, as it is much more complicated, and more liable to get out of order than theirs. The "Buckeye" has a much better feed, is more easily regulated, and will sow oats and other grain more evenly. Besides this, the lifting device on the "Buckeye" is much better; its frame and hopper more substantial and better made in every way. It is a well known fact that the poorest drills in the country make the biggest blow, and when the parties to whom we refer put such cards in the papers, as they have been recently doing, it only proves the claims of our drill as being THE BEST.

The fact that to build up a reputation for their own drill, they are obliged to single out and name the "Buckeye," and compare theirs with our machine, is evidence of the high standing of the "Buckeye." We do not honor their drill with the name of competitor, but, to the thinking farmer, their being obliged to single out the "Buckeye" as a standard of excellence, is sufficient guarantee that their machine will not fulfill their wordy promises. It only goes to prove the claims we make for the "Buckeye" as being the best.

The manufacturers of the Drill to which we refer, not being able to sell their machines at the East, where "Buckeyes" are generally used, are seeking by a system of blowing and misrepresentation, to introduce them on the Pacific Coast, and in foreign countries, where the "Buckeye" has not been so thoroughly introduced. But, where farmers see them in the field, the superiority of the "Buckeye" will be manifest, and our wordy neighbors will find that their misrepresentation will ultimately be to their discredit and disadvantage.



GILPIN SULKY PLOW.

The construction of the "Gilpin" Sulky Plow is ingenious and simple. It is of light draft, easy on the operators strong, durable and economical. It has an iron beam and iron frame; is free from a complication of lever gearing, jack screws, pulleys and chains, one lever only being required to operate it to any required depth.

The "Buckeye" Broadcast Seeder has always, since its introduction, been acknowledged by manufacturers, dealers and farmers everywhere as the best Broadcast Sower made. Improvements have been made from time to time, as often as their merits have become established, and the machines thus kept in advance of all others.



"BUCKEYE" BROADCAST SEEDER.

We are Sole Agents for the

Schuttler Wagon, South Bend Chilled Plows, "Challenge" Feed Mills,

PERKINS' WINDMILLS,

Corbin Disc Harrows and Kalamazoo Spring Tooth Harrows.

HAWLEY BROS. HARDWARE CO., San Francisco, Cal.

BATCHELOR & WYLIE,

Manufacturers of

Spring-Tooth Harrows, Seeders and Cultivators.

We wish to call the attention of farmers and dealers of the Pacific Coast to

OUR NEW IMPLEMENTS,

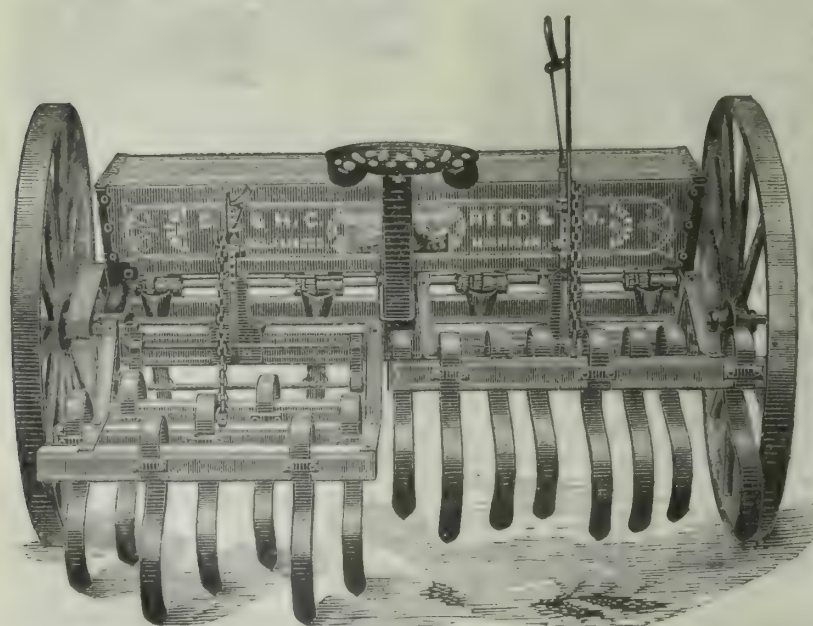
Here represented. The experience of the past three years has proven the fact that no implement in use will so thoroughly cultivate and stir the ground, or prepare so perfect a seed-bed as those of the SPRING-TOOTH class which have been steadily improved each year as we have learned the necessities of this country until we feel confident we now have an implement suited to a greater variety of soils and larger scope of work than any other

Cultivator,

Seeder,

Or Drill

In the Market



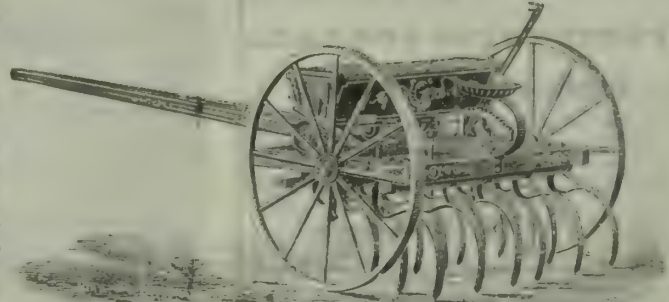
Self-Adjusting Spring-Tooth Cultivator and Seeder.

The Self-Adjusting Cultivator carries the teeth in sections which work independently of the frame and adapt themselves to the inequalities of the surface, either section of which can be raised or lowered easily without interfering with the other.

They are both mounted on large broad wheels. This gives a light draft and carries the frames high from the ground which renders them especially adapted to wet land or winter work. The two center teeth can be taken out of either making a perfect cultivator for rowed crops. The seeders on each are identical both being the famous Champion FORCE FEED which sows either Wheat, Oats, Barley or Flax with uniformity and without cutting or mashing the grain. The quantity is regulated by a lever near the driver's seat and REGISTERED on the INDEX of the hopper.

A REGISTERING LAND MEASURE,

Which marks on the dial of the hopper the number of acres sown is attached to every seeder. We sell these seeders under a GUARANTEE to work perfectly and give satisfaction or no sale. Any responsible farmer wishing to buy can take one upon trial and if not as represented return to us. Send for descriptive circular and price list.



Lock Lever Spring-Tooth Cultivator and Seeder



Seed Box and Center Teeth Detached for Working Hops, Grapes, Corn, Etc.

The Lock Lever Cultivator has a side adjustment of frame by which the teeth are set at any pitch for either hard or mellow ground. A simple device in combination with the lever sets and locks the teeth at any depth and by which they can be easily raised to discharge trash.

BATCHELOR & WYLIE,

31 Market Street,

SAN FRANCISCO.

PACIFIC RURAL PRESS

PLOWING, SEEDING AND PLANTING EDITION—TWENTY-FOUR PAGES.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, OCTOBER 28, 1882.

Number 18

The Age of Seeds.

Some twenty years ago a few grains of wheat were found in the tombs of some ancient mummies in the south of France, supposed to have been fully 2,000 years old. It is said that this wheat was planted and produced the astonishing yield of 1,200 grains to one, and the French government assumed charge of the matter, and when the product had increased sufficiently, this new wheat was distributed throughout the empire. The result, according to official reports, showed an immense increase over the yield of the ordinary varieties. As a natural result quite a craze ensued in regard to sowing old seeds of other plants. The excitement reached the United States, and some agriculturists commenced saving melon, beet, corn and other seeds until they became four, six and eight years old, and upwards. The theory was that a rest of years, instead of months, gave the seeds unusual vitality and more prolific powers of reproduction. Many of the experiments proved utter failures, and no remarkable degree of success seemed to attend on any. Much surprise was expressed in some quarters at such results, especially as the reports of the unusual productiveness of the mummy wheat appeared to be genuine. Those who had carefully noted the progress of the matter, referred the wheat success to the fact that each package of wheat sent out by the French government contained detailed instructions in regard to the best mode of cultivation, which all recipients were enjoined to pursue faithfully.

It may reasonably be doubted whether any wheat from the case of a mummy ever sprouted at all; but the lesson in improved agriculture was sent abroad all the same, and performed its work remarkably well. If the wheat cultivators of California would take more pains to procure good seed, and cultivate their fields and harvest their crops with due care, there would be no need that they should look to the catacombs of Egypt for seed with which to secure a marked increase in the yield of their fields.

A Successful Prescription.

About a year ago, Prof. Hilgard received from the neighborhood of Anderson, Shasta county, a sample of red clay soil from the foothills of that region, with the following statement regarding its behavior under cultivation, from Mr. George H. Moore:

I have been here 10 months and raised about one and a half tons of hay on six acres, and potatoes at the rate of about one-tenth the bulk planted, etc. There is a dense thicket of chaparral and poison oaks, with some oaks and other brush. Not raising anything the past season has nearly crushed me, and one more year of all work and no pay will leave me too poor to move away. This is a very peculiar land, there being such a compact mass of clay and gravel cement composition, about four feet from the surface, that water does not penetrate below 15 in. from the surface.

The soil, of which a sample was sent, appeared to be quite similar to others from the foothills that have proved highly productive, and whose composition, as ascertained by analysis, showed good reason therefor. The analysis of the Anderson soil proved, however, that while fairly supplied with other ingredients of plant food, it is remarkably deficient in phosphates. Mr. Moore was so informed, and advised to apply to his land light dressings (200 lbs. per acre) of bone-meal, such as manufactured at San Francisco. The result of this treatment is given in the following note, lately received by Prof. Hilgard:

I got bone-meal last winter and used it as you so kindly directed. The barley did well, coming up and growing steadily until it reached its height, producing well-filled heads of good length. Please accept my gratitude.

This looks like a tangible result from the application of science to agricultural practice. It appears from other samples received that this red clay chaparral soil is of quite extended occurrence in northern California, so that this demonstration of its only defect and its efficacious remedy is of more than local interest.

Fruit Growers' Convention.

We trust that many of our readers intend to attend the Fruit Growers' Convention, which is to meet at San Jose on the 14th of November. The Board of State Horticultural Commissioners wish it to be understood that not only all fruit growers, but also fruit shippers, packers, nurserymen and others interested in horticulture in California are invited to attend. There will be reports and discussions upon many matters of vital importance in successful orchard management, as pruning, maintenance of pro-

will be sold by trains arriving at San Jose on November 13th, 14th, 15th and 16th, and will be good for return passage until midnight of November 20th.

There is some talk of an exhibition of dried fruits, etc., but we do not know that anything definite has been decided upon in that regard. There is no doubt, however, that if anyone has choice samples of dried or unusual varieties of fresh fruits he will find an appreciative audience at San Jose.

SEED POTATOES.—Mr. Murdoch, of Rothie-

Improved Seed, Grain, Fruit, Etc.

He who improves on what we have is a public benefactor. A man who plants a seed or a root with the purpose of improving its character by close attention and good cultivation is deserving of a rich reward. Much has already been done in this direction, but much more remains to be done. As a rule, more benefit may be derived from bettering our varieties than from producing new ones. The one leads directly to improved farming by the multitude; the other too often to anything but benefit to any one except the originator. We have no desire to discourage the production of new varieties; but the means too often taken to foist them on the public are not always fair in their efforts. A man plants a seed or tuber, obtains an apparently new variety, and measures the product or calculates the quantity of his plants, and then compares the results of his experiment with the product of other and well-known varieties obtained from an extensive cultivation, and finds his experiment gives two or three times as much to the acre. He immediately claims great value for his new product. The increased yield is more apparent than real, and is due solely to higher culture.

A new tomato is perhaps introduced, and its yield compared with some old kind set out too early and stunted by the cold. The new variety is kept back until the weather is favorable and all nature unites to push it forward with unchecked vigor. It produces nice, smooth fruit one or two weeks earlier than its rival. The fact is heralded abroad and brings in a rich harvest to the successful manipulator. So with other vegetables and fruits. New varieties of potatoes have been sold for a year or two at fabulous prices, to be finally lost sight of and regarded as below common place. The maxim that "all is not gold that glitters," is as true of brilliant statements as of other brilliants.

Too much cannot be said in praise of him who strives to show how much improvement may be received by good and careful culture. Every considerate person recognizes the value of such efforts, yet but few are those who practice them. The farm is no uncertain business. Its laws are as certain and fixed and as easily learned and followed as are the laws of any trade or other calling. The farmer knows or may learn just what condition of soil is necessary for raising wheat. He knows all the steps necessary to perfecting a crop—the seasons alone being outside of his control. He knows that his harvest will be wheat as well as the carpenter knows that the results of his labor will be a ship or a house, just as he plans and lays it out. Both know that certain scientific and practical modifications of labor and material will vary the results according to well known laws. If the farmer would have more or less wheat, he has a law by which he can reach the desired result, modified, more or less, by certain "higher laws" out of his reach, which combine to produce certain modifications that result in the average of crops.

There is no reason why a man should raise worthless, watery potatoes instead of rich, mealy tubers, or why he should grow gaudy, bitter and sour apples when, by grafting, he can have the best, or why he should take to market pears worth 50 cents a box, when, for the same cost and labor, he can produce those that will bring him a dollar. Let us hope that the time will soon come when none but the fittest products will be produced, so that at least our children may thrive and our land become for them—like ancient Canaan—one that shall "flow with milk and honey."

ESTIMATES have been prepared for the pay and mileage of the members of the Forty-eighth Congress. There will be 325 members and eight delegates for that pay. There has been asked \$1,650,000 and \$25,000 for contestants, and for mileage \$125,000 is estimated, making a total of \$1,800,000.



GRANDPA'S VISIT.

As the budding plants in the garden rejoice in the sun shine, so do the little shoots in the household revel in the sunny warmth spread through the home by the coming of a loving grandparent. "Grandpa's come" will rally the children from all directions, and cause them to dance about in joyous glee, for grandpa shows by his greeting that he loves the little ones, and they know him as a devoted friend. Grandpa's visit is a notable event in every household.

may, England, who, it is said, has raised experimentally "many hundred varieties" of potatoes, and under different systems of seeding, favors for seed "small or medium-sized tubers, planted whole, as a rule." Mr. A. W. Putnam three or four years since reported his experience in raising potatoes to the *New England Farmer* as follows: "Five hundred potatoes in a bushel is the size selected this year, which is somewhat larger than I used last year. It is three years since I began to plant whole potatoes, selecting the small-large ones, or the large-small ones for seed, and for that reason, or some other, the potatoes have improved in quality very much, so that now I am so well satisfied with the seed I have, I have no desire to prospect for better."

DURING the past week 45,500 head of cattle were received at Chicago.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Ede.

At Newsom's Springs.

FROM THE PRESS.—Situating 14 miles south of the town of San Luis Obispo, two miles from Arroyo Grande village, and four miles from the ocean beach, in an out of the way nook in the coast hills, is Newsom's Springs, a summer resting place for those who long for quiet, and a health resort for those who are afflicted with a malady.

Thither I took myself one bright, sunshiny day in the late summer, without a shadow of an ailment to plead as my excuse for going. If I know myself, I am innocent of rheumatic twinges and neuralgic agonies, of dropsical affections, and diabolical disorders of the stomach and liver. If any of these afflictions should visit me during the next decade, I should be tempted to blame the warm sulphur water which gushes from the glen as the exciting cause, and straightway hasten to cure myself with the same sulphurous remedy.

I did not learn the name and history of the first discoverer of these springs, or the character and antecedents of the underground agents who determined upon this wholesale system of healing. I did not learn whether the water is warmed by chemical action or volcanic heat. I hope that the ghost of the dead discoverer will not disturb me, and that the flowing rivulet will not overwhelm me, while I wait to be enlightened on this subject. I would like to put off disease and dissolution till these things are certainly known. It is a repossessing place, and it was a happy thought to put a spring there, a fountain which might attract alike the lame and the lazy, the poor creatures who are really sick, and the fortunate folks who are well, and desire to retain their health and vigor.

There are two ways to reach Newsom's—one by rail to Arroyo Grande village, and thence two miles by private conveyance, and the other by the roadways, one over the mountains, in sight of the railway, a rough and dusty ride in the summer time, and the other around by Branch's, following the course of the Arroyo Grande creek, with one delightful stretch of about six miles completely shaded by a growth thick enough for a tropical region—a bit of wooded loveliness that is not common in southern California. The emerald green of the vines, sedges, willows and sycamores contrast brightly with the grey rocks and brown hillsides, while the brook hastens through valleys and meadows, resting itself sometimes in dark pools by the roadside. The springs are at the terminus of the road, and at the upper end of a narrow canyon. As you approach them the wagon track hugs the steep sides of the hill, and the trees and windings hide from view the plain cottages till we drop down into their midst, and are surprised to find that this is the end of the journey. The hamlet consists of the proprietor's dwelling, the bath-houses, five cottages and a camper's tent. There are cattle and horses grazing beyond, and away up on the high a flock of goats are browsing. These ambitious animals are a picturesque feature of the place. They kindly overlook the dust and litter of the camp. There is always a pleasant invitation to look up in these canyons and enjoy the best in a lovely landscape. The near hillsides to the right are very steep and covered with live oaks, which cling to the slopes with an almost human persistence and cover it with verdure. These are assisted in their beautiful mission by the ferns, shrubs and wild flowers, which flourish at their roots and contribute flashes of bright color.

There were people at Newsom's before I came. The cottages were full and had been overflowing. A few had been there all summer, and could not tear themselves away. There was the old lady who had come for a pain in her toe, and the young lady who had come because there was a pimple on her nose. The merchant's wife from town was there with her children for a month's rest. The mechanic's wife was there to seek relief from a misery in her back. The laborer had a trouble in his hip. Mrs. Rancher had come to get rid of her "rheumatism," and Mr. Rancher to leave a distress in his stomach. The cook and saloon keeper were there for the pure enjoyment to be got from a free life in the hills and by the brook side. They hunted and fished through the day, made the evenings pleasant with their violin, and were a very comfortable pair.

A pale-faced woman approached me as I went for a draft of sulphur water my first morning. She was inquired what ailment had brought me to the springs. I can pardon her curiosity about such a healthy-looking invalid; but she did seem surprised when I confessed that nothing ailed me—that I was actually there without a complaint. Most people find it necessary to cultivate a taste for warm sulphur water. A few take kindly to such a combination of medicinal tastes and odors; and when they do like it they get to be dreadful drinkers—intemperate in their sulphurous drams.

The outward application is pleasanter and exceedingly beneficial for skin diseases, as well as for gout, neuralgia and rheumatism, dropsy,

paralysis and liver complaints. The plunge bath is a luxury, sick or well, an institution that is sure to take the badness from your system, and make you feel as good as new. These springs are a neighborhood resort for picnickers. They come with their well filled baskets, take a bath, eat their lunch, and drive away over a most romantic mountain road. Richardson's evidences of civilization abound all up and down the canyon, in the shape of empty bottles, fruit cans and sardine boxes. But for the limited accommodations many people would gladly avail themselves of such a quiet nook for their summer vacation. The air is exceedingly pure, and the enervating heat of the lower valleys is never experienced.

The diversions of the place are not various or novel in character. There is deer hunting in the adjoining hills, and flea hunting in the vicinity of the springs. There is dirt enough for all the mud pies that the children care to make; and these same children told me, over and over again, that they were having the best time they ever had in all their lives. The friendly oaks provided shade and support for their swings and hammocks when they were tired of play and tramping. A great good-natured sheep herd dog "Flora" kept a watchful eye upon intruding animals, and enjoyed in a dignified way the children's sports. The cottages were all rented to families who were housekeeping, or playing keep house, as best they could under difficulties. Yet rough and rude as are these establishments, they have cost the proprietors a good deal of toil and trouble, and a considerable sum of money. Building material is always dear in these out of the way places, and the transportation of lumber and furniture nearly doubles the first cost.

The monte land below these springs has been cleared, and at a point down the canyon one can peep out on little farms, the rich soil of which is well adapted to the raising of corn, beans, barley and potatoes. Fruits and vegetables also do well for those who care to cultivate them. The original owner of the grant upon which these springs are located was Mr. Branch, one of those pioneers whose memory is cherished in San Luis Obispo county. He, with a few other Americans, lived here many years before the gold discovery. He was aware of the remedial virtues of this water, and secured the property for his daughter, Mrs. Newsom. The native Indians resorted to these baths for their uncivilized disorders.

It was my good fortune to meet very pleasant people at this resort—people accustomed to the refinements of polite society, and plainer people who would always regard the proper rights of others, and were incapable of offering offensive familiarity. A children's dance at Newsom's house one evening was really delightful. There were no ball dresses, but the young folks danced to the music of the organ with an abandon peculiar to their years. There were two accomplished performers in our party, one the sister of a well-known composer. How well they played and sang, and how sweetly the music sounded in that wild, secluded place!

With the young girl for my companion I toiled up the highest hill one evening to get a view of the region round the springs and of the whole Arroyo Grande country. We brought away the picture in memory's gallery of a fair landscape of hill and valley, with the little village two miles distant, and the long line of white sand beach beyond that bordering the ocean, all a little dimmed by the incoming fog. The young girl looked with all the enthusiasm of an unworn life, and I caught enough of her rapture to forget for the time the years that I have lived.

Two weeks sped by, while I was as nearly as well I could be "out of the world"—my world, at least. The day I went back to the old life and my home I walked more than a mile down the canyon, following the road upon the edge of the treeless side, now bare and brown. The opposite side atoned for this. It was robed in the living green of trees and shrubs, and I was glad that my farewell view was one so exceedingly pleasant to remember. D. M. D.

White Redwood Trees.

EDITORS PRESS:—The poverty of our language was illustrated by the boy who asked his mother why blackberries are white when they are green. We are obliged to use this heading in describing a novelty of the redwood forests, where trees of considerable size bear upon their young shoots colorless or yellowish white leaves.

Generally speaking, the blanching of conifers indicates weakness or delicacy of constitution, but there are exceptions to this rule. A silver spruce has been produced in England from our Douglas fir, which appears to have all the strength and vigor of the original. It was first grown at Castle Kennedy, and named *Abies Douglasii* Stairii. Many thousands have been propagated by cuttings and grafts, and such enterprising houses as the Arsons, Hoopes & Meehan doubtless have them.

It is difficult to conceive a more striking effect than would be produced by one of these silver spruces with a background of hemlock spruce and a foreground of creeping juniper, or *Saxifraga* *americana*.

Our arboriculturists might experiment with the white redwood, grafting it upon the common kind, and thus giving permanency to an accidental family. JEANNE C. CARR, Pasadena, Cal.

ARBORICULTURE.

The Præparturiens, or Early-Bearing Walnut.—No. 3.

Its History, Description, Propagation and Culture.

Written for the PRESS by FRANK GILBERT.

In the second part of this essay I showed most conclusively that the Præparturiens walnut was originated in France by Mr. Louis Chateau, of Dune, in 1830, under the name of "Fertile," and that in 1840 Mr. Poiteau gave the new walnut the name of *Juglans Præparturiens*; and I have furthermore proved that it is not a dwarf tree, at least not in the general sense of the word. Mr. Carrière, the distinguished horticulturist of Paris, is of the opinion that from the seed the Præparturiens will produce trees that will vary considerably in size—that is, from a very small to a very large size. I do not really understand how Mr. Carrière could make such an assertion, at least as far as the gigantic size of the tree is concerned; for the oldest Præparturiens trees in existence are only 40 years old and 39 feet high, and will not have attained their full development before 40 to 60 years to come. At the end of that period, when Præparturiens trees will have reached their maximum of growth, it will be time to say how large that sort may grow, but not before. Unless Mr. Carrière means that the way Præparturiens trees are growing, and when their growth is compared to that of the common or English walnut at a corresponding age, that then it is easy to say which of those trees will remain small, which will grow to a medium size, and which will attain a gigantic size. What we want rather than mere speculation about the growth of that walnut is facts establishing, beyond a doubt, the growth and size of the tree. Concerning its growth and habits, we know enough, however, to form an idea of what sort of a tree the Præparturiens may be; but, as to its maximum growth or size, all we know is that, though growing to a rather good size, it will probably never attain the huge dimensions of the common walnut, from which it was originated. Having had at heart to lay before the readers of the PRESS, and the horticultural public of America, all the facts concerning that variety of walnut, I went to work to trace the origin of this

English Dwarf Prolific

(Præparturiens), said to be in full bearing when six feet high. As in France they had no knowledge of a dwarf species of Præparturiens, I had to confine my researches to America, where the tree was advertised and described as above.

I first addressed myself to Mr. Thomas Meehan, of the Germantown nurseries, near Philadelphia, and one of the most distinguished horticulturists of America, and whom I knew by reputation. Mr. Meehan replied to my inquiries as follows:

It so happens that I have no knowledge of this walnut Præparturiens from actual experience. I have only known that it was a very early bearer, and bearing more freely; but, whether a dwarf or not, I have never understood. I fancy P. J. Berckmans, Augusta, Georgia, would know as much as anybody. I will make further inquiries.

Next I wrote to Messrs. Ellwanger & Barry, of Rochester, and Berckmans, of Augusta, about that Præparturiens Dwarf Prolific, so-called. Here is Messrs. Ellwanger & Barry's reply:

We imported the walnut Præparturiens some 25 years ago from France, when it was first introduced. It may be found in our old catalogues of 1860 and ever since. It was described as bearing quite young, which it does, and is of a more dwarf form than the common English walnut. We have had it bear many years.

Not being satisfied with Messrs. Ellwanger & Barry's answer, I wrote back to them. Said I: "As your letter leaves me in the dark in regard to the history and description of the Dwarf Prolific walnut, I will beg to submit you a few more questions, and, as I do not wish to trespass upon your time, I will enclose herewith on a separate sheet several questions with a blank space for you to fill." Among those questions were the following:

First. How large are your oldest trees—that is, how many feet in height, and how many inches in girth?
Second. How old are your largest trees?
Third. At what age do your trees generally go to bearing?
Fourth. How large is the nut, and what shape?
Fifth. Is the tree hardy? In other words, is it liable to be injured by late frosts in the spring, as the common English walnut?
Sixth. By whom was that Dwarf Prolific Præparturiens of yours originated?
Seventh. Why do you describe it in your catalogue as the English Dwarf Prolific?

Messrs. Ellwanger & Barry replied as follows:

We would like to answer all your questions in detail, but it is our busy season and we must be brief. Our oldest tree of *Juglans Præparturiens* was cut down a few years ago; must have been then 20 years old. It is simply a variety of the English walnut; fruit exactly like it and about as hardy. If our trees bear the coming season we will send you some fruit. We are much obliged for the trees sent.

I had sent two of my own one-year-old seedlings two feet long, including the roots, for them to try. Then I purchased from them one dozen of their one-year-old Dwarf Prolific, which were hardly one foot long, body, roots and all, being anxious to experiment on them and compare their growth here with that of my own.

Mr. P. J. Berckmans, of Augusta, Georgia, another leading horticulturist of the United States, by the way, replied to my inquiries as follows:

In 1852 I planted several trees of *Juglans Præparturiens* (obtained them from Mr. Andre Leboy, of Angers), on my place at Plainfield, New Jersey (since sold to John Taylor Johnston, President of the N. J. Central E. R.). Those produced fruit two years afterwards, and some of those trees are likely still upon the place. All my trees were imported from Angers and Orleans, France. My oldest trees were killed last summer by the unprecedented drouth. The largest now growing are 10 years old and some eight feet high; they set fruit freely last year, but it failed to perfect from excessive drouth. The drawback here with growing walnuts is that the *Oncideres Cingulatus*, or sawyer-fly, cuts off the terminal ends of the limbs, and thus ruins the fruit crop. I know but one variety of dwarf walnut or *Juglans Præparturiens*. This I saw in the grounds of Mr. Jean Laurent Jamin, in Paris, as early as 1845, and at Angers and Tours the same year. If you can lay hands upon the "Annales de Flore et de Pomologie" for 1849, you will find this variety described therein. Messrs. Ellwanger & Barry, of Rochester, had this variety in fruit about 1855 or 1856; thus, it is no new thing in the Atlantic States.

It is to be regretted that Mr. Berckmans did not state what size his oldest trees were before being killed by the drouth, and also Messrs. Ellwanger & Barry about the old tree they cut down.

I concluded to write to Mr. John Taylor Johnston, at Plainfield, New Jersey. Here is that gentleman's reply:

The English walnut on my place, planted by Mr. Berckmans, is still living. There is but one tree that I know of, the others probably have died. It is now 18 years since I took possession of this place, and in that time I do not think the tree has grown more than 10 ft. It now stands about 20 ft. high. Its girth near the ground is about 4 in. It has a thick, healthy-looking top, but bears very little fruit. About 1864 or 1865 there was heavy crops of nuts on it, but there has been a steady decrease since, and the few specimens of late years have fallen off before ripening. It stands in a lawn without protection from north winds, and we have thought the winters too severe for it. When a nut ripens it is very good and of the ordinary size of an English walnut. I am happy to give you any information, and hope that this may be of use to you.

In the meantime I had written back to Mr. Thomas Meehan, requesting that gentleman to propound to the readers of the monthly magazine of which he was the editor the same questions I was putting to Messrs. Ellwanger & Barry concerning said Dwarf Prolific (Præparturiens). Those questions were published in the June number of the *Gardener's Monthly*, a very good publication by the way, but I have not heard yet of my questions being answered. The questions were noticed, for some Eastern horticulturists called my attention to it, thinking it came from some of my competitors in business, and one of them, an Indiana horticulturist, sent me a postal card with the request to answer immediately in the *Gardener's Monthly* the questions on page 177 in regard to *Juglans Præparturiens*. "Take each question by itself," adds the Western horticulturist, "and answer in rotation. I feel sure that no one in the United States can answer it as correctly as you can."

I, answering my own questions! Such is all the information that I was able to obtain concerning that English Dwarf Prolific, said to be in full bearing when six feet high. In my opinion, however, the *Juglans Præparturiens* of France and the English Dwarf Prolific of America are the same thing, though it is not clear in my mind why the Præparturiens or Fertile walnut has gone in America under the name of Dwarf Prolific. As to who gave it that name, it seems that nobody knows. The name is far from being appropriate, and serves only to bring confusion in names, and gives a false impression as to the habits of growing of the tree.

I will now say a few words regarding the Propagation and Culture

Of the *Juglans Præparturiens*. I expect that by this time all the readers of the PRESS are convinced that the Præparturiens walnut at any rate is a valuable kind to keep, and well fit to be cultivated for its fruit. I should not be surprised at all that in California it will grow to larger dimensions than it does in Europe and the Eastern States, if I should judge by the size attained already by my own trees and a few planted around Nevada City. That the Præparturiens is very desirable for its precocity and hardiness is a well-established fact; and right here I will quote from a letter of a Santa Clara county nurseryman, a good authority on such matters, and under date of March 21, 1881, about a year before this controversy on the Præparturiens walnut took place. Said the Santa Clara horticulturist:

We will soon see the day when no other sorts will be planted than grafted chestnuts and Præparturiens walnuts. To wait from 12 to 20 years for walnuts from common sorts will not do when you can have them in bearing in three and four years.

Such were the words of encouragement that I was glad to obtain for my enterprise in introducing the best kinds of fruits to California from one of Santa Clara county leading horticulturists, Mr. John Rock.

The Præparturiens walnut, coming well enough true from seed, that method of propagating the species is certainly the simplest one to follow. The nuts may be planted as soon as gathered, though here in Nevada City it is too cold to plant them in the fall, for the frost in winter would surely lift the nuts right out from the ground. This is the way I do for keeping and sprouting walnuts: I throw into the bottom of a box one inch of damp sand, then I set in a layer of nuts, put in another inch of sand and another layer of nuts, and so on to one or two inches from the top. Then I water well with a sprinkler, and water again during the winter whenever the sand gets too dry. The sand has to be pretty well saturated with water, especially from the 1st of

January down to planting time, which is in February, March or April, according to localities. The latter part of March or first week in April is best for Nevada City. The nuts are planted in drills and to a depth of two to three inches, and I cannot here too well recommend to plant the nuts, not the small end down, but sideways with the suture or seam, perpendicular to the horizon; this is indispensable to obtain trees with a straight body and straight root and of a fine growth, instead of crooked trees with roots looking like a corkscrew.

In transplanting the trees the top root may be or not be cut back, though I would rather let the most of it stand. The idea of French nurserymen, in cutting back the tap root, is to make the tree start lateral roots, which, at their turn, will grow quicker a fine top. That when the tap root is once done away with, it never grows back, is altogether incorrect, at least in this State; for not only does it grow back here in California, but very often it grows two or three instead of one.

Small or Large Trees.

A question has been very often put to me, viz.: What is the best to plant, a small or large tree? I will say that it does not matter much, as far as the successful growth of the tree is concerned, though I would always prefer a large tree to a small one, a four or five-year-old tree to one one-year-old. A large tree, in the course of two or three years, will get firmly rooted and ready then to grow a fine top and produce a crop of fruit at once. With a small tree we have to wait so much longer for a crop. Whenever walnuts can be had of a good size and not too far away, I would advise to plant such trees; but people at a distance very often have not got the choice. In planting a large tree with tap root and hardly any lateral ones, the leaves will often drop off right in the middle of July, that is, on the first year of plantation; people need not feel alarmed and think that their tree is dying; a good soaking given to the tree will start the vegetation anew. I will give a very good illustration of that fact. Last winter I took up with as much earth as I possibly could a *Præparturiens* tree, seven feet high, and planted it in a small cask with an open end; my object being, as that tree had borne seven nuts last year, to exhibit it at the State fair this fall. But all the nuts that bloomed on that tree did drop off prematurely, so that the tree had to remain here. One day I thought of it, but it was almost too late, the leaves having already all dropped off. I gave it a thorough soaking for two consecutive days, and it started again as fresh as ever.

Two years ago I gave four rows of young walnuts (2 years old) two good soakings in June, then I had to stop for the season; next they formed their terminal buds; then the leaves commenced to turn yellow, to finally drop off as though it were October, and by the first of August there was not a leaf left on the trees. Those trees are at this time of writing from 8 to 12 ft. high, some having grown as much as 7 ft. this season, but with water during the whole summer. About the

Training of the *Præparturiens* Walnut.

It must be well borne in mind that that variety has a great tendency to grow ramifications; in a word, to branch and spread out. What has to be done is during the summer, and as fast as they grow to cut off all lateral shoots on young trees, leaving but one to shoot up to six or seven feet; the tree is then permitted to branch as soon as that height is reached. The tree, however, will still keep on speeding out at the expense of the top. If people think it gives too much shade around, or that they prefer a tree with a high top, they will have simply to take off all the limbs that spread out too much, and thus force the tree to shoot up. That is to say, that if it is desired to have a tree with a high top, like a forest or ornamental tree, it has to be trained accordingly; this is elementary in arboriculture. On the other hand, if the *Præparturiens* is trained more like a high standard tree, one cannot expect to have so soon a large crop of nuts, as is generally the case when the tree is let alone after branching at six feet from the ground and allowed to spread out at leisure. But what I would particularly impress on the minds of people planting *Præparturiens* walnuts is the importance of training their trees as standard, branching not lower than seven feet from the ground. If permitted to branch and spread out when two or three feet high, the tree will certainly look more like a bush, or a "California buckeye," than a walnut tree. I may give a good illustration of the above:

Last year I had a *Præparturiens* walnut in my nursery row that had branched out the year before 30 inches from the ground—that is, it had grown two shoots one foot long at that height. The summer of that year that tree produced a cluster of two nuts at the end of each shoot. It was certainly quite a sight to look at that little tree with those four nuts on; and I showed it to every visitor to my place, among them Mr. R. Williamson, of the Capital Nurseries, Sacramento; Mrs. D. B. Lawrie, Colusa; Messrs. Bliss Bros., of Camptonville, and others. Well, a shoot did grow up between the two limbs of that tree. Now let us suppose that I had cut down that shoot, and let the tree keep on spreading out where it had started, 30 inches from the ground, I certainly would have stunted the tree by keeping it down and forcing it to go to fruit at that height, and finally I might have got a regular "Dwarf Prolific" in full bearing at three feet high. But no, I did let that shoot stand, and cut off the two limbs

that had borne those two clusters of nuts, and to-day that tree is over 10 ft. high. (I showed the tree to Mrs. Lawrie, of Colusa, who, in company with Dr. Bobo, of this place, called again upon my place this summer.) I would not anyhow allow a *Præparturiens* tree to go to fruit before being of a certain size—that is, six or seven feet high and already branched.

Grafted or Budded.

Though the *Præparturiens* walnut can be well propagated from the seed, still it is not very easy to procure nuts for seed, so scarce is the variety yet; but it can very well be grafted or budded on any kind of walnut, the American black walnut being the best to use; thus unfruitful walnut trees or poor kinds of walnuts may very well be grafted with this variety. The walnut is, in general, the most ungrateful tree to work upon, and this may be the reason why it has been so neglected in California and the United States; so much so that not a single budded or grafted tree may be found in the nurseries of this and other States. As successful as grafting is with the pear and apple, as sure is it to fail with the walnut, unless done on the root or in a fork. Also, as easy as budding is with all sorts of fruit, as hard is it to make it stick with the walnut. About budding, if the trees are small, say from one-third to one-half of an inch, shield budding may be used, and, though stock and cions may be well in sap, the result will be hardly 40% to 50% of good buds. When the stock is from one-half of an inch and over, annular budding has to be resorted to, and there again the result will be 50% to 60% of good buds. The trouble with the walnut comes from the bud proper, which becomes black all round, and ruined, if not tightly pressed by the ligature against the body of the stock.

Working over a Walnut Tree.

Having been asked repeatedly how to proceed when wishing to transform the top of a large English or black walnut into a *Præparturiens*, I will describe it here. In the first place I must say that there is something wrong with the English walnut in some parts of California at least. In a former paper to the *RURAL PRESS* on "the Walnut," I explained what did cause the unproductiveness of the English walnut here; for, though the trees have every spring an abundance of catkins and nuts, still all the nuts drop off after getting to be as large as a pea. The trouble is that the catkins all drop off before the nut with the pistillate blossoms have time to put up an appearance, and at their turn the nuts have to fall to the ground for not being fertilized. Not so with the *Præparturiens*, anyhow. In this county 24 years' old English walnuts, 16 in. in diameter, are yet to bear fruit, and Nevada county is not the only one to complain of the unfruitfulness of the English walnut. Mr. C. M. Silva, of the Newcastle nurseries, Placer county, complains of very large English walnuts being unproductive upon his place; Mr. W. H. Jessup, the well-known horticulturist of Haywards, Alameda county, makes the same complaint about his English walnut trees, which are 10 years old and from 18 to 20 ft. high, with trunks 10 to 14 in. in diameter. Mr. Jessup stated to me last winter at Sacramento that he had found that I was right in regard to the cause of the unfruitfulness of the English walnut in some parts of the State, it being due to the staminate blossoms or catkins dropping off before the nuts with pistillate blossoms were out. (In *RURAL PRESS* of February 21, 1880, page 121, see full descriptions with cuts.)

Here is the experiment I have been trying this summer, so as to obviate that unfruitfulness of the English walnuts; I sent to both Messrs. Jessup & Silva, *Præparturiens* cions of my latest kind with staminate buds on, and instructed those two intelligent horticulturists to bud their own unproductive walnuts with staminate buds and see whether the *Præparturiens* catkin that will issue from that staminate bud inserted on the old trees will not fertilize the nuts on those trees next summer. The nuts with the pistillate blossoms coming out last on any sorts of walnuts, it would therefore be quite important and interesting to find out whether the nuts of the English walnuts could not be fertilized after all their catkins are gone by those of the *Præparturiens*, which are so much later in coming out.

Now as to the transforming of a large English or black walnut into a *Præparturiens*, I would proceed as follows: During the winter I would cut down the top of the tree, say a few feet above where the tree branches out, letting the lateral limbs stand; the top, of course, will grow many shoots through the summer all round where it was cut back. I would let most all of them stand, and by the 1st of August, or even sooner, I would insert seven or eight annular buds on so many new shoots. The ensuing spring I would cut the shoots that have been budded back to six inches from the bud, remove all the other ones, then cut off a part of the lateral branches that had been allowed to stay, and take off the balance the ensuing year after the buds have developed into long, heavy shoots. All shoots that would grow around and below the buds have to be removed as fast as they grow, and the shoot issued from the bud itself has to be tied up to the little stump that has been left to stand for that very purpose, for fear the wind would blow down the tender shoot. In this manner I have transformed, at Mr. L. Charom's, near Nevada City, a large unproductive English walnut (16 in. in diameter) into a fine *Præparturiens*, which is expected to go to fruit next year. Thus it will be

seen that it requires about three years to transform completely an English or black walnut into a *Præparturiens* or any other sort of walnut.

Value of the Walnut.

In conclusion, I would urge our nurserymen to pay a little more attention and give a little of their time to the walnut, so neglected and so little thought of among that rush for the orange and the apricot and other fruits. I would urge them to keep those fine and valuable varieties to be found in all the leading nurseries of France and other parts of Europe, and which are propagated only by budding and grafting. The *Præparturiens* walnut is far from being the only or best valuable kind to raise; far more beautiful yet is the nut of the Chaberte and that of the Mayette, those two late and fine varieties so desirable wherever late frosts are frequent in the spring; then there is the Parisienne, another most beautiful nut; the Gand or "Noix a Gants," or "a bijou," so remarkable for its large size; the Franquette, Mesange, Cluster or Bucemosa, and others, whose fruit is shipped by the enterprising nut orchardists of the southeast of France to the Paris market, where they fetch such a remunerative price, thanks to the good size and nice shape of the nuts and beauty of kernel. I admit that those varieties having to be budded, and walnut-budding not being so successful as the budding of other sorts of fruit, trees from those varieties would have to be held up at a higher price than the common English walnut grown from the seed. This is true; but the California public in general do not complain of the high price they have to pay for rare or valuable kinds of fruit if they are only sure to have the kind called for or that it is represented to be.

To say that the English walnut reproduces itself well enough from the seed, and does not need to be budded or grafted, is a true or the walnut as it is of the peach or chestnut, which, nevertheless, are usually budded. A seedling will be a seedling, having all the general defects of seedlings, with but very few exceptions. When a nice fruit is obtained from the seed, be it walnut, chestnut, peach or any other kind of fruit, the only or, at least, surest and most rational way of propagating exactly the kind so produced is through budding or grafting, and not from seed.

Thanking the editors of the *PRESS* for their courtesy in allowing me such a space in their valuable paper, and also the readers of the same for the close attention and interest shown by them regarding this controversy on the *Præparturiens* walnut, I will here close this essay with the hope that I have not trespassed on the patience of the readers of the *PRESS*.

Nevada City, Oct. 7, 1882.

FORESTRY.

Forest Trees of California—No. 16*

Douglas Spruce.

(*Pseudotsuga* [Abies] *Douglasii*).

"There is a quiet spirit in these woods."—*Longfellow*.

Douglas spruce is found in great abundance in California and Oregon, from coast to Rocky, Blue and Sierra mountains, but does not climb the higher and highest elevations, yet ranks among the grandest of the lofty and exceedingly beautiful trees of the Pacific. This is one of the first and best known trees of the far West, discovered by Menzies, at Nootka sound, in 1797, during the voyage of Vancouver, afterwards by Douglas, and truly identified, and in whose honor it received its final specific name. It has been well described and renamed by many authors up to the recent date of the last publication. This tree constitutes a large portion of the heavily wooded timber lands of the coast and lower sierra. A short time ago, on the Central Pacific railroad, about 3,000 ft. altitude, were to be seen specimens about 200 ft. high, 9 to 10 ft. in diameter, and some 15 ft. In closely crowded forests they are even higher, reaching 300 ft. Here the trunk often forms a column straight as an arrow, with scarcely a branch for from 100 to 200 ft. Like most trees of dense forests, our conifers are colonaded and towered, so that it is rare to find trees spreading or even well spired continuously from base to summit, as seen under cultivation. We notice, however, on the most broken coast those species of spruces and firs that climb the tallest steeply suited to their habit, and are, least of all, liable to be shut off from abounding sunlight and air, are those that retain their branches long; a few such sentiments, outskirting the crowded plateau forests, also are found of exceedingly great beauty; the branches form horizontal at length droop in graceful curves with ascending star-spangled sprays, and these in softened slightly silvery tips joyously upturned like the bent bow on its back, wooing the hand of some primitive Nimrod, thus, in due order, multiplying and successively aspiring, feathery and flossily thickened in with foliage of unwonted delicacy and grace inimitable. And again, where we see them thriving luxuriously upon moderate mountain elevations of free outlook, favoring soil, sun and aerial conditions most conducive, as upon the lower mountain ranges contiguous to the base of Mount Shasta, its intrinsic native grace is greatly heightened to one's beau ideal of princely

* From "The Forest Trees of California," by A. Kellogg, M.D. Published by the State Mining Bureau, State Printing Office, Sacramento.

elegance and beauty. Witness those extraordinary steamer sprays, 17 to 18 ft. long, of similar slender size, of plumed curtain cords, drooping vertically, like the Bridal Veil fall, in Yosemite; or say, what could exceed the stately grandeur with such a softened and graceful flow of silvan elegance, as is displayed by this truly "Vernal Fall" of the forest? Nor is this exuberant sport all of the "witch knot" origin of Scottish renown, but, like that of the Sitka spruce, must chiefly spring from more highly enriched soils and favoring influences indicated.

The bark on older trees is dark brown, thick, coarse and rough; water-ways deep, flaring, or gaping, often broken and confused, and the general longitudinal fissure plan so jumbled as to bewilder the eye. In veteran forests they are more or less charred by periodical fires—not always the wanton work of man—for we have seen, several times in a single season, the scathing fires of heaven gleaming from clouds envelop lofty trees hundreds of feet high in one unbroken column of blaze, a perfect tower of fire, leaving the forest burning in its tracks months afterwards, or until the rainy season set in and stayed the raging. Strangers seeing many steeple-topped trees—spruces, firs, pines and cypresses, especially in the young state, are apt to hastily infer this to be peculiar to California forests; whereas, we have really a greater number of flat heavy-topped conifers than are seen in the Mississippi valley.

This timber is exceedingly tough, rigid, and bearing great transverse straight, though coarse-grained from the best localities lasting; for long timbers of great strength, much sought after, e. g., those very long mining pump-logs, 60 ft. to 200 ft. long—in some cases 2,400 ft. or more long, the rod alone weighing many tons, counterbalanced by transverse walking beams every 200 ft. or so. These solid timbers are about 16 inches square. For bridges, frames and strong rough work generally of every kind they are most superior.

For butter and similar boxes, that require to be sweet and odorless so as to communicate no taste or flavor to their contents, the wood is invaluable. It is the well-established opinion of experienced lumbermen and miners, mechanics and farmers, that the timber is best within its middle belt, say 3,000 to 4,000 ft. altitude of northwestern and western exposures. Of course this altitude given is not absolute, but applies mainly to California from the north line of Mexico to Oregon. Besides other superior qualities, it may be noted this timber is not so hard to work, etc. In higher latitudes the isothermal lines dip lower toward the coast, and the average requisite temperature, rainfall, etc., accord the best conditions of vigorous growth. Lower down the mountains this tree is not at all equivocal. Far south the wood is red, more brittle, splits too easily, fails to hold the spike as good timber will unrelentingly; it is, however, said to be lasting. A tree so well known requires little detailed description. Suffice to say: The spruce leaves are narrowly line-like, about one inch or so long, furrowed above, keeled below, margins smooth, recurved, and a little bluish bloomy beneath; cones pendent from near the tips of twigs, long egg form, nearly sharp pointed, three to five inches long or so, and about one or two inches in diameter; scales few, large, loose—but not shed off like fir—roundish, entire and thin; the bracts above strap-like, projecting out beyond the scales lying along the surface, and pointing toward the tip of the cone, ending in three points, of which the middle narrow one is the longest. Sabin describes the cones as erect, whereas they are pendent. Nuttall's figure represents the bracts reflexed; they are not so, but as we sketched them in Vol. VI, U. S. R. R. reports, page 34.

The recently discovered large cone (*Macrocarpa*) variety(?) of San Felipe canyon and elsewhere in the southern part of the State and Arizona, perhaps requires more than mere enumeration. The form of this tree is rather more broadly conic, branches more horizontal, open and airy in appearance, leaves longer; cones, scales and seeds larger, etc. This large tree attains to 100 ft. or more high, 5 to 6 ft. in diameter—quite as much diversity from the type as the restored *Pinus Jeffreyi* from the old *ponderosa*.

Woodmen and workers distinguish this one species into two kinds (or qualities?), red fir and yellow fir; the former with red, hard, brittle and knotty heart of matured wood; singular enough, and contrary to the usual custom with other timbers, this heart wood, by common consent, all reject as relatively worthless. The other kind has softer wood, with scarcely a feeble tinge of yellow; this is easier worked and highly valued, but deemed less lasting. Much more appropriate common names would be red and yellow spruce.

INDUSTRIES IN SOUTH CAROLINA.—In nothing is the progress of Charleston, S. C., shown more vividly than in the diversification of industries. There are in and around Charleston to-day 138 factories of different kinds, employing 4,356 persons, with an annual product valued at \$8,116,568. This includes the fertilizer companies, 11 in number, who employ 920 hands, and whose products for the year are valued at \$2,562,000. The fact may not be generally known that it was in Charleston that the first American-built locomotive turned its wheels for the first time on a railroad track—at the depot of the Charleston & Augusta railroad.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of remonstrances and subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

Continued from Last Week.

Roll Call of Granges.

YUBA CITY: George Ohleyer, W. M. —In making his report on Grange matters, Bro. Ohleyer reviewed the Grange movement from its inception. He said, according to his experience, the Grange cause flourished best when the agriculturists are suffering under adversities. Yuba City Grange was organized in September, 1873, with a charter membership of 30, which ran up within a year to 150 members. Those were the days of rings. There was the wheat ring, the freight ring, the bay ring and the money ring. All these combined succeeded in taking away about all the profits of the farmer. These things produced a universal dissatisfaction, and a determination by our farmers to organize for relief. The Grange promised relief, hence the rapid organization of nearly the entire farming population of the State. The onslaught came, and, while many farmers were the sufferers, the rings were broken, never to be welded again. A season of unparalleled prosperity set in, the farmer received all his produce was worth, less a reasonable cost for transportation. Now that a healthy equilibrium was established there seemed nothing more to be desired by our members, and, one by one, they allowed themselves to be read out or withdrew. The loss by death was also considerable, until, from all these causes, our members were reduced to less than 50. At one of our meetings the question was discussed whether it were not better to surrender our charter than to allow the Grange to die of neglect. A vote was taken, but no ballot was cast for surrender. From that day forward the Grange felt dearer to us. At the beginning of the year a sister offered a resolution which was adopted, that each member present should take one or more blanks home, and at the next meeting present at least one new name for membership, or the return of an old member. This was done, and the result was a success beyond expectations. At present the Grange numbers 76 members. Our meetings have been held very regularly, the exceptions being in the midst of harvest, or when prevented by floods. Our meetings are rendered interesting by recitations of original or selected literary productions, music, etc. Altogether, no one regrets the time spent in this social intercourse, and even those who have fallen out of our ranks remember with pleasure the good times enjoyed in the Grange.

Woman's Relation to Society Through the Grange.

(Read a fragment interesting of the State Grange by Mrs. F. M. Lemons, of National Ranch Grange, San Diego county.)

In the dark ages of the past, when warfare was the refuge of the disaffected, physical strength the chief element of defense, and refinement was considered weakness, it was but natural that woman should be under the ban of disfavor, and neither be invited nor wanted to sit in the councils of men.

But as the car of progress rolled forward, and the mists of ignorance melted away before the bright rays of enlightenment, when tenderness and mercy were found to be more effective agents in our civilization than arms and warfare, a new era was ushered in, and "woman's hour had struck."

One by one the doors turned back on their time worn hinges, and woman was welcomed to the halls of learning, from whence she went forth crowned with the laurel wreath, and step by step the tide of conservatism was stemmed, until, yielding to the advancing sea of an enlightened age, medical schools followed in the wake; then the rostrum, bar and pulpit yielded to the popular demand, and earnest eloquence from womanly lips has tempered stern justice with tender mercy. Every avenue of labor to which woman's skilled hands, educated brain and loving heart are adapted are opening to her. Old prejudice is dying, physical force is giving place to the finest sentiments of human nature, and now her admission to secret societies on a perfect equality with man marks an epoch in our history, the importance of which the world has not yet fully comprehended.

Secret Orders have existed from remote centuries, but they carefully barred their mystic doors against women, and not until the dawn of the 19th century, aptly called "woman's century," did an Order spring into existence with the clear understanding of the needs of the physical, social and intellectual well being of both sexes. Even agricultural societies dating back more than 100 years, make no direct effort to promote the moral, social and intellectual condition of the farming classes, by endowing the farmer's wife and daughters with the same privileges and responsibilities of the farmer. Until the advent of the Order of P. O. H., societies confined to the agricultural classes have aimed blindly to elevate the farmer and his pursuits, without inviting the co-operation of the farmer's

wife, whose interests are identical with his. The Order of Patrons was the outgrowth of the nation's extreme needs, the legitimate result of centuries of progressive thought, and came to us as naturally as the recurring seasons or the daily sunshine. It cannot be said to have originated in the minds of men only as the thought of a republic came as an inspiration to man, when he had outgrown the conditions of a monarchy. Neither expediency nor policy awayed those who gave shape to the thoughts of the organizers in overstepping the bounds of custom in admitting women. But simple justice that had grown in the minds of men with the growing esteem with which they regard womanhood, gave brothers and sisters seats side by side, with equal rights to discuss the needs of the great human family, of which they are equally members. It is well for us to be reminded occasionally of that noble sentiment of our staunch friend, Anson Bartlett, of Ohio, the faith reposed in us, and the responsibility it involves. The Order of P. O. H. was in its formative state. Four degrees had been decided upon for men, and one for women. This unfair discrimination, so at variance with the spirit of the times, drew from Mr. Bartlett a strong remonstrance in the following language:

"I believe that the preservation of democratic institutions, elevation and advancement of the laboring classes, unless the idea can be successfully combated that labor is degrading, that we shall be in danger of losing our free government. But if the idea can be established that labor is noble, and that the tiller of the soil is nature's true nobleman, and the peer of anything human, the permanency of free institutions is a fixed fact. But in order to accomplish this result, the willing, active co-operation of woman is indispensable. Here, in the organization of this Order, is the opportunity to initiate mighty reforms, and here may be inaugurated the idea of equality between the sexes, without doing violence to any person's feelings or prejudices."

Such heroic words, unsanctioned by time-honored conservatism, and fraught with such happy results, should be to us a monitor warning us to beware of apathy in the work intrusted to our hands, and encouraging us to fulfill the obligations we have assumed.

"No Grange shall be organized or exist without women," was the emancipation to the women of the farm, and the natural outcome of the advanced educational privileges accorded them, for which the century has been noted.

Something more than a silent appreciation of this compliment is demanded of us. Earnest and cheerful work alone will bring to us the advantages the Order has to bestow. The pivot on which all our interests turn is home. It is the center of the world's thought, the leading object of humanity's ambition and love. The family is the material and moral basis of the State, and to insure prosperity to the nation, the home and family must be sacredly guarded. This work has ever been accorded to woman. The Grange confirms the old time theory; confers on her new powers, and sanctions her efforts in every worthy cause that has for its object the strengthening of domestic ties and the improvement of our dwelling places. But the word home has a broader significance than the four walls within which we eat, sleep and mingle together. It not only includes our houses, but our gardens, farms, neighborhood, and is only bounded by the outer circumference of our country. Taking this broad and rational view, we perceive the force of Mr. Bartlett's logic—that the preservation of our democratic institutions, through the agency of the Grange, devolves alike on men and women. The work of the subordinate Grange is the connecting link between the home duties at the fireside and the more public home duties of our country. Woman's interests in the home, the Grange and country are identical with man's, and can never be severed from his. Her heart alike responds to harmony and is pained by discord; the same beneficent laws protect and the same cruel ones oppress both him and her. She has won golden words of praise for her untiring devotion to her fireside home. She must win it, too, for an unselfish devotion to the Grange, and through a concentration of influence restrain her sons in public as she has done in private life; check national sins as she has repressed private ones. Looking back over the lapse of 15 years one cannot fail to note the higher social and intellectual standard of women in farming districts. "Country women," a score of years ago, was a synonym for coarseness and ignorance with our sisters of the city; a class, it was supposed, incapable of rising above kitchen and farm-yard drudgery and wholly disqualified for the higher social circles of the town. Although unfounded, it is yet clear that the Grange has stimulated to intellectual activity those who have come within its influence and has sealed in silence the lips of those who brought the charge. The slumbering genius of a hundred thousand women has been awakened, and through the perfection of their works have proved themselves the peers of the highest lady of the land. The papers bring us now, that from one end of our grand republic to the other the pen of the farmers' wives and daughters is busy; their voices are heard in advocacy of those principles that made our Order a necessity; their influence is felt in the cause of temperance and moral reform; we hear of them in county councils with timely words of wisdom, in Grange anniversaries, with addresses and poems, instilling new life into the Order, and with a happy felicity embellishing the practical, routine duties of the

hour. Nor has womanly modesty suffered by this new awakening, but so far as increased knowledge has been applied to the improvement of her home, her family and her surroundings, so far has her own nature been developed in all the graces of a pure womanhood. To woman the Grange is an educator in a way that no other society ever attempted. Nor will the influence of this discipline cease when they who now enjoy it shall have folded their hands to rest, but it will reach forward into the distant future, when the girls and boys of to-day, imbibing the enthusiasm of their parents, shall carry forward with riper experiences the grand work we shall soon lay down.

The limitless opportunities the Grange presents to woman, if seized upon, may convert the social convent of the isolated farm-house into a charmed resting place, where youth and age may find pure pleasures and more satisfying enjoyments than the busy centers of life afford. The resources of the Order are so varied that every taste may be gratified. Has she a love of literary labor? A broad field opens before her, in which she should work to instruct the fathers, mothers and children of the farm. Do her domestic tastes predominate? The numberless observations and experiments she is constantly making should be carefully gathered for the "good of the Order," to communicate to her sisters on Grange day, thus helping the inexperienced to attain her own exalted standard of domestic life. The most trifling duty, if it contains the germ of a new thought, should not be overlooked, for "He who seeks to pluck the stars may lose the jewels at his feet." Has she a soul attuned to harmony? The Grange choir offers her the gladdest pastime, and the sweet songs may be brought to the family hearthstone, and many a dark-winged care be banished by them, while the lisping voice of childhood joins in the sacred work of home-making. Is she imbued with a spirit of devotion? The spiritual wants of her nature are not forgotten. Does she delight in merry-making? The festive days overflow with gladness, and the otherwise dull routine of farm work is so broken by them that the wear and grind of perpetual toil is softened and made light. Has sorrow laid its heavy hand upon her? Fraternal hearts enfold her in their sympathies. Does she lack that knowledge so essential to guide over the rough places that all find on the road of life? Every Grange has its members qualified to advise and aid. And while she reaps a spiritual and material harvest of other's experiences, every matron in turn is pledged to contribute from her store of knowledge for the good of others. This is the highest form of co-operation, and everyone, however humble, has capital to invest.

The smallest wave of influence set in motion
Extends and widens to the eternal shore
We should be wary, then, who go before,
And we should take
Our bearings carefully when breakers roar
One mistake may wreck a hundred years
That follow in our wake.

Woman's mission in the Grange that underlies our social, civil and political institutions is that of developing and nurturing a taste in our youth for the tastes and pure pleasures of country life; cultivating in them habits of industry, economy and sobriety, combating the modern ideas that manual labor is degrading, thus strengthening the pillars on which rests the superstructure of a republican government. A few years ago the Rev. Washington Gladden addressed a large number of letters to persons eminent in literature, science and art, and those distinguished in honorable public work, making inquiry with regard to their youth and early surroundings. The extraordinary sameness of the replies revealed the fact that they were born and reared on the farm, their early impressions, gained from contact with nature, were lasting and conducive to that healthful mental development for which they were all remarkable instances. The virtues, no less than the intellect, are stimulated and strengthened in the quiet pursuits of country life.

A forced growth of the mental powers and a forgetfulness of the moral nature is one of the commonest errors of the age, and calls loudly for the counteracting influence of the Grange, storing the minds of youth with a knowledge of the classics, to the neglect of temperance, industry, filial respect and honesty; giving them the opportunity for social excitement rather than instilling into their young minds a love for the healthful pleasures of home life; giving them access to poisonous literature to the exclusion of useful reading; nurturing a passion for exterior display and a disregard for honest labor, is the tendency of the times which the Grange may, if it will, correct.

The farmers' homes, through our organizations, present the grandest possibilities for reforming prevailing social errors. Here is found the "golden mean" between enslaving poverty and enslaving wealth. Here labor and rest may clasp hands, and the fitful fever of speculation find no victims.

By-and-by, when our politicians are at their wits' end to harmonize the interests of capital and labor, when our social science reformers, our philosophers and philanthropists, who look with dismay upon the increased defiance of law, uncertain where to look for remedy, when our prisons and reform schools are uncomfortably filled, when the heaven of the Grange will permeate the loaf of society, and the uncrowned queens of home, our matrons who are faithful to their trust, will reap the reward of their labor. Brothers and sisters will alike rejoice that the permanency of our democratic institu-

tions is assured, and a grateful people will reverentially exclaim: "Behold what the Grange hath done!" What has now been accomplished compared with grand possibilities, is as the first flush of midnight to the sun's meridian glory. The fulfillment of this promise rests with the sisters not less than the brothers of the Grange.

Let them first be true to thyself
If thou the truth would touch;
Thy soul must ever be true,
If thou wouldst ever reach
It needs the overflowing heart
To give the lips full speech;
Thank truly, and say the right
Shall the world's famine feed,
Speak truly, and thy word
Shall be a fruitful seed.
Live truly, and thy life shall be
A good and useful deed.

Anti-Debris Appeal.

To the People of California:—We have been requested by the suffering people of the great valley of this State to make an appeal to you in their behalf. Would that each one of you could behold with your own eyes the devastation that has already been wrought by the unrestrained flow of mining detritus. You would be astonished to know that any number of the American people—people claiming revolutionary sires—had patiently met such destruction of their homes. Could you behold this, you, too, would grow impatient at the cold impress of type upon paper. All the language a Patrick Henry could command and thus put forth would fail to give more than a glimmer of the wrongs these people and you have suffered and are about to suffer. As has been repeatedly shown, it is not alone the people whose hearthstones are being invaded who suffer, but all the people of the State and their children, and their children's children, on down to the time when "the earth with age grows wan" and bears

The best of human mould
That shall creation's death behold
As Adam saw her prime.

Rivers are being destroyed upon whose bosom floats, or has floated, the commerce of a rich agricultural territory capable of supporting two or three millions of people. These rivers are worth to the present sparse population not less than \$2,000,000 annually. More than 100,000 acres of the finest land on the face of the earth has already been destroyed and as much more made impractical of reclamation. Other hundreds of thousands of acres are in process of destruction. These rivers, these lands cannot stand another year of unrestrained hydraulic mining. The bay of San Francisco must go next, and if you would save any of California worth the saving, you must interpose an objection at some stage of the proceeding. Why not now?

The miners have announced that they intend to ask the next Legislature to attempt to legalize in some way the building of impounding dams. Such a scheme is a delusion and a snare, and the rivers and the valley lands must take the consequence of a failure. The courts have decided that it is unlawful to run this detritus into the rivers, but the miners have evaded the service of the orders of the courts, hoping that the Legislature may come to the rescue. Our people do not desire that the principle of the law shall be changed, but that measures be taken to enforce it. They appeal to you to see that no pernicious legislation be had. Because the hydraulic miners have evaded the processes of the courts, some legislation may be required to put in force the principles of right and justice laid down by the courts, and which are as old as civilization.

With all our long suffering, with all our wrongs, this is all we have to ask of the voters of the State in their sovereign capacity. We ask no charity; we ask no compensation for damages; but we come showing our wrongs—your wrongs—and ask for justice. We ask every voter in the State to see that the men he sends to represent him in the Legislature are willing to give us this. Much has been said, and we do not choose to go into details of facts or enter upon an elaborate argument. It is time for action. Will you help us?

Geo. Ohleyer,
W. S. Green.

EUREKA LEMONS.—A few weeks ago we mentioned that J. W. Wolskill, of Los Angeles, was shipping overland selected Eureka lemons, nicely wrapped and packed, and that we looked upon this movement as a promising feature of the coming overland citrus fruit trade. Last week Mr. Wolskill sent us a sample box of the fruit he was shipping, in order that we might judge of the quality of the fruit and its general desirability in the market. We do not hesitate to pronounce it excellent in every respect. The Eureka lemon is acknowledged to be one of the very best yet brought out in California. Its sweet rind, high percentage of acid and abundant juice have been frequently set forth in the careful tests made by the lemon committees at the southern California citrus fruit fairs. We find all these characteristics brought out well in the lemons Mr. Wolskill is marketing, and it must be only a question of time when they are recognized by lemon users generally. The old prejudice against "California" and in favor of "Sicily" lemons will melt away as soon as the market can be supplied with the fruit of the improved varieties which are now being propagated. We do not find any imported lemons superior to the lemons Mr. Wolskill sends us, either in appearance or quality. We are pleased to bear this testimony to the excellence of a home product.

AGRICULTURAL NOTES.

CALIFORNIA.

CONTRA COSTA.

RAISINS.—*Oakland Tribune*: Mr. Mason, formerly a painter of San Francisco and Oakland, a few years since purchased, at a low figure, 10 acres of hillside land in San Pablo township and turned his attention to the culture of raising grapes. His vineyard came first into full bearing the present season, the yield being over 50 tons of grapes, producing 12 tons of excellent raisins. Mr. Mason's net return for the year's labor and attention will be \$2,000. An experienced wheat grower, whose success has been uniformly fair, declares that 40 acres in vines are preferable to 500 acres in wheat, both for profit and certainty of crop. What splendid opportunity have the young men of California! Better far than those offered by the learned professions.

FRESNO.

NO PHYLLOXERA.—*Republican*: I have examined the following named vineyards and colonies for phylloxera, and failed to find the slightest traces of any: Malter's, Fresno, Butler, Barton, Eisen, Eggers, Williams, Hudson and Kearney vineyards, and Nevada, Church, Central California and Scandinavian colonies. I should like to advise every vineyardist in the county to be very careful in ordering cuttings and rooted vines. It is hardly necessary to go beyond the limits of Fresno county, and by far the most prudent not to do so when we consider the possible result as regards phylloxera. Now that we are still clear of this pest, it will be worth millions of dollars to this promising and thriving center of a fruit growing community not to let this enemy be brought among us. One single infected cutting will do the business. Buy your rooted vines, cuttings and fruit trees at home if you can possibly be suited. This is the only real safeguard we have.—M. DENICKE, Local Resident Inspector.

GRASS.—*Expositor*: The grass is coming up rapidly, and with ten days' ordinarily favorable weather there will be good sheep feed. The ground in some places is already green with new grass. The present prospects are favorable for more rain, and if it comes it will send vegetation along booming. Mr. Dusy informs us that considerable Egyptian corn that had been cut and left lying on the ground has been injured by the rains. He says that the growth of vegetation is very rapid in his neighborhood, and that corn will sprout and grow three inches in a single night.

INYO.

POTATO YIELD.—*Independent*, Oct. 21: Dr. W. H. George informs us that a gentleman at Bishop cultivated 2,373 pounds of potatoes from 12 pounds of seed on a piece of ground two by five rods in extent. This is at the rate of over 19 tons per acre. The variety is called the "white star," and has but recently been introduced in this valley. Some of our exchanges have been "blowing" about a yield of 18 tons of potatoes on a single acre of ground in one of the coast counties. Inyo goes them one ton better.

KERN.

EARLY SOWING.—*Californian*, Oct. 21: The farmers on the rich plain, at the sink of Poso creek, are engaged in putting in wheat on summer fallowed land. They have experimented in various ways on the best methods of growing this cereal and have demonstrated the one they are now pursuing to be the best. The early sown grain, that has the benefit of all the moisture that falls, and of the full length of the cool temperate season, produces the heaviest and in all respects the best crops.

LOS ANGELES.

ORANGE RAISINS.—*Times*, Oct. 20: Mr. R. McPherson, of the firm of McPherson Bros., Orange, the well-known raisin producers, employ 38 hands in the work of curing their raisins, and expect to have the work completed in two weeks. They estimate the total raisin product of that section will reach at least 20,000 boxes this year, an increase of 5,000 boxes over last year. Messrs. Lusk & Co. and Mead & Co., of San Francisco, have secured the total product of that valley this year. From a preexperiment two years ago, when the total product of the valley aggregated only one carload of 670 boxes, the yield has leaped to 20,000 boxes. This is the best commentary possible on the wonderful resources of the soil, and its adaptability to the growth of the raisin grape. To the enterprise of McPherson Bros., in a great measure, is due the growth and fostering care of Orange's raisin product. They have perfected arrangements, whereby they will be shortly in daily receipt of weather reports from San Francisco, Santa Barbara, Los Angeles and San Diego through the Signal Service Department—a very important acquisition to them in view of the fact that all their raisins are made by the sun-dried process.

SANTA ANA RAISINS.—*Herald*, Oct. 15: Halesworth Bros., of this place, have sold their raisin crop of this year to Mr. George D. Rowan. They have about doubled the crop of last year, putting up now about 1,200 boxes of superior raisins, which, we understand, have been sold for \$1.75 per box. The raisins put up by Halesworth Bros. last year were eagerly sought for by buyers, on account of their superior excellence, they having exercised the greatest care in picking and packing. We learn that from one

vineyard they will make 200 boxes of raisins to the acre, the vines being extraordinarily full of grapes. It is calculated that it takes four pounds of grapes to make one pound of raisins.

MONTEREY.

RELATED HARVEST.—*Argus*: The grain is not all threshed in Castrovilla vicinity yet, one or two outfits having a full week's run yet. The unthreshed grain that laid out in the rain is not seriously damaged, though badly discolored.

PLUMAS.

HAY AND CATTLE.—*Greenville Bulletin*: The abundance of hay in Honey Lake valley this season has made it cheaper than for some years past. It is now selling in the Tule Confederacy at from \$5 to \$6 a ton, against \$6 to \$8 previously. As the price of beef is steadily increasing in the lower country and Eastern markets, the Honey Lake cattle owners ought to make considerable profit. Mr. Byres will feed about 1,500 head on his place this winter. On most of the ranches, however, the hay is sold to men who make a business of buying cattle in the northern counties and Oregon and taking them there to fatten. From 3,000 to 4,000 head are fattened in this district every season.

SACRAMENTO.

HAULING EXPOSED GRAIN.—*Bee*, Oct. 19: The steamers of the Sacramento Wood Company are busily engaged hauling exposed grain from the banks of the upper Sacramento river. Calculation shows that if the boats do as well to the last day of the month as they have been doing since the 1st instant, over 19,000 tons of wheat will have been brought down during the month. The steamboat men report that it is now known that little damage was done to grain by the recent rains.

LARGE HOP SALE.—The largest sale of hops ever made in California took place in Sacramento Monday. The hops were raised by H. Whittenbrook, and consisted of 700 bales. The amount paid was nearly \$85,000. The negotiations were conducted on the part of the buyers by Neubourg & Lages, for Paul J. Crowley, of San Francisco. The hops will be shipped to England.

SAN JOAQUIN.

BIG SQUASHES.—*St. Helena Star*: Our readers remember the big squash raised in Santa Barbara Co. by Philander Kellogg, and into which his 18-year-old daughter was able to get and be completely closed in. H. L. King, of Lodi, got five seeds and planted them May 10th. Of these three grew. The first squash came July 25th, and now weighs 172 pounds, picked October 14th. The three vines have nine squashes, weighing 1,530 pounds. A tenth squash unfortunately rotted. The whole family is now on exhibition by Mr. King, and is an interesting illustration of what good seed will do.

SANTA CLARA.

THE CANNARIES.—*Mercury*, Oct. 19: The San Jose Fruit Packing Company has put up 60,000 cases of fruit this season—more than ever before. The Golden Gate Packing Company has put up during the same time 50,000 cases. Besides these Dawson's and the Los Gatos canneries have done a considerable business. The fruit from all finds a market in every quarter of the globe, and the demand is practically unlimited. The fruit interest, it is believed, is yet destined to make this one of the richest valleys in the world.

NEW GRAPE CRUSHER.—We witnessed Tuesday, at the winery of Lemoine, Turrel & Co., of this city, the working of a new grape crusher, the product of the fruit brain of Mr. Sansevain. It consists of a cylinder-shaped arrangement with a hopper—the former constructed of rods in such a way as to do the work of separating the grapes from their stems and crushing them perfectly, while the stems are ejected from one end of the cylinder. The crusher, when put to its full capacity, with steam or horse power, will crush from six to eight tons of grapes per hour—equal to 2,000 gallons of juice per hour.

SANTA BARBARA.

APRICOT WINE.—A correspondent of the *Rural Californian*, from Santa Barbara, writes to that journal as follows: "A few days ago I took a little drive into the country. Stopping at a farm house, which was surrounded by a fine fruit orchard, the lady of the house brought in a bottle filled with a clear, bright liquid, and proceeded to fill glasses. 'I wish you to guess what this is,' said she. I looked at it; it was colorless and sparkling like the best champagne. It had some brisk, exhilarating taste. I pronounced it more like champagne than anything I ever tasted, except champagne; but while declaring it delicious, and welcoming a second glass, it was impossible for me to determine its origin. Imagine my surprise when I learned that this delicious, sparkling, clear white wine was made from the juice of the apricot! The market was glutted; the price paid for the fruit hardly paid for the labor of gathering it; and so, rather than have the fruit go to waste, this lady had tried the experiment of using the fruit for wine, hardly hoping for a successful result. The fruit was taken when fully ripe and full of juiciness. The wine was made by the same process as other home made wines, the only difference being that less sugar was used in preparation to the amount of fruit."

SAN LUIS OBISPO.

BEANS.—*Tribune*: The bean crop of the Arroyo Grande Bottom is estimated to aggregate \$200,000 in value. The harvest is well advanced and the yield is found to be from 2,500

to 4,000 pounds per acre. The estimate of \$200,000 for the crop was made by calculating the rate of three and a quarter cents per pound, but since then the price has risen to four cents. At an average of 3,000 lbs. per acre, at 3½ cents per pound, the return to the farmer is at the rate of \$105 per acre for his land. Who can estimate the value of land producing such returns?

SANTA CRUZ.

WATERMELONS.—*Courier*, Oct. 19: In an interview with Mr. R. A. Raleigh, who has been one of the principal operators in watermelons in this section, we learn that he has devoted ten acres of his ranch near Corralitos to this crop the present season. His first melons were ready for market on the 6th of August, and since that date the yield has been from 1,000 to 1,500 ripe melons per week, and he expects the harvest to continue for three weeks longer at least. The price averages through the season at about 10 cents each. Mr. Raleigh owns one of those foothill ranches that many farmers sneer at, yet his net results will compare favorably with many valley farms. His place contains 47 acres, partly timber, partly grazing land, and is far from being fully improved, yet his sales of fruit aside from melons this year nets \$152, while his total outlay for help does not exceed \$70, leaving him a margin of profit besides the total income of the "melon patch."

SOLANO.

LOSS OF RAISIN GRAPES.—*Sacramento Bee*: The grape crop was an unusual heavy one, and if the rainy season had been deferred to the usual time there would have been much profit to growers. As it is, however, many will suffer great loss. G. J. Briggs, of Davisville, will be the heaviest loser in this section. He had a large acreage which under ordinary circumstances would have brought an income, it is calculated, of \$60,000. They were nearly all raisin grapes of the most valuable kind. They had to be dried on planks in the vineyard, and the storms were so frequent and sudden that the fruit could not be protected or put under cover. He stated a few days ago that he would not be able to save more than one-fifth of the crop, and that the saving of that amount was done at an expense that would prevent profit.

TEHAMA.

CHESTNUTS.—*Colusa Sun*: P. L. Washburn brought us fifty some chestnuts grown by H. M. Albright at Red Bluff. The trees are eight years old and are heavily loaded with nuts. Mr. Albright says if all his shade trees he planted at the time had been chestnuts, he would have a larger income next year than any man in the valley gets from a quarter section of wheat. This valley is a great place for all the nut bearing trees. The walnut does splendid, and it is now said the chestnut does fully as well as the walnut. The chestnut is a beautiful tree, and people planting shade and ornamental trees would do well to intersperse them with chestnuts; in fact we believe that a chestnut orchard would be very profitable. The bloom is late, and hence the crop is more certain than almonds and some other nuts. The tree does not bear so young, but when they do begin to bear the profit will be very great.

VENTURA.

FRUIT GROWERS' MEETING.—*Free Press*, Oct. 21: The third meeting of the Ventura Fruit Growers' Association was held on Thursday at the office of Blackstock & Shepherd N. W. Blanchard in the chair, and F. A. Foster, Secretary. The Committee on Constitution and By-laws, S. Bristol, Chairman, made a report, which after some discussion was as a whole adopted. After another general discussion the meeting adjourned. The interest manifested by those present and that shown by others indicates that the society means business—that it intends to enforce the laws passed to punish those who breed pests and enemies to the fruit business. The society is composed of live men and their efforts should be seconded by every fruit grower in the county.

PLOWING, SOWING AND THRASHING SIMULTANEOUSLY.—This is one of the interesting and unique features of California farming, that all the implements of the farm may be at work at the same time and within sight of each other on the same field. The *Chico Enterprise* says: A busy scene is presented on the Glenn ranch. Thrashing, plowing and sowing is being busily carried on, and quite a large force of hands is at work. The damage by the late rains turns out to be mere nominal, as far as the unthrashed grain is concerned, and the advantage of getting plows to work and seed put in so early, without a long intermission of idle time, more than counterbalances any small loss that may have been sustained.

THE LATEST FASHIONS.—With a view of giving our lady readers a glimpse of the modes we have introduced a page of recent fashions in this issue. We do not intend to let this matter encroach upon the regular field of the *RURAL*, but rather to give it as a diversion, if it should prove acceptable to our readers. We hope to give hints on styles which shall be of practical value, and not the extremes and excesses in costuming which "ordinary good folks" and those of good taste and culture have little to do with.

EDWARD P. FERRY, of Utah, has been appointed Government Director of the Union Pacific railroad, vice Robt. Baker, deceased.

News in Brief.

MAUD S. is to be shipped to Cincinnati in December.

In September Michigan farmers marketed 12,740,000 bushels of wheat.

A COLLISION of freight trains at Rhine Cliff, N. Y., caused a loss of \$80,000.

BAKER PASHA has been officially appointed to the command of the new Egyptian army.

The value of supplies issued to the Indians by the government during the year was \$37,196.

The price of Russian grain has greatly declined, owing to the competition from America.

Two hod-carriers fought on the top of a three-story building at New York Saturday, and fell to the ground, both being killed.

The new Northern Pacific Railroad bridge over the Missouri river at Bismarck, D. T., was formally opened to traffic Saturday.

The new Minister from Japan arrived at Washington Saturday evening, in 22 days and 9 hours from Yokohama—the quickest time on record.

The government's receipts for the capitation tax on immigrants, under the Act of August 3d, up to and including September 30th, amounted to \$37,660.

Dr. Boynton's claim for services during President Garfield's illness is for \$4,500, being \$5,500 less than any claim for professional services yet received.

The will of Jeannette Buchanan Golet has been filed for probate in New York. After disposing of a large amount of real estate, she bequeathes to her relatives over \$700,000.

It is said that Sutro & Co. have purchased a controlling interest in the Omnibus railroad, in this city, and that the cars of the line will hereafter be run by electrical motors. It is claimed they will work a saving of \$6,000 a month.

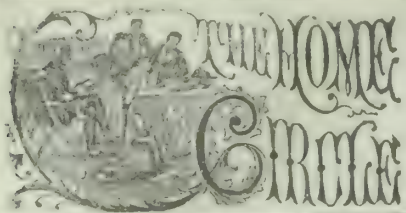
PURSES of \$10,000 a year or a lump sum of \$250,000 each were offered to Sir Garnet Wolseley and Sir Beauchamp Seymour. They chose the latter, which indicates that the available rate of interest is not bad, and that life insurance in its practical aspect is understood by the War Office.

MESSRS. PAXTON & CURTIS, of Eureka, Nev., with ex-Gov. Low, have bought about 7,000 acres on Eel river, Humboldt county, known as the Ralston tract. The price paid is reported at \$100,000. This syndicate proposes to build a railway from the track to tide water at Humboldt bay, a distance of some 20 miles. Prominent lumber men of Chicago and Detroit have had representatives here at various times during the past year, with a view of ultimately using redwood for finishing work in place of white pine.

LARGER CATTLE SOON.—We expect soon to have a chance to turn our attention to larger cattle than those which are just now occupying considerable space in our columns. The small beasts which our fruit men grow upon their trees, and of which they are so anxious to close out their stock, are forced upon our attention just at this time because the annual bug banquet will come off at San Jose in November. After that meeting is over, and its proceedings placed upon record, we expect to let the fruit growers man their pumps and distribute their *lives* alone, while we wander into the pasture and stock yards, and give attention to the cattle, sheep, hogs, poultry, etc. Indeed this contemplation of minute live stock is so depressing that we are half a mind to put in a few pages on the domestication of the elephant, to sort of balance the size of the animals discussed in our columns. Let those of our readers who do not care for insect lore possess their souls in patience; we shall swing off into other spaces soon.

A BOOK ON DRAINAGE.—"Practical Farm Drainage and the Manufacture of Drain Tile" is the title of a book just published by J. J. W. Billingsley, Indianapolis, Ind. Part I treats of Farm Drainage; Why, When and How to Drain. Part II treats of the Manufacture of Drain Tile, Selections of Clays, Plans of Factories, Machinery and the Mode of Manufacture. The two parts are substantially bound in one volume, and illustrated with more than 60 engravings. In view of the greatly increased interest in farm drainage for profit and health, this work will doubtless have a large sale. California has but just begun to learn the advantage of under draining, but the lesson is taking rapidly, and our orchard and vineyard men are putting in large quantities of tile at present. In a year or two the practice will become quite general, and the result will be much better land and more satisfactory returns. Mr. Billingsley's book, which costs but \$1 per copy, will be found valuable to all who contemplate improvements.

MR. A. R. BOOTH, proprietor of "Booth's Sure Death Squirrel Poison," which is advertised in our columns, is, we understand, meeting with great success in the sale of his poison. It is also efficacious for gophers, birds, mice, etc. Now, after the rains, is a good time to test it. From the testimonials which Mr. Booth states he is constantly receiving (two of which we publish in this issue), it appears that the poison is giving great satisfaction to those who have used it. It can be obtained of A. R. Booth, Eagle Drug Store, San Luis Obispo, and from all wholesale and retail dealers.



How Von Mouse Died and was Buried.

Such an uproar arose in the honey bees' hall,
From the store-house sweet to the nursery wall,
Till the queen hobbled out,
Full of faint-hearted doubt,
Lost Democracy clamored for Monarchy's fall.

All the gatherers loitered, a-dust, by the gate,
Thinking, doubtless, that work for a day-spell might
Wait.
That the terrible din
And commotion within
Was a valid excuse for their going out late.

When buckwheat was ripe a great enemy came
To the honey bees' castle, Von Mouse was his name,
But the wings and the stings
That were working in Rings
Before, joined to combat Von Mouse and his claim.

Then they tattered his doublet of velvet gray,
They lanced him and stabbed him in merciless way;
Nay, they tortured him so
That he died, hard and slow,
With his paws on his breast, at the end of the way.

Their first triumph over, new trouble arose,
For time brought revenge on the jubilant foes;
And Von Mouse, lying dead,
Was a weightier dread
Than the living intruder who battled with blows.

Too heavy to push from the battlements down,
Too bulky to drag through the streets of the town,
Yet the pestilent breath,
Silent herald of Death,
Would not pause in its work at the queen and her crown.

So a council was held in Hexagon Hall:
All the regal advisers and commoners small
Were convened in a trice,
A committee on mice,
To discuss the new danger that well might appall.

There were many suggestions at the best incomplete,
Till a common brown worker from Clover-Nook street
Buzzed aloud through the din,
"Build him in! build him in!
From his saucy pink toes to his guilty black feet!"

When the bees had recovered from terrible fright
They soldered him close in his casket white.
Wouldn't mortals be wise,
As their troubles arise,
If their busy hands builded them in out of sight.

A Woman's Work.

The glory of a free once glimpsed may make
The humblest life heroic for its sake.

It was near the close of the campaign of 18—
that the wigwam of Graffsburg was crowded
to its utmost capacity by an eager, listening
throng of people. The speaker, to whom they
were paying the closest attention, was one of
the prominent political orators of the day.
Ever and anon the vast building rang with
cheers which seemed to pierce the lofty roof,
and to mount even to the starry heavens. The
address was clear, logical, eloquent. Each point
was distinctly marked, and so bulwarked by
arguments and facts that it seemed immovable.
Parallel circumstances from the histories of
other countries, showing the well-read mind of
the speaker, alternated with dry but powerful
statistics; while an occasional flower, plucked
from the garden of poetry, relieved and beauti-
fied the whole. When, at length, the orator
concluded with an eloquent eulogy on the
Union, which brought tears to many eyes and a
thrill of pride to every loyal heart, the cheers
of the audience drowned the music of the band,
and men on the platform grasped his hand, and
sought to express their feelings of admiration
and approval.

He had won other triumphs in the course of
his life. Success was not a new thing to him.
"Invention is one of the great marks of genius,"
says Sir Joshua Reynolds. In his early manhood,
this man had proved his possession of genius by
an invention which brought to him \$50,000, and
which moved the world onward another step
toward the perfection of mechanical powers.
That was a victory over cold iron and steel.
But how marvelous is that power which, moving
over a great multitude of men, fills the eyes
with tears, conveys conviction to the mind, and
wins honor from the heart! Yet another mark
of genius is modesty. No truly great mind
ever boasts of its own powers or willingly re-
ceives the adulation of crowds. And the hero
of the evening, breaking away from the con-
gratulations that were being showered upon him,
turned to a man who had stood near him in
silence, showing his pride in his friend by a
beaming countenance and shining eyes, and
said:

"Come, Harmon, and go with me for a
walk."

Out into the cold night air they went, arm
in arm. The stars were bright, and the trees
under which they passed stood like tall, lifeless
spectres in the perfect stillness of the evening.
Leaving the throngs of people behind them, they
found a quiet, retired street, and they slackened
their pace, enjoying the change from the heat
and commotion of the great building. Not un-
til then was the silence broken. It was Har-
mon who spoke.

"I cannot tell you, Lawrence, how proud I
was of you to-night. You did a grand work for
the party, and you achieved a glorious triumph
for yourself."

The reply, which came slowly, earnestly

and emphatically, was a surprise to the
hearer.

"And the credit is all due to one woman."

Ernest Harmon was not a man who asked for
confidences, even from his dearest friend, and
so he waited silently for what should come next.
And Lawrence, of his own accord, told him
in detail the story of his life. Let us go back
and trace it more fully than his modest words
will allow.

It was just after the close of our civil war
that a man might have been seen walking along
a lonely, dusty road in one of the States south
of Mason and Dixon's line. The hot sun poured
down upon him as he wearily dragged one foot
after the other, occasionally pausing in the
shade of a tree to wipe the drops from his brow
and gain breath and courage for renewed effort.

At length he came to a little brook, whose
very rippling had in it a sound of encourage-
ment, and the weary wayfarer paused to bathe
his hands and face in its clear waters, and then
seated himself on the mossy bank to enjoy the
delicious coolness of the place. He had, all his
early life, lived among the hills, in districts re-
mote from schools and all educational advan-
tages. He had enlisted in the war, a mere boy,
and contact with men and the flux of new ideas
had stirred to life the soul that had hitherto
lain dormant within him. When the war
closed he could neither read nor write, but had
learned the value of both, and had begun to ac-
quire some knowledge of the former accomplish-
ment, though of the latter he as yet knew noth-
ing. He thought over all these things, sitting
there on the bank.

"Twenty-one years of age!" he exclaimed
bitterly, "and a know-nothing and a no-
body!"

The young man did not realize what a step
forward it was for him to have gained a true
estimate of his own status, however humiliating
that knowledge may have been.

"To that old life I will not return," he said,
clenching his hands tightly together, and mak-
ing an impassioned gesture of scorn, "not if I
die for it! There is something in me which
speaks of better things than I have known heretofore.
I will attain to them, cost what it may.
The question is not what I may do in the future
but what can I do now?"

A half a mile's walk brought him in sight of
a farm house, which he examined on all sides,
and finally decided to approach. Passing
through the gate, he turned from the house and
followed a path which led him into the field.
He presently came in sight of a number of men at
work, and at once detected the master of the
place giving his orders. He turned his steps
towards the man, who, with a blunt manner
and a note of interrogation in his voice, said:

"Well, sir?"

"I came in to ask for work."

"What can you do?"

"Anything about a farm."

"Lived on one, eh?"

"All my life before the war."

After a few more inquiries and an agreement as
to wages, he was hired and immediately set to
work. The days following were full of hard, unre-
mitting labor, and at night the new hand was
glad to forget his weariness and all else in sleep.
But as he became more accustomed to his work he
did not suffer so much from fatigue, and his
thoughts turned constantly to his desire for self-
culture. The other hands seemed neither to
think of nor to care for any such thing, and so
he wandered away from them in the long sum-
mer evenings, carrying with him his whole lib-
rary, a small volume of the "Lady of the
Lake," which had been given to him by a fel-
low soldier. It was slow work trying to read
and understand alone, and at times he would
grow so discouraged that the book would re-
main unopened for days, while he joined the
others in their smoking and rude story-telling.
But he was a gentleman by nature if not by
education, and the society of these men was
distasteful and annoying to him. And so dis-
couragement and despair seemed about to gain
the mastery. But there is a Providence caring
for the weakest of us, which, when we are about
to sink beneath our burden, lifts the heaviest
end from our weary shoulders.

One evening the lonely student, seated be-
neath a tree, was poring over his book with re-
newed zeal, of which he himself did not know
the origin. It was merely the forerunner of
what was in store for him. A footstep aroused
his attention, and, on looking up, his first
thought was that he was blessed with an angel
visitation.

And never did Grecian chisel trace
A nymph, a naiad, or a grace,
Of finer form, or lovelier face.

A tall, graceful maiden, with eyes like the
violets that starred the grass at his feet, clad
all in the purest of white, stood looking at him
with an expression of kindly interest. Moved
by his instinctive sense of the fitness of things,
he sprang to his feet and respectfully raised his
hat.

"I beg your pardon," she said, in a voice that
sounded like a chime of silver bells; "I did not
intend to disturb you, but I was curious to know
what book you were reading."

For reply, he handed her the volume, and as
she took it from him he noticed her hand—
white, shapely, beautiful. Who could she be?
The memory suddenly came to him of hearing
one of the maids say that the farmer's daughter
was coming home from boarding school; but he
had paid no heed to her words, not dreaming
that they held aught concerning him and his
future.

There they stood in the shadows of the even-

ing, the lovely, cultured girl and the ignorant
farmer-hand. What could they have to do with
each other? It has been said that human lives,
like circles, can touch each other at only one
point; but surely these two are like parallel
lines, which can never approach, even though
infinitely produced.

"You are interested in such books?" she
asked, looking up presently into his face. He
stammered somewhat in his replies, overcome
with embarrassment; but, a true man and a
true woman must always feel at ease with each
other, however different the grades of society to
which they may belong.

And soon the earnest seeker after knowledge
was pouring forth the yearning and aspirations
which burned within him, and the stately girl
was listening and sympathizing with all the art
of a genuine woman.

"I think I can help you," she said, thought-
fully. "I have all my school-books and you can
have the use of them if you wish."

He tried to thank her for opening to his vision
an intellectual Eden, but she interrupted him,
saying:

"Please do not thank me. I do not know
why I have had these school advantages, which
have been denied to you, unless it was intended
that I should help you. But let me read you
my favorite passages."

Turning the leaves rapidly she read a para-
graph here and there, commenting somewhat
on each one of them. Then, promising to read
some books on the morrow, she returned the
volume to him, and, with a pleasant smile of
adieu, turned away toward the house. The
man she left stood motionless, looking after her,
until the last gleam of her white drapery was
lost from sight. Then he threw himself down
on the grass, and, opening his book, read hastily
and almost feverishly until the darkening twi-
light concealed the words, for a new light
shone over and from the pages. The reading he
had heard was an interpretation and an inspira-
tion. He began to discern the meanings that
lay underneath the words. His heart beat fast
with sympathy for Douglas, whose memories of
past honors were but a bitter sweet to him. He
followed the "cross of fire" with bated breath,
mourning in the weird strains of the coronach
over Duncan, and feeling a throb of pain for
Norman, summoned from his young bride.
United with Fitz-James, he contended against
Roderick Dhu, until the haughty chief was
overcome. Then with Ellen he made his way
to the court, and shared her thrill of wonder
and amazement when he discovered that

Snowdon's knight was Scotland's king.

Reluctantly that night did he close his eyes,
fearing lest the morning sunlight should reveal
to him that the evening's impressions and ex-
perience were but the shadowy mist of a dream.

The farmer's daughter was true to her prom-
ise, and not only lent him books, but gave him
such instruction as she could. She seemed to
him a marvel of learning, and yet her mind had
not half the breadth of his. The pupil soon
passed far beyond his instructor. Intensely in-
earnest, and gifted with a marvelous natural in-
sight, he soon astonished her with his attain-
ments. She understood and pointed out to him
the a b c of mathematics, but he went on until
he reached and mastered the x y z. She told
him the names of the stars; but he, looking far
into the inter-stellar spaces, gained some com-
prehension of the magnitude and grandeur of
constellations and systems, of the wonderful
ever-moving order of worlds, instituted and
directed by the Divine Mind. He was passion-
ately fond of poetry, and during his day of hard
labor the stanzas which lingered in his memory
seemed like strains of music to encourage and
strengthen him. The soul of the man was quick-
ened within him. It awakened to the broadest
thought, the most generous impulses, the sin-
cerest desires for usefulness in the world. Surely
an effect is often infinitely greater than its
cause. The young girl, in the kindness of her
heart, helped the man to the first beginnings
of an education, nor ever realized that she was
aiding the development of one of the finest
minds of the age, and was giving an impulse to
a soul capable of the grandest possibilities. But
into the clear sky of the farmer-hand's happiness
shot a sudden thunderbolt.

"Would you believe it, Harmon?" Richard
Lawrence said, his heart aching anew with in-
dignation, as he told his story to his friend.
"Would you believe it? That old ignoramus,
the father, evolved the idea from the shallows
of his inner consciousness that I was making
love to his daughter. If she had given food to
a hungry beggar from that white hand of hers,
he would no doubt have looked on approvingly;
but he knew of no starvations besides that of
the body. He had never hungered for mind
food. His soul had never thirsted for the spring
of knowledge. And he forthwith discharged
me for daring, as he said, to encourage in my
mind the thought of marrying his daughter.
Marry her! Why, I would as soon have dared
to mount to heaven by Jacob's ladder, and
asked for the hand of one of the seraphs about
the throne."

Ernest Harmon smiled at his friend's en-
thusiasm, thinking what changes Time had
wrought, and how far above the boarding school
graduate was the earnest thinker, the cultured,
finished orator.

"What did you do then?" he asked.

"I found another situation, and then that
fortunate invention gave me my college course,
and then the means of culture which money
commands. But whatever success I have at-

tained is due to that girl's help and encourage-
ment, without which I might have sunk back
into the old drudgery, and been a farm-hand to
this day. And, Harmon, when she dies, if I
am alive, however far away I may be, I will
make a pilgrimage to her grave, and water it
with my tears."

"Amen," said his friend softly, and in the
stillness of the starlight they turned their steps
homeward.—*Nellie George Hollett, in the Inter-
Ocean.*

KEEP YOUR TROUBLES SAVED.—A worthy
wife of 40 years' standing, and whose life was
not made up of sunshine and peace, gave the
following sensible advice to a married pair of
her acquaintance. The advice is so good and so
well suited to married people, as well as to those
who intend entering that state, that we will
publish it for the benefit of such persons: Pre-
serve sacredly the privacies of your own house,
your marriage state and your heart. Let no
father, mother, sister or brother ever presume
to come between you two, or to share the joys
or the sorrows that belong to you two alone.
With God's help build your own quiet world,
not allowing your dearest earthly friend to be
the confidant of aught that concerns your do-
mestic peace. Let moments of alienation, if
they occur, be healed at once. Never, no
never, speak of it outside, but to each other
yield gracefully and confess, and all will come
out right. Never let to-morrow's sun still find
you at variance. Review and review your vow;
it will do you good, and thereby your souls will
grow together, cemented in that love which is
stronger than death, and you will become truly
one.

THE RELIGION WE WANT.—We want a religion
that softens the step, and tunes the voice to
melody, and fills the eye with sunshine, and
checks the impatient exclamation and harsh re-
buke—a religion that is polite, deferential to
superiors, courteous to inferiors, and considerate
to friends; a religion that goes into the family,
and keeps the husband from being cross when
the dinner is late, and keeps the wife from fret-
ting when he tracks the newly-washed floor
with his muddy boots, and makes him mindful
of the scraper and the door-mat; keeps the
mother patient when the baby is cross, and
amuses the children as well as instructs them;
cares for the servants besides paying them
promptly; projects the honey-moon into the
harvest moon, and makes the happy home like
the Easter fig tree, bearing in its bosom at once
the beauty of the tender blossom and the glory
of the ripened fruit. We want a religion that
shall interpose between the rats, and the gullies
and rocks of the highways of life, and the sensi-
tive souls that are traveling over them.

WARMING HOUSES BY THE SUN'S RAYS.—
Prof. E. S. Morse, of the Essex (Mass.) Institute,
has devised an ingenious arrangement for uti-
lizing the heat in the sun's rays in warming our
houses. His invention consists of a surface of
blackened slate under glass, fixed to the sunny
side or sides of a house, with vents in the walls
so arranged that the cold air of a room is let out
at the bottom of the slate and forced in again
at the top by the ascending heated column be-
tween the slate and the glass. The out-door air can
be admitted also if desirable. The thing is so
simple, and apparently self-evident, that one
only wonders that it has not always been in
use. Its entire practicableness is demonstrated
in the heating of the Professor's study in his
cottage at Salem. The value of the improve-
ment for daily warming buildings like churches
and school-houses, which, when allowed to get
cold between using, consume immense quanti-
ties of heat before they are fairly warmed again,
is evident. Of course some other means of
heating must be available when the sun does
not shine.

TO PREVENT SILVERWARE FROM TARNISHING.
—Solid silverware, as well as plated goods,
grow dark and tarnished in a very short time
when exposed to the air, and even when put
away in a dark place. This is especially the
case where hard coal is used in the house or
neighborhood, as the sulphur in the coal, liber-
ated by heat, is sure to stain all the silverware
within reach. This annoying tarnishing can
be entirely prevented by painting the silver-
ware with a soft brush dipped in alcohol in
which some collodium has been dissolved. The
liquid dries immediately and forms a thin,
transparent and absolutely invisible coating
upon the silver, which completely protects it
from all effects of the atmosphere, etc. It can
be removed at any time by dipping the article
in hot water. This recipe has been in use for
some time in the large establishments at Lon-
don, where most of the goods in the show-cases
are protected in this manner.

ANTIQUITY OF WEAVING.—Archæological re-
searches have shown indisputably that the art
of weaving was practiced in prehistoric times.
It may even date back nearly to the creation of
man, as fragments of woven cloth have been
found among the relics of the Lake Dwellers,
who are supposed to have been about the first rep-
resentatives of the human race. The Bronze age
furnished specimens which placed the art above
most others in degree of perfection, even fabrics
of wool being found in the remains of Denmark,
Scandinavia and England—the remains of
France and Switzerland yielding linen fabrics.
The oldest historical reference to the art of
weaving is furnished by the Bible. Job la-
mented that his days were passing with the
fleetness of a weaver's shuttle, and Joseph's coat
attired in "vestures of fine linen."

The Infinities Around Us.

"What is there beyond this starry vault? More starry skies. Well, and beyond that? The human mind, driven by an invincible force, will never cease asking 'What is there beyond?' " "It is useless to answer 'Beyond are unlimited spaces, times or magnitudes.' Nobody understands these words. He who proclaims the existence of an Infinite—and nobody can evade it—asserts more of the supernatural in that affirmation than exists in all the miracles of all religions; for the notion of the Infinite has the twofold character of being irresistible and incomprehensible. When this notion seizes on the mind there is nothing left but to bend the knee. In that anxious moment all the springs of intellectual life threaten to snap, and one feels near being seized by the sublime madness of Pascal. Positivism unceremoniously thrusts aside this positive and primordial notion, with all its bearings on the life of human societies. Everywhere I see the inevitable expression of the Infinite in the world. By it the supernatural is seen in the depths of every heart. The idea of God is a form of the idea of the Infinite. As long as the mystery of the Infinite weighs on the human mind, temples will be raised to the worship of the Infinite, whether the God be called Brahma, Allah or Jehovah; and on the floor of those temples you will see kneeling men absorbed in the idea of the Infinite. Metaphysics do but translate within us the paramount notion of the Infinite. The faculty which is in the presence of beauty leads us to conceive of a superior beauty. Is not that, too, the conception of a never-realized ideal? What are science and the passion for comprehending anything else, then, but the effect of the stimulus exercised upon our mind but the mystery of the universe? Where is the real fountain of man's liberty, where the true source of woman's dignity, but in the conception of the Infinite, in presence of which all men are equal?"—

Real to Them.

A writer of a story which takes hold of the popular heart must himself be sympathetic; for it is as true in writing as in speaking, that he who would move others to tears must first weep himself.

A friend met Thackeray while he was writing "The Newcomes," one noon just as he was coming out of his house. Seeing that the novelist's eyes were red, as if he had been weeping, he asked:

"What is the matter, my dear fellow? Have you lost any relative?"

"I've just killed Col. Newcome," said Thackeray, again wiping his eyes, "and I feel as though I had been burying my father."

Readers of that most pathetic scene in English literature, where the noble colonel, thinking himself back in the old schoolroom, answers *Adsum* (present) to Death's call, will sympathize with Thackeray's tears.

Charles Dickens used to say that his characters became real persons to him while he was creating them. He laughed at their pranks and wept over their misfortunes. It was long before he could bring himself to kill "Little Paul," in "Dombey and Son," though he knew he must. For, as a critic said, who saw that such a boy could not be carried into manhood, "If Dickens don't kill 'Paul,' 'Paul' will kill Dickens."

An incident associated with the dramatizing of the "Christmas Carol" shows the tender sympathy of the author. Dickens, while attending one of the rehearsals, noticed that the manager had brought on the stage a set of irons and bandages. He intended them to aid in making the part of "Tiny Tim, the poor little cripple, more effective.

"No, sir, no," interposed Dickens, taking the manager aside. "This won't do! Remember how painful it would be to many of the audience having crippled children."

Shall We Meet Again?

The following is one of the most brilliant paragraphs ever written by the lamented George D. Prentice: The fiat of death is inexorable. No appeal of relief from the great law which dooms us to death. We flourish and fade as the leaves of the forest, and the flowers that bloom wither and fade in a day, having no firmer hold upon life than the mightiest monarch that ever shook the earth with his footsteps. Generations of men will appear and disappear as the grass, and the multitudes that throng the world to-day will disappear as footsteps on the shore. Men seldom think of the great event of death until the shadow falls across their own pathway, hiding from their eyes the faces of loved ones, whose living smiles were the sunlight of their existence. Death is the antagonist of life, and the thought of the tomb is the skeleton of all feasts. We do not want to go through the dark valley, although its dark passage may lead to Paradise. We do not want to go down into the damp graves even with princes for bed-fellows. In the beautiful dream of "Ion," the hope of immortality, so eloquently uttered by the death-devoted Greek, finds deep response in every thoughtful soul. When about to yield his life a sacrifice to fate, his Clementhe asked if they should meet again, to which he responds: "I have asked that dreadful question of the hills that look eternal, of the clear streams that flow forever, of the stars among whose fields of azure my raised spirits have walked in glory.

Young Folks' Column.

Our Puzzle Box.

Cross-Word Enigma.

My first is in bend, but not in crook;
My second is in stream, but not in brook;
My third is in up, but not in down;
My fourth is in king, but not in crown;
My fifth is in grass, but not in hay;
My sixth is in wren, but not in jay;
My whole is an imperial power.

AUNT SARAH.

Decapitations.

1. Behead a sudden noise and leave a grate.
2. Behead a surgical instrument and leave to invest.
3. Behead a piece of architecture and leave a piece of fireworks.
4. Behead an animal and leave a fluid most of us use.

MELANCHTON.

Charade.

The Misses Smith and White would have a *fete*
Surpassing that of Misses Jones or Brown;
So to my first they soon petition bore
For funds to rouse the gay old pleasure town.

"Now he, my second, give it me," quoth Jane,
With high-pitched voice and angry frown;
"For, if our pleasant *fete* a failure proves,
What *prestige* have we then in all the town?"

Anon the Misses Smith and White were fain
To modify and lessen their desire;
For, in the self-same manner of my whole,
They found the means to which they did aspire.

UNCLE CHADDER.

Syllable Puzzles.

My first is to view.
My second is to be indebted.
My third is an article.
My whole is one of the United States.

NETTIE.

Curtailments.

1. Curtail a fish and leave a vehicle.
2. Curtail a kind of meat and leave an insect; again curtail and leave to exist.
3. Curtail a musical instrument and leave to chirp.
4. Curtail a farming utensil and leave to urge.
5. Curtail a collection of animals and leave a personal; again curtail and leave another pronoun.

DANIEL.

Answers to Last Puzzles.

NUMERICAL ENIGMA.—"My son, if sinners entice thee, consent thou not."

CURTAILMENTS.—1. Earl, ear. 2. Dime, dim. 3. Comet, come. 4. Rape, rap.

BIBLICAL ACROSTIC.—
Hanna H
A n n a H
N o o N
N u n
A s A
H a n n a H

METAGRAM.—Fire, ire, fir, if.

SYNCOPIATIONS.—1. Fear, far. 2. Four, for. 3. Fain, fin.

Peepy.

One morning Jane heard a great deal of talk in Mamma Turkey's nest, in the potato patch. When she went down to know the cause, she found ten darling little baby turkeys. First she caught the mamme, and carried her by the feet (upside down) to the coop. Then she gathered the little peepies in her apron. But she only found nine of them. One little white fellow, with black patches over him, ran away and hid among the tall potato stalks. Jane tried her best to find him, but he was so badly frightened when he heard her coming that he always ran farther away, and nobody could catch a glimpse of him. Jessie, Lizzie, Edgar and Ralph stayed out in the hot sun until their heads ached, but all in vain. He was so quiet, and the potatoes were so thick, they could not find him. After a while he got into the tall ripe oats—they could hear him call.

"Oh, my, he is lost now," cried Edgar; "for to-morrow they will be cutting the oats with the great machine, and then poor Peepy! The horses will step on him, the wheels will crush him, or the knives will cut him."

Poor turkey had to stay all that day and rainy night in the oats. He had no good warm mamme to cover him and keep him warm. Oh, how he cried! His throat was almost broken. By morning he was so sick and tired he could not stand. After a while the men commenced their reaping. Edgar was out, determined to follow until Peepy was found, dead or alive. The rows were pretty long, and his legs were aching.

"Oh, there he is!" A little dirty wet ball of feathers. He was so little the knives had passed over without touching him. All he needed was a good warming and some breakfast. Then Edgar took him out to Mamma Turkey. Then what a rejoicing there was in the Turkey family; they had a great handful of yellow meal and a basin of water. Peepy could never get done telling his troubles. You should see him now. He is the proudest gobbler in the world. He spreads his tail and struts about as if he were a king. And you would scarcely believe it, but he was so ungrateful to poor Edgar as to fly on him, and scratch and peck him—only because he had on a red cloak, just as if nobody ought to have nice clothes but himself. Edgar says if he had known he was going to turn such an old scamp, he might have died in the oats field.—*N. Y. Tribune.*

NO JOKE TO BE A BABY.—"Now, I suppose you think," a baby is made to say by a lady writer who thinks differently, "because you never see me do anything but feed and sleep, that I have a very nice time of it. Let me tell you that you are mistaken, and that I am tormented half to death, although I never say anything about it. How should you like every morning to have your nose washed up instead of down? How should you like to have a pin put through your dress into your skin, and have

to bear it all day till your clothes were taken off at night? How should you like to be held so near the fire that your eyes were half scorched out of your head, while your nurse was reading a novel? How should you like to have a great fly light on your nose, and not know how to take aim at him with your little, fat, useless fingers? How should you like to be left alone in the room to take a nap, and have a great pussy jump into your cradle and sit staring at you with her great, green eyes till you were all of a tremble? How should you like to tire yourself out, crawling away across the carpet, to pick up a pretty button or pin, and have it snatched away as soon as you begin to enjoy it? I tell you it is enough to ruin any baby's temper. Oh, I can tell you it is no joke to be a baby! Such a thinking as we keep up; and if we try to find out anything we are sure to get our brains knocked out in the attempt. It is very trying to a sensible baby who is in a hurry to know everything and can't wait to grow up.

DOMESTIC ECONOMY

The Use of Condiments in Cooking.

[Written for the RURAL PRESS by Mrs. Jeanne C. Carr.]

Now that we are preparing to lead the world in the production of all kinds of canned goods, I imagine that it will not be long before our food factories will include the production of appetizing sauces as a part of their work. As I look at the huge strings of red peppers which festoon the outer walls of so many of the adobe houses of Los Angeles, I wonder how so much red fire can be consumed or digested; yet I know that the inhabitants of warm climates have always demanded such foods as aids to digestion, or possibly to ward off disease.

Our English and Roman ancestors used saffron largely as a condiment. It is many centuries since mustard became a necessary adjunct of civilized tables. I find my taste for curry has developed in this climate. I have several recipes for the preparation of curry powder which have been sent home from India by missionary friends, but it is hardly worth while to prepare it oneself. The best curry is made by mixing a small piece of green ginger, boiled and mashed to a pulp, with two cloves of garlic, a thimbleful each of coriander and cumin seeds; six small onions, one good-sized red pepper ground to powder, ten corns of black pepper and a piece of tumeric to give color, a desert spoonful of butter, half a grated cocoa nut and the juice of a lime. Thousands of tons of this preparation are annually imported into Europe from India.

A more curious sauce is Indian soy, of which some of our Californian epicures pretend to be fond, and which my Japanese students relied upon with bread and butter. It is made with Soja beans, wheat, salt and water. The beans are boiled, the wheat bruised and steamed. Both are then fermented by mixing with yeast in small trays, which are kept in a close room with the right temperature until the whole mass is filled with fungi. Lovers of mouldy cheese can appreciate this choice mixture before it is covered with hot salted lye, from which all impurities have been removed, which is the last step of the process. What remains is merely ripening of the bean must, which is done in enormous coops, where it is kept from three to five years. At the end of that time the mixture is put into bags of cotton cloth and subjected to pressure which extracts the soy, the last runs being inferior in quality and strength, in consequence of the addition of more salt and water.

This a little more than matches the German sour-kraut, with which the settlements of the Hudson and Delaware were redolent in early times.

The Dutch use anise seed in their tea, and the Germans put caraway seed in their rye bread. The Arabs chew anise seeds, and also use them in cakes. In India it is a universal custom to strew fennel seeds over the floor of the ovens before the bread is put in, to sprinkle it over the loaves and knead them into little cakes, as we put caraway into our cookies. Before Eastern spices came into use in England the fennel was boiled as a pot herb to give a pleasant aromatic flavor to meats.

There was shown in the Indian department of the Centennial Exposition sjovian seeds, which have a pleasant taste like cardamoms. This condiment is used as we use savory and thyme in the making of force meats. Cardamome, grains of paradise or Guinea grains, with all kinds of aromatic roots, such as ginseng, sarsaparilla and the like are used in preparation of cordials and medicated bitters.

A Grahamite would probably contend that all this is worse than useless in the human system. But it may safely be concluded that whatever the most enlightened of mankind have agreed with great unanimity to do hath a reason for doing, and Prof. Voit, of Munich, than whom there is no higher authority, contends that condiments actually increase the nutritive value of food, and compares their office to that of oil in machinery. He says that a dietary without taste or smell is not only unendurable, but would in a little while cause nausea and vomiting.

I have never seen such luxuriant growth of umbelliferous plants as here in California. Our neighbor, Mrs. Foote, having a forest of fennel growing at the back door, cut, saved and sold it at a remunerative price, confirming my belief

that we ought to have a seed farm here in Pasadena. Here, too, is a good chance for picking walnuts, onions, etc. Every housewife can make her own caper sauce, and prepare a toothsome pickle from the nasturtium. These matters have been brought to mind by a recent visit to the hospital home of the master of Alhambra Grange, where the fine arts of cookery are deliciously practical, that flavors are remembered like the odor of flowers, and also by a story told us by sister Steele, of San Luis Obispo, who suggested the raising of celery seed to a person seeking an addition to a small income.

Celery seed is in great request for flavoring soups and salads, and brings a good price. The party referred to made it pay to gather the wild celery seed, which is abundant all along our creeks and water ways.

Mrs. Helen Hunt Jackson, when home is at Colorado Springs, obtains all her fruits and preserves from a lady in Massachusetts, who began business by making a few tumbler of raspberry jam, and is now at the head of a large establishment. It is not a cannery, for everything is put up in glass with plenty of sugar. The Sacramento and Los Angeles fairs, and notably those of San Diego, have shown examples of women's culinary skill in these preparations. They are capable of still greater extension, and ere long the bric-a-brac of the store-room will be shown with greater pride than that of the drawing-room.

GOOD HEALTH.

How We Digest.

To make the process of digestion simple, let me say that it begins in the mouth and ends in the lungs. A man swallows a mouthful of bread. We follow it from his mouth down through the esophagus to his stomach. It now, by a peculiar motion of the stomach, is moved about in the stomach, and as it touches here and there, gastric juice starts out, like sweat upon the forehead, and wets the bread.

After a couple of hours of revolving about within the stomach, the bread is changed into something that looks like buttermilk. This is chyme. Now the gate at the right end of the stomach opens and lets this chyme pass through the first parts of the intestine. These two liquids are poured in, one from the liver—the bile—the other from the pancreas—the pancreatic juice. These induce certain changes in the liquid bread which makes it resemble milk. Now it is known as chyle. Innumerable little mouths which open within the intestine suck up the milk or chyle, carrying it to a small canal—the thoracic duct, which lies upon the back bone—and through this it runs up to the upper part of the chest and is poured into a large vein just under the left collar-bone. Through this vein it reaches the right side of the heart, and is then forced into the lungs, when it comes in contact with the air. Now a wonderful change comes over it. This is produced by the addition of oxygen to the milk-like fluid. For a given quantity of this chyle a still larger quantity of oxygen is added, and the compound which comes of this union between the bread and the oxygen is the nutriment which supplies the wants of the system. What takes place in the lungs is more important than anything that precedes it in the process of digestion.

For example, a man may live on fried salt pork, hot salaratus biscuit, and strong green tea (I don't know a worse dose); if he lives on the western plains and breathes pure air, he will have a purer blood, healthier skin, and will be freer from humors, than another man who lives upon the choicest grains and fruits, but who constantly breathes the air of a close, furnace-heated house. In other words, we may truly say that, in considering the great function of digestion, the lungs really play a more important part than the stomach itself.

It is really vital that the first and last step in digestion should be well done. First, chew well, and last, breathe well. If those two duties are well performed, a substantial contribution will be made to our welfare.—*Dr. Dio Lewis.*

AMERICAN PUBLIC HEALTH ASSOCIATION.

We have just received a circular announcing the fact that the American Public Health Association will hold its tenth annual session at Indianapolis, Ind., commencing Tuesday, Oct. 17, 1882, and ending Friday, October 20, 1882. A number of interesting papers on sanitary subjects have been announced, and as more time will be devoted to discussion on this occasion than has been allotted at former meetings, we venture to say that considerable matter of unusual interest and importance will receive attention. The plan adopted of favoring and promoting discussions on the various subjects considered is worthy of favorable comment, and it is to be hoped that the members will take advantage of the opportunity thus offered for directing special attention to points of more than ordinary interest. The Secretary of the association announces that information in regard to transportation will be furnished by the Indianapolis local committee at an early date, and by a later bulletin from the Secretary, if required.

POISONED BY LIMA BEAN ROOTS.—The family of F. L. Kellogg, at Goleta, Santa Clara county, were dangerously poisoned a short time since by eating the roots of Lima beans, which they happened to discover were very palatable.



DEWEY & CO., Publishers.

A. T. DEWEY. W. B. EWER.

Office, 262 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *For the extra will be added to the price of the paper.* Each THREE MONTHS DELAY which may be made in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week. 1 month. 3 mos. 12 mos:
Per line25 .80 \$2.20 \$ 6.00
Half inch (1 square)..... \$1.50 \$3.00 10.00 24.00
One inch..... 2.00 6.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, October 28, 1882

TABLE OF CONTENTS.

EDITORIALS—The Age of Seeds; A Successful Prescription; Fruit Growers' Convention; Improved Seed, Grain, Fruit, etc., 317. Anti-Debris Appeal, 320. The Week; Extent and Kind of Our Recent Immigration; The Pacific Rural Press; Interest the Boys and Girls in the Farm, 324. Pacific Coast Interests; Academy of Sciences; A Microscopic Reception, 328. The Annual Growth of Trees; The Escutcheon Theory; The Proprietary Discussion; Patents and Inventions; Notices of Recent Patents, 333.

ILLUSTRATIONS—Grandpa's Visit, 317. San Jose Scale Insect; Black Scale; The Oyster Shell Bark Louse; Cottony Cushion Scale, 325. Prevailing Fashions, 330.

QUERIES AND REPLIES—The Japanese Seed Distribution; Squirrel Poison; Crossbred Ducks, 324.

CORRESPONDENCE—At Newsom's Springs; White Redwood Trees, 318.

AGRICULTURE—The Proprietary, or Early-bearing Walnut, No. 3, 318 and 319.

FORESTRY—Forest Trees of California, 309.

PATONS OF HUSBANDRY—Annual Meeting of the State Grange of California; Woman's Relation to Society Through the Grange, 320.

AGRICULTURAL NOTES, from the various counties of California and Nevada, and 321.

NEWS IN BRIEF, on page 321.

HOME CIRCLE—How Von Mouse Died and was Buried (Poetry); A Woman's Work, 322. The Infinites Around Us; Real to Them; Shall We Meet Again, 323.

YOUNG FOLKS' COLUMN—Our Puzzle Box; Peep; No Joke to be a Baby, 323.

DOMESTIC ECONOMY—The Use of Condiments in Cooking, 323.

GOOD HEALTH—How We Digest; American Public Health Association; Poisoned by Lima Bean Roots, 323.

ENTOMOLOGICAL—Scale Insects on Deciduous and Ornamental Trees, 325, 326 and 328.

Business Announcements.

"Buckeye" Seed Drill, Hawley Bros., S. F.
Fruit Trees for Sale, R. J. Trumbull & Co., S. F.
Ely-Meeker Sun Drier, Meeker & Porteous, S. F.
McSherry Grain Drill, Frank Bros., S. F.
The Farmers' Ticket, of California.
Santa Clara Nurseries, Richard D. Fox, San Jose, Cal.
Reporter Wanted, American News Exchange, Cincinnati, O.
V-Tooth Harrows, Byron Jackson, S. F.
Corn Shellers, Wiester & Co., S. F.
Big Hedge Poultry Yards, San Mateo, Cal.
Pomona Nursery, Wm. Parry, Parry P. O., N. J.
James Hannay's Nursery, James Hannay, San Jose.
Seeds, etc., Savin Vincent & Co., S. F.
Strawberries, C. M. Silva, Newcastle, N. J.
Seed Merchants, W. R. Strong & Co., Sacramento.
San Leandro Gang Plows, David N. Hawley, S. F.
Abel Stearns Ranches, A. Robinson, S. F.
Agricultural Implements, Benicia Agricultural Works.

The Week.

The fine display made in our advertising columns this week by the nurserymen, the seedsmen, and the implement dealers, is unmistakable evidence of the opening of a new season, for these wide-awake merchants are ever on the alert to attract public attention just at the most seasonable moment. The nurserymen have had several months of busy inside work, getting their stock into good growth, setting buds by the hundreds of thousands, and generally arranging for the hurried months of lifting, packing and shipping, which are now just at hand. They have also been forced to do considerable trading all summer, because orders for favorite varieties have come in thick and fast all the year and the greater part of the trees available have already been engaged. The seedsmen are ready for a good, active season, and the prospect is that they will have it. The growth of the agricultural implement trade is

evident from the hosts of new firms, new manufacturing establishments, and then enlarged and improved facilities which the old and renowned houses are securing for themselves. Let it go on. Everything now indicates a year of unequalled prosperity and growth for California. It is a joy to live in a State which is going forward. The Empire State of the Pacific echoes the motto of the Empire State of the Atlantic—*Excelsior*.

Extent and Kind of Our Recent Immigration.

Although there has been no rush of immigration to California of late, our population has throughout the entire year been steadily increased by accessions from abroad; and, what is more to the purpose, the people arriving here have for the most part been of the right kind and come from the right quarter, being composed largely of emigrants from the rural districts of the old world or from the Eastern States of the Union. They would in any country constitute a desirable element of the population, and to us, who want tillers of the soil and permanent citizens, they are especially valuable, since the most of them intend to engage in this branch of business, and they all come to abide. These people want homes and are in no sense adventurers. One immigrant of this kind with his family, or even if he is alone, is worth more to the State than a score of gold-seekers, such as came here in former times with the purpose of amassing a fortune as speedily as possible and then going elsewhere to spend it.

Very few of these newcomers will go to the mines, and in this they are wise, the mines of California holding out to this class of laborers very poor inducements. It now requires capital and experience to any longer make money in the gold mines of this State, and even with the aid of these, the business does not always prove successful. On the contrary, it is a very precarious, not to say dangerous pursuit, and one which the man of small means and limited experience does well to avoid.

Farming, on the other hand, requires in this country no great amount of either experience or capital, nor is it attended with much risk. To the extent of insuring a present livelihood and a competence in the end, it is the most certain business in which a man can engage, it being at the same time more independent than almost any other.

For grain raising or purposes of general farming it makes but little difference what part of the State a man locates in, so long as he keeps in or to the westward of the lower foothills of the Sierra Nevada, and within easy reach of market; though, even here, certain localities will, on account of soil, water, etc., be found especially well fitted for particular branches of the business. The climate of the great interior valleys, and even at the same altitude throughout the coast tier of mountains, is much the same from one end of the State to the other, the mercury in winter ranging only a few degrees lower at the upper end of the Sacramento valley than it does in San Diego county, 500 or 600 miles farther south. Garden flowers bloom throughout the winter and oranges can be grown in the open air in either of these localities. The settler, so he avoids the extreme northern and the mountain and desert districts of California, will find no great choice between other portions of the State; coming from almost any other part of the world, to him both our winter and summer climates will be likely to prove acceptable.

In commencing farming in California, it is possible for the beginner, if his means are limited, to economize in the matter of building to an extent not practicable in countries having long, cold winters and rainy summers. A very cheap sort of house can here be made to do for a few years at first, scarcely any barn at all being needed. The poor man can, if needs be, make shift to live in a board shanty or a canvas covered hut, a shed, closed only on the sides from which the heavy rains come, affording all needed shelter for his cows and work animals. Some of the largest land owners and most prosperous farmers in the State began their careers in this way, having lived with their families in the covered wagon with which they crossed the plains or in a tent pitched beside it for a year or two at the start. And these pioneer husbandmen had only thin skeleton teams, worn out wagons and scanty camp furniture to begin with, having, also, everything in regard to the soil, the climate, the proper time for seeding and planting, and, in short, all the lessons of practical agriculture to learn, and the learning of which cost some of them very dearly. Moreover, the expenses of living, the cost of farming implements, and the wages of hired laborers were then enormous compared with what they now are, although the principal products of the farm did not command much higher prices than at present. The pioneer farmer, in fact, labored under many disadvantages, from which the modern farmer, orchardist and vine-grower is happily exempted; not the least of the pioneer's troubles having arisen from uncertainty of land titles and a lack of transportation facilities, which latter in some localities rendered his cereal crop of but little value even after it had been out and garnered. In the greater security of land titles larger experience gained, and cheaper carriage of his products to market, the beginner now enjoys an aggregate of advantages that more than offset the cheaper and more virgin soil of his predecessor in the field.

The Pacific Rural Press.

We are sending out this week a large number of complimentary specimen copies of our journal, the PACIFIC RURAL PRESS, to progressive agriculturists who are not numbered among our regular readers. We do this in the hope that many, perceiving the character of the journal and its thorough devotion to the dissemination of the freshest facts and experience in California farming, will be led to send in their subscriptions, and thus enable us to make the PACIFIC RURAL PRESS still more excellent and useful to those engaged in the leading industry of California.

In all departments of horticulture, the PACIFIC RURAL PRESS is conceded to be the leading authority and medium of communication between growers. It contains short-hand reports of the meetings of the State Horticultural Society, at which fruit news from all parts of the State is announced and discussed in a practical way. In short, if the reader wishes to get a comprehensive idea of the phases and features of the great fruit industry of California, he can best obtain it in the columns of the PACIFIC RURAL PRESS. Our market reports are made up with care and research upon the best authority obtained at all times.

In other departments of farm work, in the farm house family circle the RURAL PRESS is an acknowledged authority and welcomed as a true friend and counsellor. We invite all to patronize the paper with their support and subscriptions, and also to take an active part in the discussion of all important subjects which are presented. In this way the RURAL succeeds in bringing out all the latest experiences of practical men and women, and becomes a most valuable source of information, which it presents in the purest and most readily available form possible.

Interest the Boys and Girls in the Farm.

As the vegetable and flower-seed catalogues for the coming season are now being distributed, one, at least, should find its way into every family which reads the RURAL PRESS. The head of each family which contains either boys or girls should give its younger members a chance to make selections, and thus beget in them an interest in the farm. In no other way than this can a love for agriculture and horticulture be so easily created as to allow them to spend a small sum for vegetable and flower seeds, and have set apart for their especial care a small portion of the garden or farm, with no proviso except that they shall each personally take the entire charge of their own lot, and have no molestation from anyone, and cultivate it thoroughly. A correspondent of the Massachusetts Ploughman, in referring to this idea, says:

"Let every parent remember that very much more depends upon the spirit in which the gift is made than upon the gift itself. Twenty-five cents generously and freely given, and wisely and judiciously expended, together with cheering words and the bestowment of well-deserved praise upon the care and culture of the plot, although it may be 'gardening upon a pocket handkerchief,' will create a greater love for the noblest of the arts than ten times that sum scrupulously given, with a mien expressing so much money wasted, and no praiseworthy action on the part of the parent if the young aspirant to agricultural honors succeeds with the result of his investment in seeds. Let us here remark that such farming experiments, no matter how indefatigably persisted in at the commencement, will certainly end in sorrow unless the parent or guardian gives, by action or word, some encouragement in the matter. Boys treated in such a manner, and having no voice in the management of the affairs of the farm, usually and unblamably early discover that farming does not pay, and abandon the hoe and take the yardstick."

"Another and a more important reason why a purchase of new seeds should be made is, that long cultivation of similar varieties in close proximity to each other has so deteriorated the better kinds that the present crops are mongrels, and no amount of proper cultivation or care can make a desirable product."

A HUNDRED BUSHELS FROM ONE POTATO.

The wonderful possibilities, under careful culture of the sweet potato, in its reproductive powers, were shown a few years since by Mr. D. Browning, of Jacksonville, Fla., in an exhibition and statement made before the Duval County Agricultural Society. In 1871 Mr. Browning had a specimen of sweet potato, which he desired to multiply to the largest possible extent. He first cut it into pieces, each with about two inches square of skin. These he planted February 10th in a warm spot which had been occupied as a hog pen. They grew finely, and on May 18th he took from them 202 vine cuttings, which he planted, and he continued this cutting and planting till August 10th, planting in all something over 10,000 cuttings. The crop was not measured, but experienced farmers who saw the whole in heaps, as put up for banking, estimated that there was at least 100 bushels.

QUERIES AND REPLIES.

The Japanese Seed Distribution.

EDITORS PRESS:—I received two packages of seeds when I sent postage I expected to get the full number mentioned in the Press. I am not at all satisfied with the varieties sent me. I have seen nothing in the Press in regard to the distribution. Please insert a notice telling how seeds have been distributed.—W. WOODWARD, Lakeport, Cal.

We intended to publish an explanatory paragraph about the distribution, but in the press of other subjects it was overlooked by the editor. When we announced the seed for distribution we promised to send to each applicant "a selection of the seeds" so long as the supply lasted [see RURAL PRESS of August 19, 1882, page 117], and we asked each applicant to send two three-cent stamps to pay expense of distribution. The seeds came to us in bulk—a package of each kind, some large, some small. When we had allowed time enough to hear from the more remote subscribers of the RURAL, we engaged some smart young women to divide the seed into small packages, fix labels on each and then distribute the small packages equally between the applicants. Whenever any applicant specified a few kinds we put them in his or her quota; when the applicant merely asked for "some of the seeds," we put in the kinds of which we had the largest amounts. We had no idea that any single applicant would expect to get all the seeds, because we knew there would not be enough for that kind of a distribution. Therefore we expected each applicant to make a selection—that is, to state what kinds he or she would prefer, hoping thus to please all.

As we expected, we lost money on the distribution, because it was impossible to divide and pack up seeds, label and address the packages without expense for labor and for material. As it was, the seeds were delivered to our subscribers at two-thirds of one cent per package, which is certainly not a heavy charge.

In order that our subscriber may see where his two stamps went to we publish the financial exhibit of the distribution as follows:

RECEIPTS.	
Postage stamps.....	\$12.75
EXPENDITURES.	
2,500 small envelopes.....	\$4.00
250 large envelopes.....	1.00
250 brass fasteners.....	.50
250 one-cent stamps for postage.....	2.50
Printing labels.....	.50
Labor (3 clerks 4½ days), 1½ days at 75c. per day.....	10.12
Total.....	\$19.82

This seems rather a small matter to take up space with, but the account is called for and we give it. We are quite willing to stand our share of the expense of the distribution, in the hope that some of the seeds may be considered valuable to some of our readers. If a single new and useful vegetable should be found in the whole list, it seems to us the investment should be counted a good one by all who shared in it.

Squirrel Poison.

EDITORS PRESS:—I wish you would find space in the RURAL PRESS for the following receipt for killing squirrels. It is the best I have ever tried, and I send the receipt for the good of all RURAL PRESS readers: Take some wheat, more or less, according to holes; take a little dropped honey, and mix it well among the wheat so as just to wet it; be sure and do not put much honey on or the sun will run the strychnine off the wheat; take a little strychnine, make it very fine with the head of a large nail, then mix among the wheat; take about a teaspoonful of the wheat and put it into each hole as far as you can, so that the sun does not shine on it and run the strychnine off. I generally go in the morning, and when they come out they get a sweet breakfast. J. T. RAE, Scotts Creek, Davenport, Santa Clara Co.

Crossbred Ducks

EDITORS PRESS:—I am told that the large white Pekin ducks, when crossed with the common varieties, produce "mules." Is that so?—WM. MORETON, Arroyo Grande, Cal.

Who will answer?

A HINT TO SEED SOWERS.—Any hint, of however little importance, is always useful. A suggestion in regard to almost any operation, apparently trifling in itself, is often found very valuable in practice. To this character we may class the following in regard to the importance of the color of seeds in sowing, especially garden seed, which we clip from an exchange: "It is almost impossible, for instance, to tell, when sowing turnips, whether they are being sown too thick or too thin. A good sower will in time learn to distribute them pretty equally by the finger-feel alone; but, on the well-known principle of always having two strings to one's bow if possible, it would be much better if we could get the eye to help the hand. But in these dark-colored seeds this cannot well be done. The hint we have spoken of remedies this by rolling the seeds in flour or other white dust before sowing, and thus, aided by the sight, the seed sowing is made a better job of than is possible by the unaided hand alone."

PERSONAL.—Speaking of Mr. L. Walker, traveling agent for this paper, the Tehama Counsellor speaks as follows: He is a worthy brother and a genial gentleman, whom we cordially recommend.

ENTOMOLOGICAL.

Scale Insects on Deciduous and Ornamental Trees.

[Report by S. F. CHAPIN, M. D., Commissioner for the San Francisco District to the Board of State Horticultural Commissioners of California.]

[Furnished for publication in the PACIFIC RURAL PRESS.]

The prevalence of scale insects in the orchards of Santa Clara valley during the past few years has afforded ample scope for their study, to which I have, for the past three seasons, devoted what time I could command. Assigned to this work by you, I shall report as concisely as possible the information gained and the results obtained by numerous experiments carried on and observed for two seasons. I shall here-use in this paper as a part of it, a report presented to the Santa Clara County Horticultural Society, August 6, 1881, by Mr. D. C. Vestal and myself, with such revision and correction as another year has shown to be needed, and with added memoranda to the experiments detailed, in order to present their full effects after a lapse of more than a year. I shall also detail other experiments, and shall refer to work done on an extensive scale for the destruction of the scale pests, and which has shown most gratifying results.

All scale insects impair, to a greater or less degree, the vitality and productiveness of the tree or plant upon which they live. Of the seven species which have here been observed as infecting our deciduous orchard trees and fruits, five are of frequency and of such importance as to attract the attention of orchardists. These are the *Lecanium Oleæ*, *Aspidiotus Rapax*, *Aspidiotus Conchiformis*, *Aspidiotus Perniciosus*, and the *Icerya Purchasi*, the two last named being the most dangerous of all scale pests which the orchardist has to encounter.

Lecanium Oleæ.—This scale is beginning to attack other trees than the orange and its kindred. A year since I examined an orchard where it existed in overwhelming numbers upon the German prune, Brigg's Red May and the Early Crawford peaches, upon the Moorpark apricot trees, and most of all upon the *Petite prune d'agen* trees. This is believed to be the direct result of planting a few orange trees close by. Mr. Ellwood Cooper has written fully upon this scale, and to whose reports I refer you.

Aspidiotus Rapax.—So named by Prof. J. H. Comstock. This scale is rapidly spreading, and is now found in many places where unknown a year or two ago. It seems to be most prominent in Santa Cruz county, where it can be abundantly found. I have, during the past two seasons, observed it in many places in Santa Clara county, and have had specimens sent me from San Lorenzo, Alameda county, where it was abundant upon pear trees, a branch sent being well covered with the old scale, and also newly hatched young crawling about.

This scale seems to be native to the willow and alder and other indigenous trees. It, however, is found in great numbers upon acacia trees, upon the black locust and poplar, and upon some of our orchard trees, as the pear and apple. This scale somewhat resembles the *Aspidiotus perniciosus*, and by many is confounded with it, but it is not to be compared to the latter for destructiveness.

Aspidiotus Conchiformis.—The one longest known, and which was discovered and described in Maine in 1794, has ever since that time infested the apple tree particularly, although found upon other fruit trees and upon the currant. This is now found in great numbers upon almost all old apple trees on this coast, and is commonly known as the bark louse or the oyster-shell scale. It may be found described in works on entomology. This species has not caused so much injury as to alarm fruit growers to any great extent, although it is described by Dr. Packard as doing more injury to the apple tree than any other insect known.

Cottony Cushion Scale.

Next will be described a comparatively new scale heretofore, but one which has within the last two or three years been ravaging many localities in widely different parts of the State. This is the so-called dorthesia, or, as named by Maskell, *Icerya Purchasi*, and called by Mr. Matthew Cooke the cottony cushion scale.

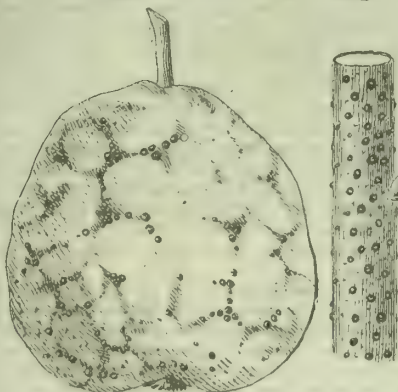
This scale has been, it is asserted, known to be on the acacia for seven years in San Jose, but it is only during the past and present seasons that it has attracted attention. Its great prolificness and its destructive abilities have called widespread attention to it. This pest attacks everything in the way of tree, vine or shrub; all the evergreens as well as deciduous trees that fall in its way are attacked, and every ornamental shrub on the lawns of some portion of our cities will show its presence. The ivy, even, is not proof against it. In San Rafael, San Mateo, Santa Barbara and Los Angeles it is well established. While in San Jose it has not this season caused so great damage as last, yet in the citrus-growing regions it is becoming one of the most serious pests they have to encounter, and it is even stated that, should its ravages not be checked, orange and lemon culture will have to be abandoned.

From the rapid destruction which follows the presence of this scale, it is well that it should be widely recognized, and its first invasion noticed and checked. In San Jose, in 1881, it was first noticed in May as the fully developed female, from which the first brood of young then appeared.

This present season of 1882 the first young appeared May 25th, the mother insect having gradually matured her eggs from the opening of spring until the young were hatched. The egg of the *Icerya* is small, pale or orange red, elongated and ovoid. The young just hatched out are very active, and are very minute, perhaps the twenty-fifth of an inch in length. The body is pale red; the six legs and two antennæ are black. The antennæ are long and club-shaped, and have from six to nine joints, as they are further matured. The antennæ are covered with long hairs, which bristle forth prominently. The eyes are small and black. Between the pair of forelegs on the under side

up in the rear and the cottony mass movable in any direction. The male insect was only found during a period of about two weeks from Sept. 25th. This was the observation of 1881, when I found them in great numbers. I have failed to find the male insect this season. It has a long red body, six legs and one pair of very long, dark and transparent wings, prominent eyes and antennæ very long and covered with hairs, arranged very much as the feathers of a peacock. The antennæ are 16 or 17 jointed. The winged male is easily seen and easily caught, as it moves slowly about, and is not readily disturbed so as to fly away. The female insect lives upon the trunk of the tree and large

Scale on Fruit and Twig.



SAN JOSE SCALE INSECT—*Aspidiotus Perniciosus*.

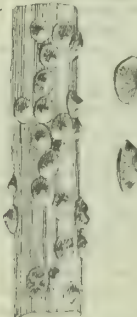
of the body is to be seen the beak or sucker, by which the insect secures its nourishment.

The females partly grown are of a variety of colors, orange red mostly, and spotted over with white and green; some are nearly entirely a dirty white, and many are a pea green. It seems that the coloring matter of the plant they are upon colors them to some extent. Their body is ovoid and elongated and flattened, the back being ridged up with several segments quite prominent. Around the rim of the body are a multitude of hairs, standing out prominently. Around the rear half of the body on its

limbs and down to the smallest twigs, around which it may be seen clinging in clusters sufficiently great to completely hide the branch; also upon the leaf, along the stem and ribs of which it is fixed, both above and below, although more abundant on the underside of the leaf.

There are three broods of this insect in the season; the first appearing in May, the second in August and the third in October, or about three months apart. I have just observed, October 15th, the mature female with eggs fully grown and with the young hatched out and

On the Twig.



Larvæ



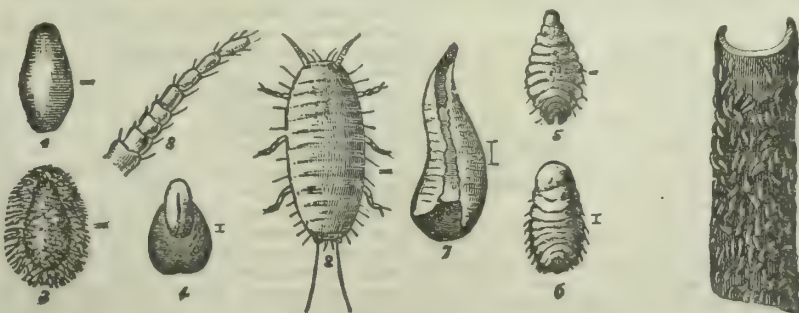
BLACK SCALE—*Lecanium Oleæ*.

rim are a row of tubercles or spinarets, from which a white secretion issues, forming a cottony cord, and these placed side by side and the interspace filled up by the same material running lengthwise the body and projecting from it, gives the whole a ribbed, satin-like appearance whitish in color. Gradually as the insect matures these projecting ridges approach each other at the ends, and are joined together and curved under slightly at the point, while the sides are at the same time curved under the whole length, and the edges joined together like a flat ribbon-like band, the whole forming, when

crawling in the same sack. In 1881 they rapidly increased from about the first of August, and were continually appearing, and still hatching out in December.

Every female, it is estimated, produces from 200 to 500 young. The young will mature and produce a new brood in about three months. Where this scale infests deciduous trees it may be readily destroyed by the application now found to be successful in treating the *Aspidiotus Perniciosus*, and detailed further on in this report.

Where, however, evergreens are involved it



THE OYSTER SHELL BARK LOUSE—*Aspidiotus Conchiformis*.

complete, a soft elastic white sack, the size, and somewhat the shape of a medium sized white bean. The length, when mature, is about three-eighths of an inch; the width one-fifth of an inch.

Inside the sack are deposited the eggs of the female, among the interstices of a mass of cotton-like fiber, which under a high magnifying power is shown to be round, and not more than one-sixth part the thickness of pure cotton fiber, with which it was compared in the same field. This mass of cottony fiber is filled with a great amount of granular matter, for the purpose, it may be, of affording sustenance to the young insects within the sack. The young hatch out in this sack, and make their way out into the world through a rent in the soft and tender underside of the sack.

The female, after finding her home and during maturity, does not move, although she does not lose her legs, but clings tenaciously with her feet to her support, leaving the body tipped

is a far more serious problem. The best treatment for the *Icerya*, so far found, is that used by Mr. Cooper, of a strong and hot infusion of tobacco, applied by spray as near as may be at 130°.

Aspidiotus Perniciosus.

By far the most injurious scale pest infesting our orchard trees and fruit is the new species of *Aspidiotus*, which, so far as known, originated in San Jose, and for some years was confined to this locality. It has been known as the San Jose small, round, black scale and named by Prof. Comstock *Aspidiotus perniciosus*. The spread of this scale over the State has been gradually taking place, until now it can be found in a number of the fruit-growing counties, notably San Joaquin, El Dorado, Nevada, Placer, Sacramento, Yolo, Solano, Sonoma, Alameda, Santa Cruz, San Benito and others, and I am told even in Humboldt in the north and in the southern counties. This scale produces terrible results in an orchard when once estab-

lished. Its ravages have caused widespread alarm, and unless checked soon causes entire destruction of the trees infested. The trees become entirely covered with the scale, so that no portion of the bark can be seen. The fruit also becomes covered in the same manner and is rendered unfit for use. The losses caused by the ravages of this insect cannot be easily computed. Whole orchards are literally destroyed by it. In many cases those who have recognized its presence and destructive power in time have made most strenuous efforts to stay its spread and save their trees, but it has hitherto been, to a great degree, discouraging, owing to the difficulties encountered in fighting an unknown foe. Within the past two years, however, great progress has been made in destroying this insect, and it is now considered certain that we have an efficient means of ridding ourselves of one of the most dangerous pests known to fruit growers.

The trees attacked embrace every kind of deciduous fruit trees except the Black Tartarian cherry, and it is supposed two or three other black cherries. Some varieties are less liable than others to its attacks, but we have found it upon all other trees than those excepted above.

Poplar and other ornamental and shade trees give it a support. It infests hedges of Osage orange and the wild cherry, many of which have been destroyed in the past two years, and have been dug out. It is found on the currant, and quickly destroys the bush. It has been found upon rhubarb, and tomato plants growing in orchards among infested trees. This scale evidently prefers some varieties of trees, but yet, when placed upon others not so well liked, will stay and colonize to some extent.

The effect of this scale insect upon the tree is peculiar. After a short residence there, the green layer of the bark becomes stained a very dark red color, which continues until the death of the limb or tree unless the insect be killed. The bark may then be restored to its normal color and health.

A Financial Aspect.

The damage in Santa Clara county has already become so great as to cause the most serious

On the Twig.



Larvæ



Cottony Cushion Scale—*Icerya Purchasi*.

losses not alone to the fruit growers, but also to the public at large—and from the orchards effected has greatly lessened the revenue which has been derived from the production and sale of fruit. One instance stated definitely will suffice to show these losses.

This orchardist states (1881) that he has 2,000 trees badly infested with scale; 1,000 of these trees are totally destroyed, and will be dug out this season; the balance are badly injured, but can probably be saved. This portion of his orchard in health returned at least \$5,000 per year. His loss on crop from these trees in 1880 was over \$2,000. For 1881 there was a total loss of crop on 1,500 trees. This orchard has regularly paid an interest of 10% on \$1,000 per acre. The scale pest alone has cost a loss of \$20,000 to the owners.

Further on reference will again be made to this orchard. The Assessor's roll for 1881 reports in this county 335,537 bearing trees of the apple, pear, plum and peach. This does not include the large number of trees which have been destroyed and are unfruitful; neither the immense number of young trees that have been planted, but not yet paying; and, as observed, it leaves out the large number of other varieties, cherries, almonds, apricots, etc., in bearing, which, it is estimated, would make a grand total of 1,000,000 trees. Should the losses experienced by the orchardists now suffering be carried out to all, you can readily estimate the astounding result. The value of the Santa Clara county fruit crop for 1880 was returned at \$976,475, notwithstanding the immense losses incurred. The sworn statement of the Assessor, now before me, says "That all fruit trees in Santa Clara county are assessed as improvements at the following prices: Trees in full bearing, free from scale, \$1.50 per tree; trees bearing, affected with scale, from .00 to 50 cts. per tree, and that there is a large number of orchards situated east and northeast from the city of San Jose, badly infested with scale (and after naming some, say), and in consequence are assessed at .00 to 50 cts. per tree." From this it will be seen that the revenue derived from taxation is seriously affected by the presence of this pest upon our orchard trees.

The Assessor's roll for 1882 gives of the four varieties of trees named above—apples, peaches, pears and plums—bearing trees subject to taxation 280,347, a deduction from the previous

year's assessment of 55,190 trees. This loss is in fact upon apple, plum and peach trees, as the young pear trees coming into bearing, and being assessed for the first time, more than equal the loss on that variety. So it is seen that the loss in assessed value on these three kinds of trees totally destroyed has amounted in the one year to \$82,785. This is actually but a small part of the loss, as other varieties of trees destroyed, and the losses of previous years from the scale as well as the reduced value of trees affected but still bearing, cannot well be enumerated. These trees were destroyed before the application of proper remedies; now, however, from the knowledge of correct treatment, these losses will soon cease, and the taxable property of the county be immensely increased. I feel assured that the next assessment will show a decided improvement. Thus the magnitude of this evil becomes apparent, and the problem to be solved is of vast importance.

Description of this Pest.

From the study we have given to this scale during the past three years it may be briefly described as follows: The scale insect is massed upon the bark of the tree and fruit as well, the scale of a dark gray or blackish and tough material which covers the insect being very small and round in shape over the female, while that covering the male is much smaller and elongated on one side. In both, the higher and central portion of the scale has a yellowish color, and directly under which may be found the insect itself, which is soft and delicate in structure and of a pale straw color. There is no connection between the cover and the insect, which is merely protected by it from harm. The shell-like scale is formed by either the cast-off skins of the larva or by a waxy secretion of the body of the insect. The microscope shows the young female insect oval in shape and flattened. At first it is very small and hardly perceptible to the naked eye, but careful observation will detect it as a minute yellow dot on the bark of the tree, crawling about with the six legs with which it is provided, and seeking a favorable locality upon which to fix itself for life. It will crawl about for only a day or two, and then fastens itself to the bark by a beak-like protuberance which it inserts, and procures nourishment from juices of the tree. Immediately upon fixing itself it begins to be covered with a silvery material, which, as it grows older, is gradually changed in color to a very dark hue, and enlarges to the size of about one-sixteenth of an inch in diameter. The insect soon after fixing itself loses its legs and antennae, and thus remains through life, keeping its flattened shape but growing wrinkled and almost round, gradually increasing in size to perhaps one-sixteenth of an inch in width and one-fiftieth of an inch in length when full of young. After the young emerge it is dried up and disappears. We have counted from the female, when full of young, between 50 and 60 of the minute sacks which contain the young perfectly formed insects ready to crawl about. The young male insect is produced in the same manner and at the same time, though not in such numbers; perhaps half a dozen males to a hundred females. In size the male is about one-third that of the female, and in shape very different, being elongated and more angular, provided with six legs placed differently up on the body, with two antennae and two eyes, and with a teat-like protuberance at the rear end of the body ending with a point.

At this stage of its existence the male has no wings, and it cannot be discerned without the aid of a magnifying glass. The color of the young male is not a yellow, but of a steel-like or whitish hue. It crawls about and fixes itself upon the bark, as does the young female, and becomes covered with a scale in the same manner, but which is elongated upon one side, and not more than one-half the size of the scale of the female. The male, after remaining its allotted time in the pupa state, emerges as a fully developed insect, having eyes, antennae, six legs and one pair of very long wings of a reddish and transparent appearance, and the protuberance at the rear end of the body is developed into a very long tapering point, nearly as long as the body itself. The perfect winged male is so minute it can with great difficulty be discerned by the naked eye, crawling and flying about in search of the female, which it impregnates under the scale and then, having fulfilled its mission, it dies.

In the season of 1880 we saw the winged males first appear on March 23d, and in great numbers for a few days. The first brood of young scales appeared the latter part of April. On June 27th we found the males from the first brood under the scales and nearly developed with appendages and wing pads, and on July 2d large numbers of them flying about; also as late as July 25th, and still later, on August 2d, a few were seen. On July 23d the trees were covered with the young of the second brood; August 2d the young males of the second brood were found crawling about. Bark scraped clean on the 23d of July was found on the 25th alive with young insects, and some of them already commencing to be covered with scale. As it was expected at the time these observations were made, a third brood would appear about October, so we found it. On October 17th we found the male scale insect in the first pupa stage of development in the winged form, and also on the same day found the perfect winged insect of the third brood moving about on the tree.

These facts prove conclusively that there are three distinct broods of these insects in the sea-

son, the earliest portion of the first brood about March 23d, of the second brood about July 2d, and of the third brood about October 17th, there being apparently an interval of 14 to 15 weeks between the different broods of the season. The young female insects were found crawling about through the season and as late as the last of November. The last brood remains through the winter under the scale until the approach of warm weather in the spring, when they again appear.

While the *Aspidiotus Conchiformis* will develop but one or at most two broods per season, this new species of *Aspidiotus* will produce three broods, and each female probably 50 young. This present season of 1882 has been in the development of fruit and insects about three weeks or more later, consequently the appearance of the scale was not expected as early as last year. The first winged male scale insects of this species were discovered this year on April 25th crawling about on an English hawthorn tree. At that time no young female scale insects were to be found, but the old females under the scales were approaching maturity, and in due time the young appeared.

Foes of Scale Insects.

The natural enemies of the scale insect are the larvae of some varieties of the *Coccinellidae*, or lady-birds.

The season of 1881 developed in great numbers an important enemy of the scale, viz.: the *Chrysopa* or lace-winged fly, the larvae of which prey upon it. This is a beautiful, slender and delicate fly, bright green in color, with large golden eyes, and very long wings like lace. The eggs are very minute, white and oval in shape, and are attached by a long and slender pedicel to the underside of leaves or the fruit. The larva is about one-quarter of an inch long, slender, and tapering from the middle toward both ends. It is provided with jaws, each perforated, through which it sucks the juice of its victim.

Remedies for Scale Insects.

In 1881 Mr. J. H. M. Townsend, of the Santa Clara County Horticultural Society, kindly placed at our disposal a large number of trees infested with scale for the use of the committee in making such experiments as were desired. A series of careful experiments for the destruction of the scale pest were made and the results carefully noted. Other experiments had been under way in our own orchards for many months.

These experiments demonstrated on one hand the inefficiency of many applications, and on the other hand showed a certain means for the destruction of the scale insect. The remedies which have proven successful will destroy all the varieties of scale, as the one under treatment is the most difficult of all to overcome. A portion of these experiments are numbered, and the results obtained, stated as observed, at different dates up to this time, October, 1882.

No. 1. Concentrated lye of the American Lye Co., one pound; water, two gallons. February 22, 1881—Applied by spray upon two peach trees infested by scale; washed in the afternoon when the trees were dry; effect, scale killed; the tenderest wood was killed also. July 5, 1881—New wood grown over the trees four and five feet long.

No. 2. Concentrated lye, one pound; water, two gallons. March 10, 1881—Applied by spray upon two peach trees infested by scale. Washed in the morning when the trees were damp with dew. July 5, 1881—Scale killed; buds and twigs not injured; fruit abundant and trees most healthy.

No. 3. Concentrated lye, one and one-half pounds; water, one gallon. June 23, 1881—Applied by pouring from a dipper upon two pear trees infested with scale and with numerous limbs dead. Lye so strong as to burn bark and foliage. August 2, 1881—Scale entirely destroyed; bark being restored and new foliage appearing.

No. 4. Concentrated lye, one pound; water, one gallon. July 5, 1881—Applied by spray upon a large apple tree badly infested by scale; bark and leaves burned. August 2, 1881—Scale killed; green layer of bark being rapidly restored and new leaves and blossoms appearing all over the tree. The foregoing trees have since been mostly killed by the application of a low grade of coal oil.

No. 5. Concentrated lye, one pound; water, one gallon. February, 1881—One almond tree, one Easter Beurre pear tree and two apple trees, grafted, were washed by brush with this strength of lye in order to destroy the red spider and its eggs, which could not be destroyed by previous applications of lye, one pound to five gallons, and also one pound to three gallons; another and the main reason being to ascertain the effects of very strong lye upon the trees. No scale upon these trees. This application destroyed the red spider and its eggs on these trees so that it did not appear for months; but, however, later on the trees became again infested. While the strong lye will destroy a large number of the eggs of the red spider it is found that all cannot be reached. The effect upon the bark and health of these trees was wonderfully good, the bark being very smooth and having a bright green, velvety appearance and totally free from all moss or other parasites.

No. 6. Concentrated lye, one pound; water, one gallon. The experiments in this number were made upon a section of orchard in a square block comprising 357 Ickworth plum trees, cut down and grafted into Petite prune; some yearling prune trees having been put in in places

and washed as were the plums, of these 126 trees were washed in February, 1881, with the above strong lye, applied with a brush. Among the 357 trees were eight trees badly infested with scale. No others had any scales upon them. The infested trees were scattered about as follows, and washed as indicated:

No. 10 in first row and 4 in 11th row were washed with lye, one pound to three gallons of water. The effect was not quite sufficient to completely destroy the scale, though so injured that they did not breed. Afterward these two trees were washed with one pound to one gallon, and this effectually ended the scale. No. 7 in 6th row, 10 in 7th row, 11 in 12th row, 8 in 14th row, 3 in 17th row and 11 in 17th row were washed with lye, one pound to one gallon of water, with the effect of completely destroying every scale upon them, and not one has appeared upon any of these trees since that time. These trees have been in the finest possible condition from the time of this application.

Among the trees not washed with the strong lye, two were found, in June, 1882, to have scale upon them; one of these, the top having become badly broken by wind, was dug out and burned, the other was washed soon as discovered with the whale-oil soap and sulphur mixture; owing to the foliage upon the tree not every part of it could be touched. Yet, however, the scale was destroyed, so far as could be found.

No. 7. Concentrated lye, 1 pound to one and one-half gallons water. Five Bartlett pear trees obtained from the nursery and planted in 1881 and scattered among a considerable number, although carefully examined at the time for scale, were found in June, 1881, to have a few scales upon them. These were at once washed with the above strength of lye, which destroyed the scale completely upon three of those trees, so that none subsequently appeared. On two of them, however, a live scale or two must have remained on the trunk of the tree at the surface of the ground untouched by the lye, as in September following a few young scales were discovered, located close to the ground. These were again washed in the same manner. Since that washing no scale has been found upon either of these trees until this month (Oct. 16, 1882). On one of them has been found a few young scale. The tree was immediately washed with the whale-oil soap and sulphur mixture. On another Bartlett pear tree, not, however, numbered with the above, was found some scales, Nov. 7, 1881. This tree, being entirely dormant, was washed with lye one pound to one gallon water, completely destroying the scale, as none can be found on it this year. Among the Yellow Egg plum trees, one was found January, 1882, with scale upon it, and washed at once with lye one pound to one gallon water, and repeated in February. No scale were left, as none can be found at this date. Another Egg plum tree was found infested in June of this year. To this was applied, by a brush, the whale-oil soap and sulphur mixture with some lye added. No scale can now be found upon it.

The trees in experiments five, six and seven are in an orchard of 50 acres. I have constantly and carefully watched all these trees, and at this date no scale can be discovered in the entire orchard. Should any hereafter appear, the treatment will be by lye one lb. to one gallon water. With this success in my two years' individual practice, I feel justified in repeating the statement I made at the first State Fruit Growers' Convention, that young orchards can be kept free from the *Aspidiotus perniciosus* by the right use of concentrated lye as a winter wash, and the whale oil soap and sulphur mixture for summer.

In the following experiments the trees were all badly infested with scale:

8. Concentrated lye, one and one-half lbs.; water one gallon. June 24, 1881—Applied to two Clairgeau pear trees; brush used in order to save foliage; many limbs dead from effects of scale. June 27—Trees burned considerably; scale killed where reached. July 2d—Much of the bark showing a healthier appearance. July 23d—Trees still better. August 2d—No sign of scale; green layer of bark being restored very rapidly; the fruit quite clean, because no scales of second brood were upon it. April 25, 1882—Examined the trees, and found a very healthy top, and with new bark where burned with the lye when washed in the summer. All the surface was not touched by the lye, and where not washed the scales still existed. Wherever the bark was washed, owing to the time that it was done, it was cracked across. Yet underneath this cracked surface was found new and healthy bark. October 14, 1882—There has been a good growth of new wood this season, and the under bark has maintained its fresh and healthy appearance over entire tree.

9. Concentrated lye, one and a half lbs.; water, one gallon. June 24, 1881—Applied on a portion of tree to ascertain the effect upon the stain of bark. July 23d—The bark where washed shows much less stain; lighter in color, and the green layer being restored. August 2d—Stain rapidly disappearing.

10. Concentrated lye, one lb.; water, one gallon. July 5, 1881—Mixed accurately, and applied same day upon pear tree. July 23d—Scale where reached entirely destroyed; bark burned by the lye, but otherwise healthy and good where it was previously sound. April 25, 1882, and October 14, 1882—Observations nearly the same as in the preceding number, the bark under the cracked outer layer being all renewed, and with a bright, healthy, green

layer free from stain; free growth of new wood during the season.

11. Concentrated lye, one pound; water, one and one-half gallons. Tree washed same time as above and with about the same results, although an unthrifty tree. October 14, 1882—The tree had been pretty well destroyed by the scale last year, and shows but a little growth of new wood.

12. Concentrated lye, one lb.; water, two gallons. Same as above, except that the tree was still more thoroughly ruined by scale, and at this date has not recovered; but little new wood; what there is, however, being healthy.

13. Concentrated lye, one lb.; water, three gallons. This tree had been washed by spraying April 1, 1881, with this strength of lye, which proved too weak to destroy the scale. July 23, 1881—Young scale insects covered the tree; the tree was left to itself with that washing. April 25, 1882—Observed that the scale was abundant and fast accomplishing the destruction of the tree. October 14, 1882—The tree is dead to within one foot of the ground, but from the collar many new sprouts have grown.

No. 14. Concentrated lye, 1 lb.; water, 5 gals. June 23, 1881—Applied to two trees, one slightly and the other badly infested with scale. This wash was used by pouring it upon the trunk of the trees and allowing it to run down and soak into the ground; the tops of the trees were not touched. This experiment was made, as it had been publicly stated that this weak lye used in this manner was an effectual remedy. July 2, 1881—No effect produced upon the scale where not reached by the lye. August 2, 1881—No effect other than noticed above; scale only injured where touched by the lye, and second brood of young scale insects crawling all over the top of the trees. April 25, 1882—Trunk quite clean and healthy, but the top full of scale insects of the last season alive and approaching maturity. October 14, 1882—Tree covered with scale, old and young; the trunk, however, where washed, appearing far more free than the upper portion; the bark where washed is healthy.

Use of Kerosene.

In the following experiments with kerosene, the action of that agent was reported as it then appeared at the date of report, but the subsequent effects which will now be stated, show how important it is to allow ample time to elapse before coming to a conclusion upon the merits or demerits of a particular proposed remedy. The use of coal oil when the tree is full of sap is plainly shown to be unallowable. These will be detailed as they appeared at the time, and also as seen this season.

No. 15. Kerosene, low grade and heavy, 110 test. June 1, 1881—Applied to two pear trees, spraying, with coarse spray used and oil thrown over the entire trees. June 27, 1881—Observed that the foliage had been killed and the trees considerably affected; scale killed. July 2, 1881—New leaf buds coming out. July 23, 1881—New foliage all over the trees, and seemingly new vigor throughout; new shoots six inches long; no scale to be found, and the green layer of the bark healthy to all appearance. August 2d—Foliage increasing rapidly all over the trees, and, apparently, the trees were gaining in health. Thus they appeared up to August, 1881. The observation of these trees on April 25, 1882, showed a very different state; the trees were dead.

No. 16. Kerosene, high grade, 150 test. June 1, 1881—Applied by spray upon two pear trees. June 27, 1881—Observed that the foliage had not been killed, but that the scale had all been destroyed; the trees apparently uninjured. July 2d—New leaf buds coming forth. August 2, 1881—Trees appear healthy; foliage uninjured; scale showing no signs of its presence, and the fruit showing less effects from scale on account of the wash it had received. April 25, 1882—Trees were dead.

No. 17. Kerosene, high grade Diamond brand, 150 test. July 27, 1881—Applied upon two pear trees with a coarse heavy spray over entire trees; trees very badly infested. August 2—Effectually destroyed the scale; the trees and foliage apparently entirely healthy. No perceptible effect upon the trees, but completely drying up the scales, so that they are blown away by the wind. The fruit is not affected by the kerosene, but the scale upon it is killed, and the fruit is very clean. It is observed that kerosene of 150 test evaporates rapidly, and leaves but little signs of having been applied. April 25, 1882—One tree dead; the other not dead but nearly so. October 14, 1882—Examination showed trees to be dead.

No. 18. Kerosene, same brand. July 27, 1881—Applied upon a pear tree by spray atomizer, which produced a very fine mist only. August 2, 1881—The same effects produced as in No. 17; scale appeared to be entirely destroyed; no apparent effect upon tree or foliage. April 25, 1882—Tree not dead, but with many scales upon it. October 14, 1882—Old wood dead, but new wood from near the ground.

No. 19. Gasoline. July 27, 1881—Applied upon pear tree by heavy syringe spray thoroughly over the tree and foliage. August 2, 1881—Not effectual in destroying the scale; too volatile; many of the insects killed, but a large portion unaffected; no apparent effect upon the tree or foliage at that time; on this tree the young male scales just hatched out were found crawling about. April 25, 1882—The tree has been almost killed by the scale infesting it.

(CONTINUED ON PAGE 325.)

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

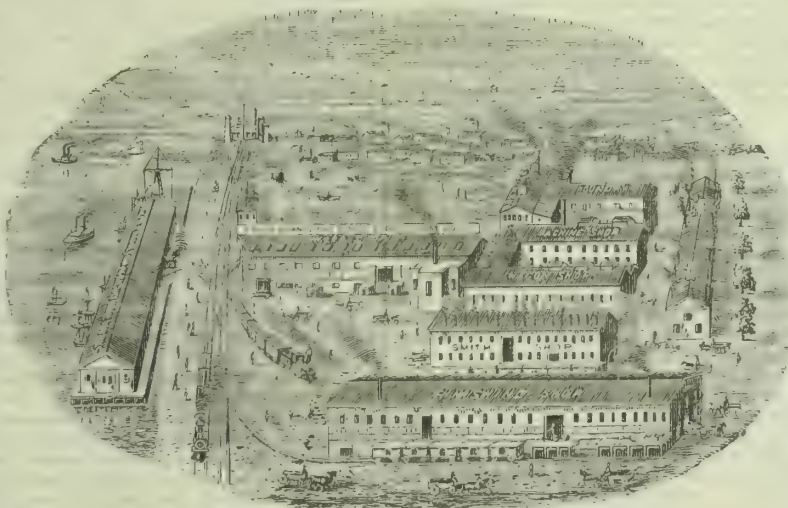
MANUFACTURERS OF AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

SPRING & THOROUGHBRACE WAGONS, OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, etc.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square feet, including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the



interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium of \$100.

The Largest and Most Complete Agricultural Works on the Coast.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.
" " " " Tule Plow.
" Improved Granger Gang.
" Improved Single Sod and Tule Plow.
" Single Plows.

Hill's Sweepstake Road and Breaking Plows.
" Side Hill Gang.
" Double Deep Tiller.
Fresno Ditching and Grading Plow.
Gillis' Improved Horse Powers.

Cultivators.
Gem Seed Sowers.
Hill's Improved Headers.
Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at or near the Sacramento or San Joaquin rivers or their tributaries can make a GREAT SAVING OF FREIGHT by buying goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited, that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, **BAKER & HAMILTON**, San Francisco and Sacramento, Cal.

Scale Insects on Deciduous and Ornamental Trees.

(CONTINUED FROM PAGE 326).

October 14, 1882—Tree still alive, with some scale upon it.

No. 20. Gasoline. July 27, 1881—Applied upon pear tree by the spray atomizer. August 2d—Result same as the preceding. October 14, 1882—This tree did not suffer from the effects of the application, but this season has made a vigorous growth of new wood quite clean from scale. The foregoing applications of kerosene and gasoline were made in full strength.

Whale Oil Soap and Sulphur.

No. 21. Whale oil soap and sulphur mixture 1 lb., water 1 gal. June 23, 1881—Applied by spray upon pear tree, covering foliage and fruit thoroughly. July 23d—Scale killed; tree gaining in health; green layer of bark being restored; fruit greatly improved in appearance. August 2, 1881—Tree still improving, also fruit. April 28, 1882—Tree very healthy and appears clean from scale; green layer of bark being fully restored, and parts of the tree that were nearly killed by the scale are forming new bark rapidly; the tree has a very fine top of new growth. October 14, 1882—The tree has grown very thrifty through the season and the wood is all very healthy; some scale are found upon the tree, however. These trees are in an orchard badly infested, and it is to be expected that the insects will return. This wash is an effectual summer wash, and where there is any scale present should be used in the strength here given, as a wash of one-half the strength has proven ineffectual.

Soft Soap and Sulphur.

No. 22. Soft soap, one pound; sulphur, one pound; tobacco, one pound; water, three gallons. July 5, 1881—Applied upon two trees by spray, covering trees, foliage and fruit thoroughly. July 23, 1881—Seemed quite effectual at the time; many scale destroyed, but not all; trees not affected by the wash; fruit improved in appearance. Subsequent observations, however, showed that but little was accomplished in destroying the scale. October 14, 1882—This tree shows an abundance of live scale in all stages of growth. This wash was used with good effect in another orchard, June 1, 1881, on a Fellenberg prune tree, clearing it from scale, which, up to this time, have not returned.

No. 23. Soft soap, one pound; sulphur, 1 pound; water, three gallons.

No. 24. Soft soap, 1 pound; water, 3 gallons; The two washes named above were applied June 23, 1881, and with no effect, neither has it shown any result this season.

Whale Oil Mixture.

No. 25. Whale oil, one pint; kerosene, one pint; borax, one ounce; water, one gallon. June 23, 1881—Applied by spray to a pear tree at the different dates in 1881; the effect has been observed; it has been apparent that the oil is decidedly injurious to the tree, applied in this manner or at this time; it is therefore not recommended. Applied to another tree in one-fifth the strength above given; it has no effect upon either scale or tree. April 25, 1882—The tree first treated is nearly dead; but, however, having the top cut off, new wood is coming along; scale appears to be destroyed. October 14, 1882—The old wood is dead; the sickly growth of new wood springing out from the lower portion of the tree shows some scale.

Carbolic Acid.

No. 26. Carbolic acid, three ozs.; water, two gallons. June 23, 1881—Applied by spray upon a pear tree badly infested with scale. June 27, 1881—Failed entirely. This tree afforded a constant succession of insects in all stages of development, both male and female. From it some of our most interesting studies were made; we repeat it as it appeared at each visit on that date (June 27, 1881); we found the male insect under its scale partially developed, with wing pads, but wings not yet out. July 2d—Found plenty of winged males of the second brood flying and crawling about. July 23d—Tree was covered with young female scale insects of the second brood crawling, and with a few of them just located and commencing to be covered with their scale. July 25th—A few of the winged male still found; bark scraped clean on this date was in two days covered with young scale and with slight formation of scale over them. Aug. 2d—Tree entirely covered with young scale on this date; two or three winged males were found. April 25, 1882—Tree almost dead from effects of scale; top dead and removed and a few feeble shoots coming forth. October 14, 1882—Shoots have grown from the trunk of the tree to some extent, but the whole having been so seriously infested the tree is considered worthless.

The entire orchard in which these trees are situated, other than the ones experimented on, from 8 to 26 were washed this past winter with a very low grade of coal oil called "tree wash"; the result is not satisfactory; the owner tells me (October 14, 1882) that he is satisfied that the oil has seriously injured his trees.

San Jose, October 25, 1882.

THE PACIFIC RURAL PRESS, the ablest agricultural paper on the Pacific coast, and equal to any published in the United States, should be on file in the home of every farmer. The last few numbers are invaluable.—Concord Sun.

Pacific Coast Interests.

There was quite a notable meeting held in this city on Tuesday of last week. It was a conference between the representatives of the State at Washington and the leading business men of San Francisco, and the subjects for discussion were several public enterprises calculated to advance Pacific coast interests, to-wit: "The Incorporation of the Nicaragua Maritime Canal Company," "The American Commercial Marine" and "The Bill regarding the Tenure of Public Lands." There were present United States Senators Farley and Miller and Representatives Rosecrans and Page, and nearly all the prominent merchants of the city. The main facts were brought forward by the local side of the meeting, the Senators and Congressmen stating that they agreed in the main with the views advanced, and would labor to get Congress to enact as the sense of the meeting required.

Concerning the Isthmus canal, the following, introduced by Captain W. L. Merry, was unanimously adopted:

WHEREAS, A bill authorizing the incorporation of the Maritime Canal Company of Nicaragua, has been favorably reported by the Committee on Foreign Affairs during the last session of Congress; and

WHEREAS, The Legislatures of Oregon and California, by concurrent resolutions, the representative commercial bodies on the Pacific coast, and thousands of our producers and merchants, have petitioned Congress, urging the passage of this bill as a matter of vital importance to the Pacific coast, beneficial in its results to our whole country and the commercial world; therefore, be it

Resolved, That the Board of Trade of San Francisco extend to our honored Senators and Representatives in Congress its thanks for their friendly assistance to the bill authorizing the incorporation of the Nicaragua Canal Company, and respectfully urge upon them the necessity for their active co-operation in securing its final passage and the Executive sanction during the next session of Congress.

C. J. Dempster stated that by the canal, in the moving of one single wheat crop over \$12,000,000 would be saved to our producers. Suppose this addition was put into the building of iron steamers for the carrying trade, can any one picture the impulse that would be given to every branch of trade? Some doubt whether our present wheat shipment can continue at its present magnitude without increased means for export. If the vast Red River country and the lands of India are to produce what has been calculated, the canal will become an absolute necessity.

The Shipping Interest.

C. T. Hopkins, Chairman of a committee to draft a memorial on the subject, "The American Commercial Marine," read the result of their labors. The substance of the document is: That the immense and constantly growing foreign carrying trade of San Francisco, now the sixth among the 93 seaports of the Union, is so completely in the hands of foreign ship owners that only 12 out of 550 vessels loaded at this port for Europe, during the harvest year ending June 30, 1882, were owned at San Francisco. That for said period of 12 months the freight paid on exports to Europe alone, by sea, amounted to \$16,069,789, and that the aggregate of inward and outward freights in the foreign trade to and from all ports on this coast must be not far from \$25,000,000 annually; the proportion whereof earned by vessels owned at American Pacific ports is an insignificant fraction of the whole. That the present lamentable decay of the American merchant marine in the foreign trade, has been entirely due to the failure of our Government to change the laws to suit the changing exigencies of modern progress, while other nations, especially England, have always given close attention to every detail of this subject, and therefore, by the substitution of iron and steel for wood, of steam for sail, by exemption from taxation, by Government employment as mail carriers, and by the use of every means calculated to improve and cheapen transportation by sea, they have underbid us in every port and on every sea, so that in another decade, unless Congress comes intelligently to our relief, they will have completely excluded the American flag from the foreign trade everywhere; and while wooden ships can yet be built in the United States as cheaply as in foreign countries, the world now demands ships of iron and steel, but Americans are prevented by the tariff from constructing such vessels, save at a cost so much greater than those of England as to confine their building to the coasting trade, in which they are protected from foreign competition; that the high tariff of the United States, therefore makes the business of iron or steel ship building for the foreign trade impossible.

The memorialists specially pray for the repeal of the last clause of Sec. 4131 of the Revised Statutes. "And officers of vessels of the United States shall in all cases be citizens of the United States." Repeal all sections or parts of sections numbered 4561, 4580, 4581, 4582, 4583, 4584, 4600, that provide for the payment of three months' or one month's extra pay to seamen when discharged in a foreign port, and substitute therefor the statute, which is now the law of Great Britain relating to the same business. Abolish all the fees of United States Consular officers now collected from shipping, and make good any resulting deficiency in their compensation by regular salaries. Allow a rebate of the tonnage tax of 30 cents per ton on each 300 tons of the vessel's register, for which no American apprentice shall be carried in the foreign trade, and compel all vessels in the coasting trade

to carry at least one apprentice to every 800 tons of her enrollment. Abolish the laws obliging masters to return seamen to the American port of shipment, and to allow crews of any nationality to be shipped anywhere on time or by the voyage. Make it a penal offence to demand or pay advance wages to seamen in any American port, or any bonds for shipping seamen, and that all such payments shall be void in law in final settlements with seamen. Enforce this against foreign vessels by requiring the Collector to refuse a clearance in case of its violation. Allow all provisions, stores and supplies used or consumed on board vessels where such vessels are bound upon a voyage to any foreign port, to be taken out of bond free of duty. Declare all shipping engaged in the foreign trade to be under the protection of the United States, and therefore exempt from State and municipal taxation; establish a Bureau of Commerce with a Cabinet officer at its head, and with duties analogous to those of the British Board of Trade. Liberal compensation for postal service by established American steamship lines, as is the policy of our commercial competitors.

The Public Lands.

The gist of the third topic was stated by the chairman to lie in the fact that a pre-emptor could not enter upon lands already inclosed; that public lands must be unoccupied by any one before the actual settler can enter on it.

Captain Blanding, from the State Immigration Bureau, addressed the Board on this question. He said we want a large population. He contrasted the population and area of the New England States with that of California, and showed how population is the first element of political power. The difficulty to get anti-Chinese legislation, he instanced as one of the benefits to be had from political power. He said the misrepresentation of the land agents of the northwestern States kept all but 3,000 of the 400,000 and odd immigrants, who landed in New York from coming to this State. But a more serious obstacle than this must be removed, for the United States Supreme Court has decided that if lands were fenced, although they might be part of the public domain surveyed for entry, the pre-emptor could not legally settle on them. The Immigration Bureau, partly supported by voluntary contributions, and in part by the Railroad Company, had discovered that California has 43,795,000 acres of public lands, half of it suitable for agricultural purposes—a country equal to Indiana, whose population is a million of people. There is now surveyed and open to pre-emption, in this State 14,537,000 acres. The bills to right the evil in the matter of a settlement upon lands already inclosed, were still pending in Congress.

Academy of Sciences.

The regular meeting of the Academy was held on Monday eve, Oct. 16, Prof. Davidson in the chair.

The Academy's museum was increased by numerous donations, and among the more interesting objects were a mounted marmot from the Sierras in California, presented by a donor who had never heard of its existence in this State; a wooden carving of the "Greek Slave," the work of Queen Charlotte Indians, British Columbia; a peculiarly constructed mortar and pestle for grinding cereals, discovered by a blast in the New Almaden quicksilver mine, and uncovered at a depth of some 150 ft. below the surface.

E. F. Loring exhibited and dilated upon the hanging nest of a California oriole, which he considered remarkable in that it was made up of various colored bunches of worsted, also comparing it to the woolen nests of the titmouse, and that of the great penzance and pouch-like nest of the Mexican oriole, which is made of grasses and flexible twigs.

Some sixty specimens of minerals were also presented, among them being 20 specimens of a substance very like soapstone crop-pings, and found by D. Groeper in a ledge from 40 to 60 ft. wide near San Francisco; also a vial of black auriferous sand, found on the beach in Los Angeles county, and sulphurets of copper found on the Oak ranch, Bolinas, Marin county.

Dr. Behr exhibited one of the mud and clam-like structures which the "mason bee" builds, calling especial attention to the remarkable instinct of the mother insect in providing the structure with sufficient pollen and honey to last the larva until a state of insect perfection has been reached.

Professor Joseph Le Conte of the University, and one of the gentlemen selected by the English Executive Committee of the Darwin Memorial to join it in carrying out this work, appeared before the meeting and treated of the genius and life work of the dead scientist. He explained at length the work done by Darwin and its grand results.

With respect to the comet and the wild speculations concerning it, Prof. Davidson announced that there was nothing authentic as to the nature and character of the heavenly visitor. It would appear, however, from the last number of *Nature*, that on Sunday, the 17th of September, A. A. Common, of England, while observing the sun with a special telescope, found a fine comet near the sun's nucleus. This was its first discovery. He explained quite fully the theories of comets, their paths, formation, etc., and read a paper on them. The whole paper was a very interesting one.

A Microscopical Reception.

A microscopical reception was given at the Harmon seminary, at Berkeley, on Friday evening, October 13th, by the San Francisco Microscopical Society and other microscopists. The reception was held in the large assembly-room of the Institute. The building was crowded with a large and quite select audience, including many of the leading teachers and others from this city. Many were also present from Oakland, while a large portion of the audience was made up from the Faculty of the University, ladies and gentlemen from Berkeley, and the young ladies of the Harmon institute, who filled most of the seats upon one side of the audience-room.

The exercises of the evening were opened by a few words from Rev. S. S. Harmon, Principal of the Harmon seminary, and an invocation by Rev. Dr. Breck. A song, with encore, was then given by the Arion Quartette, after which Rev. Dr. Wythe, of Oakland, was introduced, who delivered a short but very instructive and interesting address upon "The Microscope and Its Revelations." The address was full of interest and instruction, and listened to with the utmost attention. The great importance of the microscope, in connection not only with the study of the sciences, but also as an aid in nearly every avocation in life, was briefly alluded to. While astronomy brings to our notice and treats of the motions and arrangements of great masses of matter, and chemistry explains their constitution, the microscope brings all things to our closest vision, and lets us into the secret of their most minute structure.

The history of the early discovery of the microscope, and its subsequent improvement and gradual adaptation to the progressive needs of science and the arts, was happily described. Notwithstanding the apparent complexity of the modern instrument, the principle of the microscope was shown to be exceedingly simple, so much so that the cost of an instrument, well calculated for all ordinary work, was within the reach of nearly every person. The different parts of a perfect instrument were described and distinctly pointed out by the presence of several such shown upon the table in front of the lecturer.

The wonderful power of the modern perfect instrument calls for the exercise of the highest order of brain power, in order to judge and make practical application of the revelations which it makes in the study of minute forms and movements. In this direction the microscope brings us to the very confines of the origin of life, both animal and vegetable. It is beginning to open to our vision the origin of disease, the means of health, and is fast leading us into a field of investigation, which must employ some of the most important and absorbing thoughts which can interest the human mind.

In closing, the lecturer called attention to the character and importance of the interesting entertainment which was to follow, and recommended the study and use of the microscope to all.

After another song and encore by the quartet club, Prof. E. J. Wickson, of the Microscopical Society, made some brief remarks in reference to the character and objects of the society; instructed the audience how to avoid confusion in the examinations which were to follow, and volunteered to lead them through the several rooms in which the instruments with their objects were placed.

The subjects placed on examination were as follows, each instrument being attended by a microscopist, to fully explain and instruct the uninitiated in regard to what was shown: C. W. Banks, micro-engravings; C. H. Denison, diatoms; S. W. Dennis, M. D., dental caries; C. H. Dwinelle, garden and orchard pests; W. B. Ewer, gold in various forms; H. G. Hanks, linen cloth from Egyptian mummy; T. R. Harold, yeast plant (*Saccharomyces cerevisiae*); Geo. C. Hickox, mineral crystallizations; Arthur M. Hickox, polariscope objects; A. W. Jackson, thin sections of minerals and rocks; W. F. Myers, male and female mosquitoes; F. W. Morse, the phylloxera of the vine; S. M. Mouser, M. D., circulation of blood in mesentery of frog; Prof. W. B. Rising, chemical preparations; F. E. Spencer, diatoms; J. H. Wheeler, California scale insects; G. H. Williams, pond life; J. H. Wythe, M. D., animal and vegetable physiology illustrated; E. J. Wickson, mold of cheese and fruit; C. G. Yale, insects' wings.

The utmost interest was taken by the audience in examining the various objects shown, and in listening to the explanations by the exhibitors. Too much cannot be said in favor of such entertainments. They are not only highly instructive, but also extremely interesting. We have been requested, on the part of the Institute managers, the young ladies of the Institute, and the visitors generally, to return their most hearty thanks to the gentlemen of the San Francisco Microscopical Society for their kind attention shown in providing for them such a truly valuable and instructive entertainment.

ANHESTON AS A FOUNDATION FOR STEAM HAMMERS.—The blacksmith shop of the Pittsburg, Fort Wayne & Chicago railroad, at Pittsburg, has been much troubled by the unsetting of the brick forges by the jar of the steam hammer, and forges of asbestos paper have, it is said, proved a decidedly successful method of overcoming all difficulties.

IMPORTANT SEMI-TROPIC COLONY ENTERPRISE.

The Fairest and Best of Colonies.

THE REDLANDS,

In San Bernardino County, California.

Superior Soil, Climate and Irrigating Improvements.

The following information concerning one of the best-reputed and promising colony enterprises in southern California, is from the *Riverside Press*, of San Bernardino county, April 1, 1882:

A Model Settlement.

No place in California has sprung into public notice so rapidly and gained so deserved a reputation in so short a time as has the new tract of Redlands.

This tract is located between Old San Bernardino and Crafton on the south side of Mill Creek ditch and comprises 2,500 acres of as choice fruit lands as can be found in the State. The land is of a reddish clayey loam, not clayey enough to work hard, having sufficient admixture of sand to hold moisture and give the best results when planted to orchard or vineyard. The red lands of the State are everywhere celebrated as being superior for tree and vine.

The tract slopes to the northwest and commands one of the grandest views to be found in the State. To the north and northwest lies stretched out, several hundred feet below, the San Bernardino valley, with the towns of San Bernardino and Colton plainly in view, while, looking to the westward at night, the head-

lights of the Eastern-bound trains can be distinctly seen for 40 miles. Beyond the San Bernardino valley to the northwest, and stretching around to the northeast, the chain of mountains tower 9,000 ft. above the sea level, culminating in Mount San Bernardino, 11,000 ft. high, and Grayback, 11,550 ft. high, both of which stand up boldly from the Redlands point of view, and whose tops are covered with snow more than half of each year. Around to the left of the picture are the Cucamonga peaks, 40 miles distant, which complete the semi-circular mountain chain that makes such a beautiful background to the landscape. For mountain and valley scenery no more beautiful location can be found in the State than Redlands, outside of Yosemite valley.

Redlands is located 10 miles from the county seat, the same distance from Colton, and 15 miles from Riverside. The track of the Southern Pacific railroad runs one and a half miles from the center of the Redlands tract, and a depot will be established at once for the accommodation of Redlands, Lugonia, Crafton and Old San Bernardino.

The Redlands tract is laid off by running avenues from northeast to southwest, one-quarter of a mile apart and cross streets at right angles to those avenues every half mile, thus cutting the tract into blocks, each of which contains 80 acres. The avenues are each 100 ft. wide. The cross streets are 60 ft. wide.

Although the first work done on the tract by settlers could not be commenced till about the 1st of January, 1882, there are at the present time some 10 or 12 houses erected and in process of erection, with several to commence work soon. A number of tracts, in addition to those on which houses are being built, are being plowed up and planted to orchard and vineyard.

The lateness in the season when the land was bought by purchasers, prevented many from getting their land set out to trees or vines this year, but all who have purchased are making

arrangements to plant extensively next winter and spring.

Town Plat.

Near the center of the tract is a town plat, consisting of 140 acres, cut up into lots ranging from an ordinary business lot to two and a half and five acre residence lots.

The Water System.

Is one of the most perfect in the State. The water supply comes partially from the South Fork ditch of the Santa Ana river and partially from private water developments in the Santa Ana canyon and other localities. The waters are to be conducted to a large reservoir, located in a canyon adjoining the tract, and distributed from this reservoir by means of cement pipes. These pipes will be so laid as to carry the water without loss to the highest point on each ten-acre lot. The basis of water supply is one inch of water, statute measurement, to each eight acres of land. This is ample, and up to the best irrigated tracts in the State.

Work on the water system is being pushed as rapidly as men and money can do the work. The dam to the reservoir, which is ultimately to be 60 and perhaps 80 ft. high, is now about half done; the iron discharge pipes and water-gates are in position, and nearly four miles of the largest distributing pipes are already manufactured, and most of this is laid. This portion of the work embraces the 8, 10, 12, and 14-inch pipes—the heaviest portion of the work. The smaller pipes, none of which will be less than four inches, will be made and laid as soon as the larger pipes are completed.

The orange, lemon, apricot, peach and raisin grape, will grow here to perfection.

Following is a list of the property owners at the present time. Those who have moved upon the tract are credited to Redlands, and the others to localities where they now reside:

Names.	Acres.
J. C. Cockshutt, Redlands.....	20
G. W. Kidd, Redlands.....	19
J. F. Welsh, Redlands.....	20
B. W. Brown, Redlands.....	10
Israel Real, Redlands.....	10
C. E. Tusdell, Redlands.....	20
R. B. Morton & Co., Redlands.....	30
C. A. Smith, Redlands.....	10
O. W. Smith, Redlands.....	10

Mrs. R. W. Brown, Redlands.....	10
Mrs. E. E. Seymour, Redlands.....	20
F. R. Brown, Redlands.....	10
A. C. Simms, Redlands.....	20
Simon Cook, Redlands.....	20
J. E. Sinclair, Redlands.....	20
John Carroll, Redlands.....	10
George Cassidy, Redlands.....	10
Orsen Van Leuven, Redlands.....	10
C. K. Dewell, Redlands.....	10
E. J. Waite, Redlands.....	20
W. N. Mann, Riverside.....	50
A. S. White.....	20
L. M. Holt, Riverside.....	20
K. F. Overton, Riverside.....	20
A. W. Boggs, Riverside.....	20
A. G. Boggs, Riverside.....	10
S. R. Edwards, Riverside.....	10
Geo. Frost, Riverside.....	20
Mrs. V. V. Annabel, Riverside.....	50
J. P. Greeves, Riverside.....	10
D. U. Findlay, Riverside.....	10
A. G. Saunders, Riverside.....	10
E. K. Henderson, Riverside.....	20
Rev. F. M. Colburn, Riverside.....	10
E. P. Moody, Riverside.....	10
T. B. Stephenson, Riverside.....	10
A. H. Averill, Riverside.....	10
J. S. Cover, Riverside.....	10
S. McCoy, Riverside.....	10
J. H. Allen, Riverside.....	10
H. E. Allett, Riverside.....	10
H. E. Branch, Riverside.....	10
E. M. Westbrook, Riverside.....	10
J. B. Kimball, Riverside.....	20
N. H. Kingsley, Riverside.....	20
Hugh Marshall, Eureka Mills, Plumas county.....	20
T. A. Inch, Eureka Mills, Plumas county.....	20
J. Hosking, Eureka Mills, Plumas county.....	20
T. W. Ladd, Eureka Mills, Plumas county.....	20
Mrs. Sarah J. Morey, Eureka Mills, Plumas county.....	10
C. N. Hill, Eureka Mills, Plumas county.....	20
G. N. Starke, Grundy Centre, Iowa.....	30
F. P. Morrison.....	12
T. D. Dewey, San Francisco.....	25
W. B. Ewer, San Francisco.....	12
B. F. Watrous.....	10
H. L. Rutgers.....	20
J. W. Bashford.....	5
S. Comey.....	5
Mrs. B. O. Johnson, Deep River, Conn.....	10
J. D. Dewell, New Haven, Conn.....	10
Eugene B. Cutts, Carson, City, Nevada.....	10
W. A. Merriam.....	10
J. T. Ford, San Bernardino.....	20
T. S. Ingham, San Bernardino.....	10
L. Jacobs, San Bernardino.....	20
Total sold.....	1,004

Judson & Brown (San Bernardino, P. O.), owners of the tract, are energetic men, who leave no stone unturned to make their enterprise a success. They do not try to figure how little they can do and sell their land, but where they can put another thousand dollars and make the tract more desirable to first-class settlers. There is nothing shoddy about their operations. Redlands will stand in a few years as one of the finest settlements on the Pacific coast.



FOR KILLING SQUIRRELS, GOPHERS, PHYLLOXERA, Etc.

Should be Used After the First Rains.

Sold by Druggists and Dealers in General Merchandise. May also be obtained direct from the Manufacturer,

JOHN H. WHEELER,

Manufacturer, also, of

Sulpho-carbonate of Potassium and other Disinfectants for Vines and Trees.

ALL KINDS OF FERTILIZERS AND VINEYARD SUPPLIES FURNISHED.

OFFICE: 111 Leidesdorff Street, - - - SAN FRANCISCO.

S. P. BAILEY.

O. E. BADGLEY.

JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - Stockton, Cal.,

IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,

Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Belle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.

We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow.

In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.

Illustrated Catalogue. Photograph and Lecture, 10c. **MAGIC LANTERNS AND VIEWS** **ORGANS** Play any Tune. **\$5.** HARBACH ORGANINA CO., 509 FILBERT STREET, PHILADELPHIA, PA.

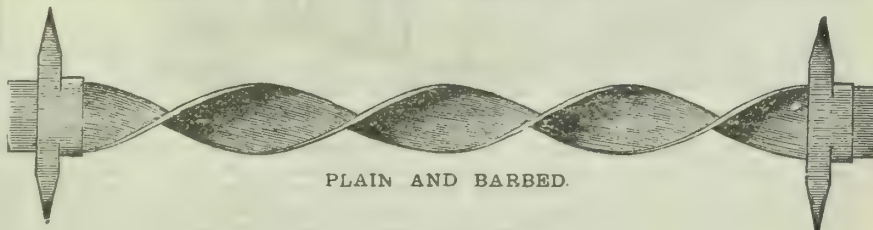
SACRAMENTO.

SAN FRANCISCO.

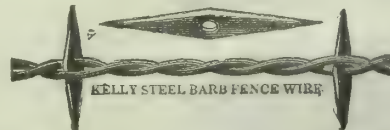
HUNTINGTON, HOPKINS & CO.,
Hardware, Iron and Steel.

AGENTS FOR

BRINKERHOFF GALVANIZED FENCING,

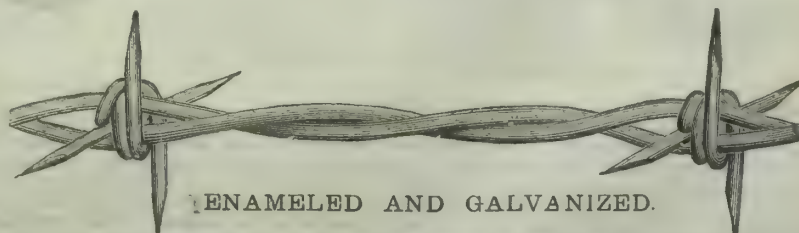


"KELLY" BARB WIRE.



ENAMELED AND GALVANIZED.

"Red Star," 4-Pointed, Barb Wire,



This paper is printed with ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent to Pacific Coast—Joseph E. Dorsey, 527 Commercial St., S. F.

LAND Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to **EDWARD FRISBIE**, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

Prevailing Fashions.

No months are more suggestive and generous of novelties especially intended for cold weather than October and November. Such materials as can be worn all winter will be chosen for garments that are to be made up from the present styles shown. There is a quiet elegance in the appearance of all the autumnal fashions, and this charming quality becomes more observable as the season advances. All the styles

ladies from twenty to thirty-six inches, waist measure. For all sorts of dress goods, and also for velvets, silks, satins, etc., it will be a favorite and elegant style during the coming season. The skirt may be decorated in any way the taste of the maker suggests, tiny plaitings, ruffles, shirred flounces and ruffles being all stylish and suitable garnitures. The draperies may be decorated with contrasting bands, rows of braid, fringe, lace, plaitings or machine-stitching. The coat is of perfect adjustment,

or it may comprise braid ornament, braid bindings, contrasting facings, etc., as desired. The pattern to the coat is in thirteen sizes for ladies from twenty-eight to forty-six inches, bust measure.

The hat is of fine felt, richly adorned with ostrich plumes.

Ladies' Promenade Toilet.

FIG. 2.—(Consisting of ladies' skirt No. 8317 and redingote No. 8318.)—Among the most re-

any way pleasing to the taste. The redingote is close in its perfect adjustment, which is performed by artistically curved center, and side-back seams and double bust and single under-arm darts. Wide extensions left upon the back edges of the back below the center seam are folded under in wide hems, which flare so as to effectively display the back drapery of the skirt. A large bow of wide Surah ribbon droops from the tops of the hems with a charmingly stylish result. The fronts present a short, pointed



FIG. 1.—LADIES' WALKING COSTUME.

shown in our columns are made up from the latest Butterick's patterns, and the numbers referred to are those used to designate the patterns of this popular establishment. In ordering ladies can use the numbers designated, and be sure to get the correct pattern.

Ladies' Walking Costume.

FIG. 1.—(Consisting of ladies' coat No. 8275, and skirt No. 8317). The costume here portrayed is unquestionably elegant and stylish, and is constructed from one of the new fancy



Fig. 3. Ladies' Bonnet



Fig. 4. Ladies' Evening Bonnet.



FIG. 2.—LADIES' PROMENADE TOILET.

all its seams and darts being curved in the most artistic manner. The center seam has coat laps upon its lower part; and the front and sides, which are quite short, are attractively lengthened by coat-skirts that flare jauntily at their front edges and are folded in coat-plaits over the adjoining edges of the back. The front is double-breasted and closes in the customary

cent of the fall fashions the redingote holds regal sway, and it is as stylish and graceful as it is novel and simple. It is worn over either a plain or an over-draped skirt, with which it usually contrasts, the result of its combination with a stylishly over-draped skirt being exhibited in the present engraving. It is here made of handsome brocade, and the skirt is of plain satin

vest effect at the center, and at the sides are long and straight, the closing being made down the vest-like portions with buttonholes and buttons, the edges below being widely hemmed and flaring in a pretty manner to display the front drapery of the skirt. A row of *passementerie* encircles the sleeve three or four inches above the wrist, and a row also borders the rolling collar finishing the neck. The pattern to the redingote is in 13 sizes for ladies—from 28 to 46 in.



Fig. 5.—Ladies' Round Hat.



FIG. 6.—LADIES' POKE BONNET.

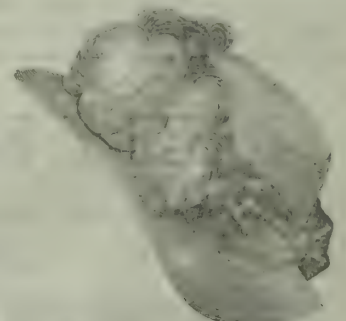


Fig. 7. Ladies' Bonnet

suittings for fall toilettes. The skirt is round and four-gored, and is trimmed about the lower part with a deep kilt-plaiting. The front drapery is very deep, and is much wrinkled by plaits clustered prettily in the side edges. It falls in a deep point at the left side, and is raised with a charming effect at the right side, the result being undeniably stylish. A broad band of velvet decorates the lower edge of the drapery, and darts fit the top smoothly to the belt. The back drapery is full and *bovante*, and is differently, but effectively, draped at both sides. The pattern to the skirt is in nine sizes for

double-breasted fashion with button-holes and large, handsome buttons. Pocket-laps of velvet rest jauntily upon the hips, their tops being included in the cross-skirt seams, and a handsome rolling collar of velvet affords a stylish completion for the neck. Deep cuff-facings of velvet finish the coat sleeves, and ruffs of fine lawn are worn as *lingerie* in the sleeves and at the neck. Such coats will be much admired for fashioning velvets, brocades, cloths, Cheviot etc., and are among the most jaunty of the fall styles. The finish may be severely plain,

merveilleux. The skirt is of the four-gored style and is deeply trimmed about the lower part with a box-plaited flounce of the satin. The front drapery is softly and prettily wrinkled by plaits in its side edges, and droops in round *tablier* style at the right side, and falls in deep, handsome points at the left. The back drapery is very full and pretty, and is effective in its artistic draping. The pattern to the skirt is in nine sizes for ladies—from 20 to 36 in. waist measure. It is a most admirable mode for all sorts of dress goods, and may be garnitured in

bust measure. For cloths, velvets, brocades and handsome textures of all kinds it will be a popular and stylish design during the coming season. Its skirt portion will frequently be lined with bright red or some pretty hue in silk, satin or Surah, and the edges may be plainly finished or adorned with flat trimmings, as most pleasing to the taste. Machine stitching and flat braids will prove stylish and tasteful ornaments for redingotes of cloth, cheviot, tricot and similar seasonable textures. Any kind of coating may be made up in this way, provided it be not too heavy in texture to appear suitable. Such

(CONTINUED ON PAGE 332.)

"Abel Stearns RANCHOS."

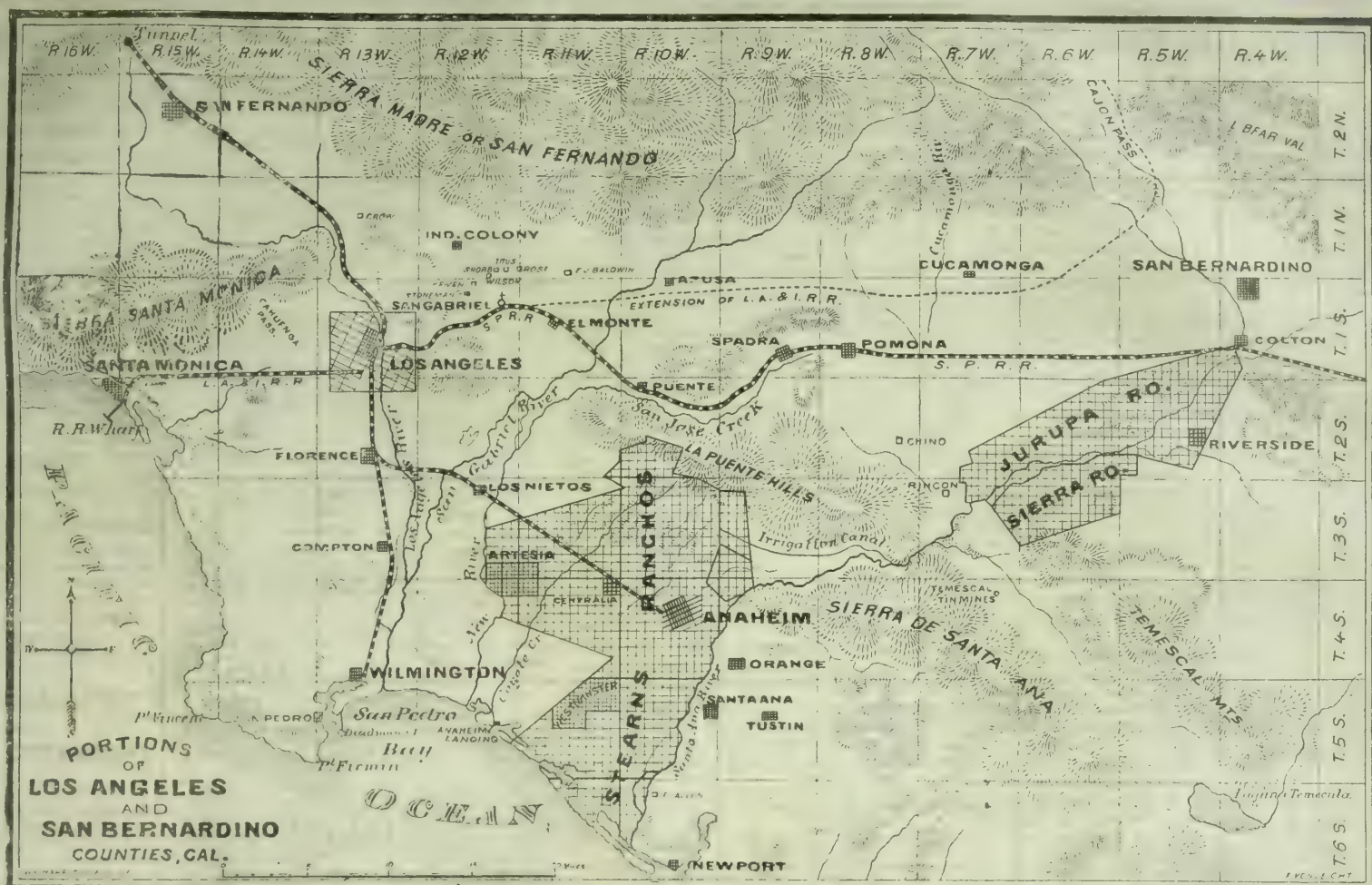
The Center of Los Angeles Valley.

Embracing Anaheim, Westminster, Artesia, Garden City, etc. Thirteen miles southeast of Los Angeles City, within the Artesian Well Belt. Hundreds of flowing pipe wells. Water near the surface. Rivers on two sides; ever-flowing creek runs through the tract. Front on the Ocean. Transportation and passage by Steamships or Railroad. Southern Pacific Railroad through the tract. Twenty-one hours from San Francisco. The unsold land for sale or lease in sections or fractions. Apply to Trustee A. ROBINSON, 318 California St., San Francisco.

Or to ROBERT J. NORTHAM, Anaheim, Cal., or concerning Westminster Colony, to REV. ROBERT STRONG, Westminster, Cal.

Terms, one-fifth cash, balance on interest at 10 per cent. per annum.

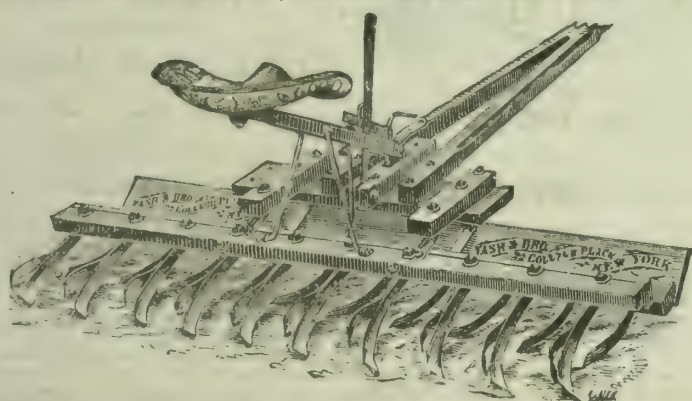
Send for Circulars and Maps.



"ACME"

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.



Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting. Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "alough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers, 22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. R. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.

Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Grant.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for free circulars containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE,

Anderson, Shasta County, Cal.

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50 to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Crabbe, C. Grozinger, T. L. Grigsby, D. Emerson, M. M. Estee, Prof. Husman, Berringer Bros., and others, Napa county. I. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dresel, James Shaw and others, Sonoma county. R. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wykoff, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

P. K. STOCKTON,

St. Helena, Napa County,

CALIFORNIA.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

DEWEY & CO.'S

Scientific Press



Patent Agency.

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY,

W. B. EWER,

GEO. H. STRONG,

Prevailing Fashions.

(CONTINUED FROM PAGE 330.)

over-dresses are sometimes made of heavy goods exclusively for street wear. The bonnet is a pretty shape in fine felt, and is stylishly trimmed with a loose twist of Surah and a cluster of beautiful ostrich tips. It is worn without ties.

Ladies' Bonnet.

FIG. 3.—Black Spanish lace, heavily beaded with sparkling jets, is laid in frill fashion on this bonnet, the row nearest the front being finished with pendant jets that fall over the brim in valance style. In the back stiff loops of black ribbon are arranged, the ends coming forward and constituting the strings, which are tied in a large bow on the corsage. A great number of pink roses are closely grouped on the left side, and form an effective garniture. Velvet poppies, pansies or roses of any deeper shade may take the place of the pink roses.

Ladies' Evening Bonnet.

FIG. 4.—A becoming capote, suitable for evening wear, is made of brocade satin of a dead white tint. Broad faille ribbon encircles the crown, is caught in the back by a fancy pearl pin, and, falling, forms the strings, which may be tied under the chin or low on the corsage. Just in front is a full, curly tip, and a long plume traverses the left side and falls at the back. Such a bonnet is always useful, and there are few households where a piece of satin or brocade large enough to make one may not be found. A cluster of handsome flowers may be used instead of the tips, or a large cascade of lace, caught here and there with pearl or silver pins, may take the place of the plume, though the latter has a softening effect possessed by no other garniture.

Ladies' Round Hat.

FIG. 5.—A hat, desirable because of its quietness, is here shown. It is of Manila straw, under-faced with cardinal Surah and simply decorated with an Alsacian bow of cardinal velvet and several short feathers. Such a shape may be worn forward or back, or may have its brim bent up or down to suit the face; and who can deny that these are advantages? Certainly not the woman with a desire to frequently change the shape.

Ladies' Poke Bonnet.

FIG. 6.—Deep claret velvet is used for covering a poke shape like the one illustrated. It is smoothly applied, the outer and inner covering of the brim being just alike. Three ostrich tips of the same shade are poised at the back, so that they fall over the edge and touch the hair. An Alsacian bow of faille ribbon is placed near the front and extends far over on each side. The strings are of the same ribbon and are tied in a large bow under the chin. If one wished, the under-facing could be of some shade, either in silk or velvet, that is specially becoming to the wearer. Or, if a contrast were thought desirable, shrimp pink could be used with claret, cadet with navy, cardinal with cadet, *ecru* with brown, or white with black.

Ladies' Bonnet.

FIG. 7.—A bonnet that is almost a hat, for the dividing line is hard to discern, is here shown in Manila straw. The under-facing is of seal brown velvet, and the scarf, so gracefully arranged across the back, is of the same material. A fancy ring of dull gold catches the scarf just in the center. Full feathers of shaded cream and brown are almost in front, being caught down so that they do not extend far over the brim. Strings of *ecru* lace, or of brown or cream ribbon, may be added, if a more sedate look be considered desirable.

A Word to Subscribers.

Prompt renewal of subscriptions is the strongest support that newspaper publishers feel. It is, so to speak, "the most sustaining part" of a newspaper diet. We have much to be pleased at in connection with our large list of subscribers, yet there are some whom we trust can favor us more promptly in forwarding the renewal of their subscriptions, and we feel the necessity of soliciting all who like our paper, and are pleased to support us in our efforts to produce a worthy and progressive journal, to do the best possible in forwarding their subscriptions promptly and aid us in securing new ones.

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct, or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on our address H. F. D. at this office.

IMPORTANT additions are being continually made in Woodward's Gardens. The groutie wall-d with aquariae constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

Extra Type For Sale.

We offer Scotch brevier type, (same as used on this paper) for sale in any quantity from 100 lbs. to 1,000 lbs., for 25 cents per lb., if ordered soon. Also, several hundred pounds of nonpareil at favorable rates. The type is in good condition and is of a very durable character.

DEWEY & CO.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

Would Have Been in the Grave.

A lady in Tecumseh, Neb., writing to Drs. STARKER & PALEN, says: "I wish to thank you for receiving so much benefit from your Compound Oxygen. Only for this I would be in the grave. I could not sleep; had no rest; was really bordering on insanity. I was alarmed. Now I sit up until 10 o'clock, and enjoy music and company. My daughter is recovering her voice. Will continue Oxygen. May Heaven's choicest blessings rest upon you and yours." Treatise on Compound Oxygen, containing large reports of cases and full information, sent free. Address, Drs. STARKER & PALEN, 1109 and 1111 Girard street, Philadelphia.

All orders for the Compound Oxygen Home Treatment directed to H. E. Matthews, 606 Montgomery Street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

THE YOSEMITE is strictly first-class and the leading hotel of Stockton. Prices moderate. JAS. CAVES, Proprietor.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in



Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
637 Sansome Street, S. F.

R. B. HALL & CO.'S
Pacific Detective Bureau,

622 Market St., San Francisco,
Opp. Palace Hotel

RESIDENCE—161 Seventh Street Oakland.

This firm will promptly attend to all detective business entrusted to its care, by corporations or individuals. We also look on ourselves in law cases, serve summons, subpoenas, and legal papers for attorneys.

We furnish private watchman for Banks, R. Roads, Corporations, Companies and Merchants. Will arrest, convey and deliver fugitives from Justice, on requisition from any State in the Union. None but discreet and experienced men employed.

REFERENCES: Hon. T. G. Phelps, San Francisco; A. P. Hotelling & Co., 431 Jackson St., S. F.; Fox & Kellogg, Attorneys, 528 California St., S. F.; Hon. R. C. Gaskill, Agt. Wells, Fargo & Co., Oakland.

A 1 Communications, Oral or Written, are Strictly Confidential.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE



20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Poles.

For further particulars address as above.

JAMES HANNAY'S NURSERIES.
East San Jose, Cal.

For sale, a large and general assortment of healthy well grown Fruit Trees, comprising Apple, Pear, Peach, Plum, Prune, Apricot, Cherry, etc., of all the leading varieties now mostly in demand. Address,

JAMES HANNAY, San Jose, Cal.

1838-1883. POMONA NURSERY.



5,000 KIEFFER'S HYBRID PEARS to be orchard, 5000 in nursery propagated exclusively from healthy STANDARDS. NO 'UDS' OR SCIONS taken from DWARFS. APRICOTS in dormant buds, by mail or express. Catalogue free. WM. PARRY, Parry P. O., N. J.

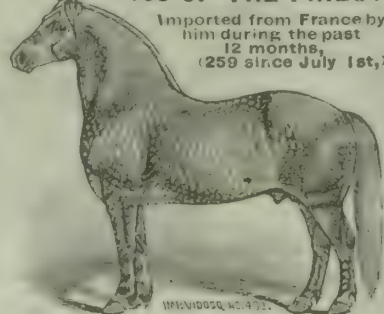
NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by
M. W. DUNHAM,
OAKLAWN FARM,
Wayne, Du Page County, Illinois.
35 miles west of Chicago, on C. & N. W. R'y.

468 OF THE FINEST



Imported from France by
him during the past
12 months,
(259 since July 1st.)

Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.



A Rapid and Permanent cure for

DYSPEPSIA, INDIGESTION,

Or Rising of Food After Eating.

LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.

N. B.—Correspondence solicited from Wholesale Druggists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,

Sole Proprietors and Manufacturers,

295 Cutter Street, CINCINNATI, OHIO.

PRINTERS, AUTHORS, INVENTORS,

PATENTEES, BUILDERS, MANUFACTURERS,

MACHINISTS, MERCHANTS, and

other trades-people can have satisfac-

tory Engravings and Electrotypes made

at moderate prices by the S. F. EN-

GRAVING CO., No. 405 KEARNY ST.

Send photographs, sketches, drawings,

models or samples for estimates. Map

and Woodcut Engravings enlarged or

reduced by the aid of photography, at

less than one-half the cost of the origi-

nals and in short time. Photo-relief,

Zincograph and other improved meth-

ods employed.

DEWEY & CO'S

SCIENTIFIC PRESS

PATENT AGENCY

No. 252 Market St. (Elevator, 12 Front), S. F.

W. T. ADEL,

City Carriage Manufactory,

No. 263 First Street (opp. N. Y. Exchange),
SAN JOSE.

Family Carriages, Rockaways, Top and
Open Buggies,

Light and Heavy Express Wagons,

Made of the best-selected and thoroughly seasoned tim-

ber and warranted.
Driving Carts, with open seats and spring shafts, the
only cart in the market that takes away the jolt. Send
for circular and price list.

Jobbing, Carriage Trimming, Painting and
Blacksmithing Neatly Done.

Prices as Low as the Lowest.

Orders Will Receive Prompt Attention

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE,
Dried Fruit, Live Stock, Etc., solicited, and liberal ad-
vances made on the same.

Careful and prompt attention paid to orders for the
purchasing of Grain and Wool Sacks, Wagons, Agricul-
tural Implements, Provisions, Merchandise and Supplies
of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR
SALE ON COMMISSION. Insurance effected and liberal ad-
vances made at lowest rates. Farmers may rely on
their grain being closely and carefully weighed, and on
having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ell-
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra-
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders. P. O. Box 1940

JAS. P. HULME,

Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce,
Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs,
Butter and Honey

Brick Stores: No. 402 Davis Street, and
120 Washington St., S. F.

Prompt Returns. Advance Liberally on Consignments

SEND YOUR CONSIGNMENTS TO



"THE OLDEST HOUSE"

PACIFIC RURAL PRESS.

A first-class 20-page Illustrated Agricultural Weekly, filled
with fresh valuable and interesting reading. Every
farmer and ruralist should take it. It is im-
mensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

The Annual Growth of Trees.

The concentric markings found by cross section of the stems have long been relied upon to indicate the age of the plant, and the prevailing belief has been that the rings mark year growths. It appears that an observer in *Nature*, one of the foremost scientific publications, gives observations which would indicate that in some cases, at least, the rings do not represent year periods. During a visit to the ruins of Palenque, Mexico, in 1859, M. Charney caused all the trees that hid the facade of one of the pyramids of the palace to be cut down. On a second visit in 1880 he cut the trees that had grown since 1859, and he remarked that all of them had a number of concentric circles greatly superior to their age. The oldest could only have been 22 years of age, but on a section of one of them he found 250 circles. The tree was 60 to 65 centres in diameter. A shrub 18 months old at most had 18 concentric circles. M. Charney found the case repeated in every species and in trees of all sizes. He concluded that in a hot and moist climate, where nature is never at rest, it may produce, not one circle a year, as with us, but one a month. The age of a monument has often been calculated from that of the trees that have grown on its ruins. For Palenque, M. Laramaz calculated 1,700 years, having counted 1,700 rings in a tree. M. Charney's observation requires the number to be cut down to 150 or 200 years, making a considerable difference, 1,500 years.

Prof. Bachelart asks whether M. Charney took account of certain colored rings which some tropical trees present in cross section, and which are to be distinguished from the annual circles. We have not yet seen any reply from M. Charney removing the doubt as to whether he made a correct discrimination between the colored rings and the annual rings, and therefore the subject is given as an interesting but still open question.

The Escutcheon Theory.

Judging the dairy value of cattle by the escutcheon or band of fine upward-growing hair upon the back of the under and extending upward between the thighs, has not yet received universal approval, although all are prone to grant the style of the escutcheon as significant to a greater or less degree. The test was announced first by M. Guenon about 30 years ago. Those who recollect its first appearance are aware of the interest it aroused. The few agricultural journals of the time described the "system," and there was much discussion and not a little ridicule. The original work was translated, and one or more other works were written to illustrate "Guenon's system." In the course of 30 years a "system," if it had no foundation of fact, would be entirely forgotten. This was not the case with Guenon's; during all these years there has been a regular if not large sale of the translation of the original work, showing that if the system were not generally adopted, there were many persons who wished to inform themselves as to its merits, and so far as this country is concerned, there are probably more farmers and cattle breeders who make use of Guenon's marks in judging of animals than there were when his method had the attractiveness of novelty. Whether one wishes to adopt Guenon's system, or to show that it has no value, it is proper that he should know just what it is as proposed by the author himself, and that he should study it as modified by Guenon after many years of practice. Orange Judd Co. of New York have just published a translation of the last work issued by the author before his death, which embodies Guenon's very latest views, and such changes in and additions to the early treatise as his experience taught him were needed. The many illustrations being reproduced by photography, the volume is the most complete presentation of Guenon's treatise to be found in the language.

GREAT BRITAIN produced in 1881 55,128 tons of ore, from which 3,000 tons of copper were produced. This was at the rate of one ton of pure metal for every 14½ tons of ore. In 1880 they mined 52,556, and got a return of 3,875 tons of fine copper. This is at the rate of 12½ tons of ore to one of fine copper. The great bulk of this ore comes from Cornwall and Devonshire.

A CINCINNATI milkman was arrested the other day for biting off the tips of his balky horse's ears.

PACIFIC COAST LAND BUREAU.

President, Wendell Easton; Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank, Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, O. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock-raising or dairying down to fruit culture. On the coast of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale.—The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands at from \$5 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$5.50 an acre; 840 acres fine grazing land, 7 miles from San Luis Obispo, \$6 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

The Præparturiens Discussion.

Mr. Felix Gillet concludes his interesting essay on the Præparturiens walnut on another page. The essay may be fairly commended as an effort to secure the fullest attainable information on the subject, and it is a credit to California enterprise that even in France, the home of the fruit, there has never appeared so comprehensive and careful a review of the nut. Mr. Gillet's essay is an important contribution to horticultural literature, and is worth all the labor and expense he has borne in its preparation. The discussion of the walnut is also a model in another way, and that is in the good temper which has prevailed between the contending parties. If our friends will hold their tempers and go to work earnestly and fairly to maintain their positions on debatable questions, they will always find the *RURAL PRESS* glad to give them space for the publication of their researches. But when controversies fall at once into insinuations, impugning of motives and personalities, the writers may then expect to find the editor's pen falling through the manuscript from end to end. Life is too short for wordy conflicts on personal matters. If subjects cannot be discussed on their merits, we have no room for them.

There is another point which we may mention, and that is that a fair discussion of a new fruit is always an important agent in its introduction to public attention, and is therefore a great advantage to a meritorious article as it is also fatal to a worthless one. For this reason the public may always take an active interest in a carefully prepared discussion, and thank the writers who uphold either side.

SEED-PLANTING AND AGRICULTURAL IMPLEMENTS.—The farmers and gardeners throughout the State have now the promise of a bounteous season. Never before, perhaps, in the history of California have the bounteous rains of heaven placed in their power to plow and plant their crops at so early a day. The cultivation of the soil has never in this State had so auspicious a beginning. With more than average returns from the labors of last year, they can now look forward with the greatest confidence to well filled purses at the close of another harvest. And now is the time to make ready for the season's work. All needed farm implements and seeds should be secured at once. Early plowing and deep, with early planting and good seed and careful cultivation, can scarcely fail to reward the farmer with an abundant crop for the coming year. By reference to our advertising columns, our readers will learn that the principal seedmen and leading agricultural implement dealers have fully prepared themselves with full stocks in their respective lines, in anticipation of an early and large demand. No time should be lost by our farmers in fitting out themselves and their farms with everything needful for active and successful work.

HORTICULTURAL COMMISSIONER.—Mr. Chas. H. Shinn has resigned his position as a member of the Board of State Horticultural Commissioners, in view of a prolonged absence from the State for travel and study abroad. The vacancy thus created has been filled by the appointment of Mr. Edward J. Wickson, of Berkeley, Secretary of the State Horticultural Society, and Editor of the *PACIFIC RURAL PRESS*.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252, Market St., S. F.

FOR THE WEEK ENDING OCTOBER 10, 1882.

- 265,655.—ROTARY HARROW—W. T. Browne, Stockton, Cal.
265,769.—FEEDER FOR THRASHERS—M. C. Dillman, Orland, Cal.
265,671.—AIR BRAKE FOR CABLE R. R. CARS—W. W. Hanscom, S. F.
265,681.—PIPE JOINT PACKING—O. M. Loveridge, Westerville, Cal.
265,629.—WATER ELEVATOR—John Patten, S. F.
265,630.—APPARATUS FOR RAISING WATER—John Patten, S. F.
265,700.—FLOWER HOLDER AND STAND—Jos. Perkins, S. F.
265,718.—CODLIN MOTH TRAP AND TREE PROTECTOR—Geo. W. Thissell, Winters, Cal.
265,938.—CAR COUPLING—Geo. W. Bedbury, Portland, Ogn.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also,

TREES IN THE DORMANT BUD.

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

THE NURSERY OF

C. M. SILVA & SON

Is the Pacific Coast

HEADQUARTERS FOR THE "HANSELL"

(New Extra Early Red) Raspberry, James Vick, Manchester and Finch's Prolific,

And other Valuable New Strawberries, and all other good small fruits, new and old. A large stock of fine

PLUM AND PRUNE TREES.

First Quality of Everything, Free from Scale.

Will issue New Illustrated Catalogue of Small Fruits about November 15th. Send for it. Address,

C. M. SILVA & SON,

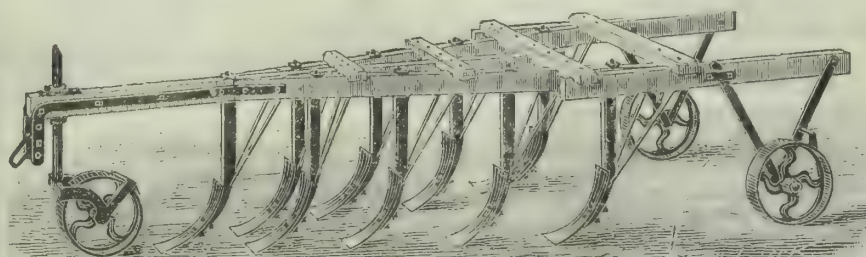
Newcastle,

CALIFORNIA.

THE SAN LEANDRO GANG PLOW.



Can give these Plows, with Steel Bottoms, of Deere & Co.'s or Garden City Make.



E. Soule's Improved Curved Chisel Cultivator.

Made with Wrought Iron Standard and Adjustable Wheels, and Heavy Wood Frames, heavily ironed with Steel Reversible Teeth; also, the Stockton Cultivator, with Flat Teeth. 7 teeth, 4-horse, \$75; 9 teeth, 6-horse, \$85; 11 teeth, 8-horse, \$100; 13 teeth, 10 horse, \$110.

FOR SALE BY

DAVID N. HAWLEY,

General Agent,

117 AND 119 MARKET STREET, - SAN FRANCISCO, CAL.

Lands for Sale and to Let.

Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Market," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "The California Real Estate Exchange and Market," Santa Cruz, Cal.

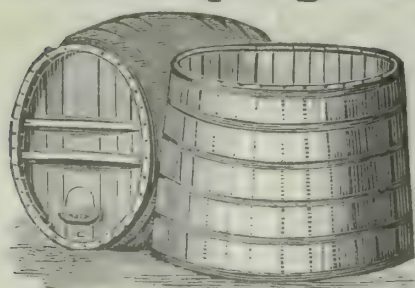
Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

DO Not Fail to send for our FALL Price-List for 1882.

Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address
MONTGOMERY WARD & CO.,
227 and 229 Wabash Avenue, Chicago, Ill.

CALIFORNIA
Wine Cooperage Co.

FULDA BROS., Proprietors.
30 to 40 Spear St., S. F.
SPECIALTIES OF CASKS, TANKS, ETC.
Saw, Mill and Water Tanks a Specialty

YOSEMITE HOUSE.
MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE
JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains free of charge.

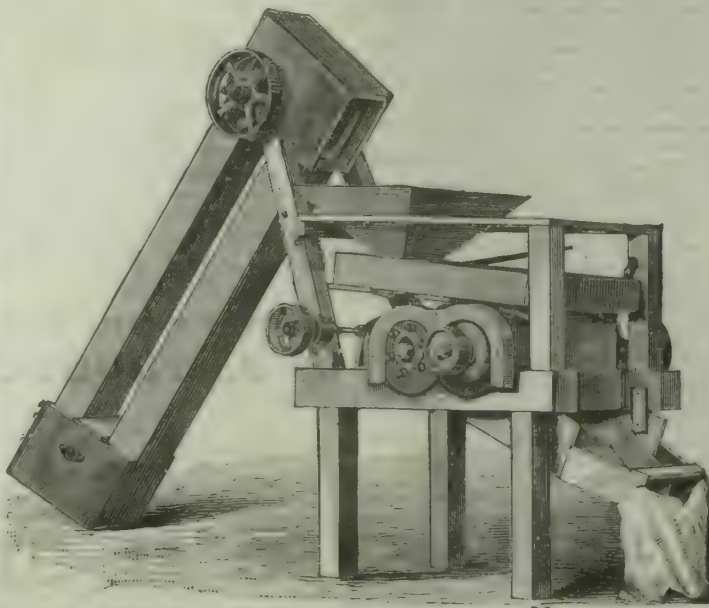
Only "PEBBLE" Establishment
1863 1882
Muller's Optical Depot,
135 Montgomery St., near Bush.
SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.
Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.

STILL AT THE HEAD!



Has again Received Premium at State Fair.

This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 50 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.

W. R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

Lift and Force Pumps,

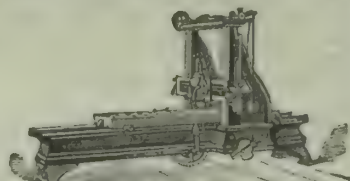
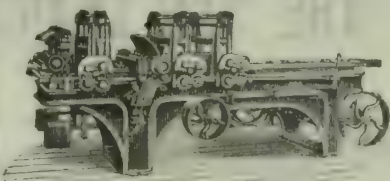
Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

THE DAVIS
IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application

D. C. MOORE, M. D.,

MRS. E. D. MOORE, M. D.,

Trail Hygienic Medical and Surgical Sanitarium
Have returned from a tour in the States, and resumed Chronic and general family practice, including diseases, at 129 Market St. 2nd Floor. Consumption, Bright Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion, and all Chronic and desperate cases a specialty.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento
ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to COOKE & GREGORY

Mission Rock Dock and Grain Warehouse,
San Francisco, Cal.

\$5,000 tons capacity. Storage at lowest rate

ORAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors.

Office—318 California Street, Room 3.

Educational.

STOCKTON
BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL

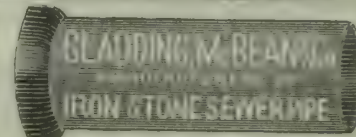
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address
P. O. Box No. 15. F. R. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address, E. C. Atkinson, Sacramento, Cal.

CALIFORNIA
COMMERCIAL COLLEGE

417 Kearny Street, San Francisco.
G. N. ANDREWS, President. G. B. BARNARD, Business Manager.
Send for Circulars.



For the Drainage or Irrigation of Lands
TERRA COTTA

CHIMNEY PIPE & TOPS

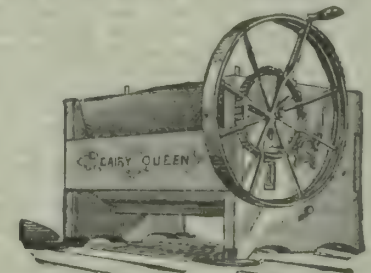
VASES, FLOWERS, FIRE BRICKS, ETC.
MANUFACTURED AT LINCOLN, CAL.
SEND FOR ILLUSTRATED CATALOGUE

1310 Market Street, SAN FRANCISCO

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 3, 1880.
RECEIVED TWO DIPLOMAS



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,
Jamesville, Cal.,
Or Jas. L. Haley, Jameville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET, STOCKTON

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations

A. & J. HAHN, Proprietors.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. With a set of stockings with H.E.E.L. and TOE complete, includes. It will also knit a great variety of works for which there is always a market. Send for circular and terms to the Twombly Knitting Machine Co., 163 Fremont Street, Boston, Mass.

GILES H. GRAY. JAMES HAYDEN.

GRAY & HAYDEN,

Attorneys and Counsellors-at-Law,

530 California St. SAN FRANCISCO

S. Ios. Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAGE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

R. J. MCKELLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

B. MENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also, cross-bred Merino and Shropshire.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal. Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$2.00. Poultry and C. L. for sale.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. P. R. Game Bantams. Eggs and fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb. box, 40c; 3 lbs., \$1; 10 lbs., \$2.50; 25 lbs., \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown and White Leghorns, Plymouth Rocks, Pekin Ducks.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

B. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. O. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

Moore's Prepared



The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors, STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

TOWER'S CELEBRATED OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting. Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

BAGS. TENTS. HOSE, TWINES.

HARNESS, SADDLES,

LEATHER & SADDLERY

Goods.

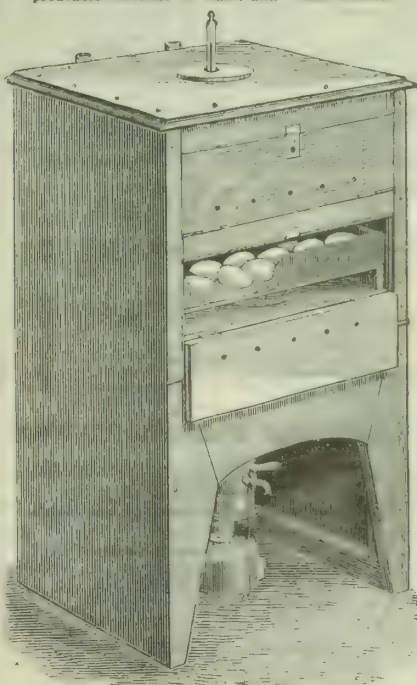
WHOLESALE AND RETAIL.

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc.

W. DAVIS, 410 Market Street.

GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.

LANGSHANS.



My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR, 1416 Folsom St., S. F.

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FAULKNER, BELL & CO.**, San Francisco



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, and for destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Men's Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERTFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. ORESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland TURKEYS. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES, Los Angeles, Cal.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - - San Mateo Co.

JOHN BERGSTROM,

ORGAN BUILDER,

29th. and Mission Sts.

RLISTER'S

PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies' equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer, Chico, Butte County, CALIFORNIA

JOSEPH F. HILL,

MANUFACTURER OF FIRST-CLASS

Buggies, Farm & Freight Wagons,

OF ALL DESCRIPTIONS.

Cor. Thirteenth and J Sts., Sacramento, Cal.

Repairing promptly attended to.

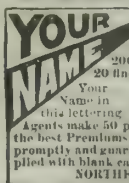


Garmore's Artificial

Ear Drum.

As invented and worn by him perfectly restoring the hearing. Entirely dead for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful Artificial Ear Drum manufactured.

JOHN GARMORE, 511th & Race Sts., Cincinnati, O.



YOUR NAME

On 50 large-size CARDS. Remembrance, Sentiment, Handkerchief, etc. No. 2 alike, 10c, 11 pks. \$1. Please send 20c, for Album of 100 samples and list of 200 best Premiums and lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872 in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

HOG RINGING A FAILURE!

OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually.

Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.

" " "Tendon Cutter," \$5.00 each.

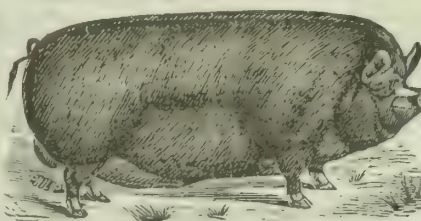
Sold by the trade generally, or address

G. G. WICKSON,

General Pacific Coast Agent,

No. 319 Market Street, San Francisco, Cal.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

NAPA VALLEY POULTRY YARDS.

I have for sale all the leading varieties of Pure-bred Poultry: Single birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn chickens, and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list.

R. G. HEAD,

Napa, Cal.

LAUREL RANCH.

Thoroughbred

Spanish Merino

SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP

THE BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.



S. F. MARKET REPORT.

Note—Our quotations are for Wednesday, not Saturday, the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Oct. 25, 1882.

Grain is hardening and the prospect of trade is encouraging. Futures are held quite in advance of spot rates, which shows the speculative idea of values. The foreign market is as follows:

LIVERPOOL, Oct. 24.—The spot market is quiet and steady, at 9s 2d @ 5d. Cargoes are quiet, at 4s for just shipped, nearly due and off coast.

The Foreign Review.

LONDON, Oct. 24.—The Mark Lane Express, in its review of the British Grain trade for the past week, says: The wet weather stopped sowing operations and hindered the threshing and marketing of Wheat. Samples which have come to hand are in bad condition. Prices in the London market are unchanged. Provincial markets have improved a little for quality on account of the inquiry for seed Wheat. Foreign Wheat is unimproved and the supplies moderate. Altogether, the trade is dull, and, if anything, weaker. The off-coast market is inanimate, except for No. 1 Red Winter Wheat, which advanced 2s. Trade in forward cargoes is steady at 1s advance. The floating bulk continues to decrease, because of the steamship in American and Atlantic shipments. This does not, however, affect the market. Flour is quiet and unchanged. Foreign Flour is in restricted supply and the trade slow. Prices are upheld. Barley, steady. Foreign Barley, dull and rather weaker. Oats, unchanged. Imports of foreign Oats are moderate and prices a shilling better. Maize has improved, and there has been a further advance of 6d. Buyers are scarce on account of the high rates. Sales of English Wheat during the past week amount to 44,736 quarters, at 39s 7d per quarter, against 54,380 quarters, at 47s 1d for the corresponding period of last year.

Freights and Charters.

NEW YORK, Oct. 21.—California Wool is dull, but there is some inquiry for California Spring at lower prices, with sales of 39,000 lbs at 26¢ @ 30¢, and 12,000 lbs Fall at 14¢.

The freight market has hardened since the last weekly review, and for iron vessels to the United Kingdom 22 7/8 is now the rate. The demand for tonnage, however, is not as brisk as it has been. Charters reported during the week number 8 vessels, of a register of 10,387, or a carrying capacity of 15,506 short tons, or 310,100 cents. The chartered Wheat fleet in port has now a register of 62,878, or an export capacity of 94,319 short tons, or 1,886,340 cts, against 104,317 at the same time last year. The German bark Flouga, 970 tons, is still at San Diego, chartered. The disengaged tonnage in port has now been reduced to 56,526 register, or an export capacity of 84,789 short tons, or 1,695,780 cts, against 26,125 tons at the same time last year. There is also a disengaged tonnage of 7,585 at Wilmington. Tonnage now on the way to this port has a register of 245,057, against 329,175 at the same time in 1881, and 201,409 in 1880.

Eastern Wool Markets.

BOSTON, Oct. 24.—The demand for Wool has been moderate, but the prices have shown no change. Fine Wool is still held with considerable firmness, and sales of Ohio and Pennsylvania X have been made at 41¢ @ 42¢; XX, 42¢ @ 43¢; XX, and above, 44¢ @ 44½¢; Michigan, fleeces, 39¢ @ 40¢; business has been light. No. 1 fleeces, 43¢ @ 44¢; combing and delaine fleeces are in steady demand at 44¢ @ 46¢ for the Michigan and Ohio delaine, 40¢ @ 41¢ for fine and No. 1 combing. Unwashed fleeces are steady and continue in demand at 25¢ @ 30¢ for fine and medium, including choice selections, and 18¢ @ 24¢ for coarse and low. California Wool is dull and sales limited, as generally held. Prices are above the views of buyers. Pulled Wool is in fair demand at 45¢ @ 50¢ for choice Eastern and Main super, and 26¢ @ 42¢ for common and good. Foreign Wool has been quiet and the business unimportant.

Western Grain and Provision Markets.

NEW YORK, Oct. 21.—Wheat has ruled comparatively steady, while Corn and Oats have advanced. Flour is irregular. Lard and the other Hog products are quieter.

New York Dried Fruit Markets.

NEW YORK, Oct. 21.—Raisins are lower, and the other foreign Dried Fruits are steady.

New York Hop Market.

NEW YORK, Oct. 21.—Hops are active and prices still tend upward.

NEW YORK, Oct. 24.—The markets generally are quiet, except in a few instances, notably Hops, which are active and have sold as high as 80¢.

BAGS—Bugs are quiet and unchanged.

BARLEY—Barley for export is more active. Rates are a fraction lower than last week, but the market is quiet and steady. We note sales, 200 tons No. 1 Feed, November, \$1.34; 100, December, \$1.35; 100 No. 2 Feed, November, \$1.29; 100 No. 1 Feed, November, \$1.34, and 100, December, \$1.36.

BEANS—Beans have been arriving very freely, and a drop in rates has occurred. The general decline is about 25¢ per cwt. Some lots are considerably damaged by water and sell below the prices for good lots, which may be found in our table.

CORN—White Corn is going lower this week. Large Yellow holds rates well where lots are strictly fine.

DAIRY PRODUCE—Butter is weakening considerably, the fancies dropping to 50¢ per lb, and good roll going as low as 35¢ in some cases. Cheese is firm. Oleomargarine is still quoted high, with the effort to give the stuff some commercial standing we presume.

EGGS—Eggs are a little weaker, although prices are not changed. It takes fine lots to bring full rates.

FEED—Hay is advancing, the improvement being about \$1 per ton, as follows: Wheat, \$1.00 @ \$1.17; Wild Oat, \$1.50 @ \$1.60; Stable, \$1.00 @ \$1.10; Stock, \$1.00 @ \$1.10; Alfalfa, \$1.30 @ \$1.40 per ton.

FRESH MEAT—Prices are firm. Beef and Pork are in measured supply, while Mutton is abundant.

FRUIT—Grapes are rather slow of sale. Tahiti Oranges and Mexican Limes are lower this week.

HOPS—Hops are strong and have advanced 2½¢ per lb for all kinds. New York reports elsewhere mention 80¢ as the top rate there.

OATS—Oats are in good demand and prices advanced considerably. The rains have interfered with the northern export harvesting.

ONIONS—Onions are in excess and sell at buyers' figures, the range being 25¢ @ 50¢ per cwt.

PROVISIONS—Cured Meats are active and firm; an especial advance is noted in Eastern Hams.

POULTRY AND GAME—Fowls and Ducks and Game Ducks are considerably cheaper this week, as our list shows. Turkeys have also advanced 1¢ per lb.

POTATOES—Nearly all kinds are lower, owing to large arrivals.

VEGETABLES—Tomatoes are becoming scarce and higher. Cucumbers and Peppers are doing better, also.

WHEAT—Wheat is firm and about 1¢ per cwt higher than last week. Shipping is proceeding moderately, purchases being made at \$1.66 @ \$1.66 usually.

WOOL—Large shipments of Wool are being made by ship, which will relieve this market. Trade is quiet and quotations about the same.

Domestic Produce.

WHOLESALE. WEDNESDAY M., Oct. 25, 1882.

BEANS & PEAS.	NEW, Ctl.	Old, cts.
Bayo, cts.	3 75 @ 4 00	3 00 @ 3 25
Butter, cts.	3 25 @ 3 50	3 00 @ 3 25
Castor, cts.	3 50 @ 4 00	3 25 @ 3 50
Peas, cts.	2 50 @ 3 00	2 25 @ 2 50
Pink, cts.	3 00 @ 3 25	2 75 @ 3 00
Large White, cts.	3 50 @ 4 00	3 25 @ 3 50
Small White, cts.	3 00 @ 3 25	2 75 @ 3 00
Lima, cts.	4 00 @ 4 25	3 75 @ 4 00
Field Peas, bly eye, cts.	2 50 @ 3 00	2 25 @ 2 50
do, green, cts.	2 50 @ 3 00	2 25 @ 2 50

BROOM CORN. Southern, cts. 3 @ 3 1/2. Northern, cts. 4 @ 6.

CHICORY. California, cts. 4 @ 4 1/2. German, cts. 5 @ 7.

DAIRY PRODUCE, ETC. Butter, cts. 30 @ 40. Fancy Brands, cts. 40 @ 45. Pickle Roll, cts. 27 1/2 @ 29. Firkin, new, cts. 29 @ 31. Eastern, cts. 20 @ 25. New York, cts. 20 @ 25.

NEW YORK MARKET. Roll, cts. 27 1/2 @ 29. Firkins, cts. 25 @ 27 1/2.

CHEESE. Cheese, Cal., cts. 13 1/2 @ 14. Oreg., cts. 13 @ 14. Cal. Fresh, doz., cts. 40 @ 45. Ducks, cts. 40 @ 45. Oreg., cts. 25 @ 30. Eastern, by exp's, cts. 25 @ 30. Pickled here, cts. 27 1/2 @ 30.

FEED. Bran, ton, cts. 17 @ 18. Corn Meal, cts. 13 @ 14. Hay, cts. 10 @ 11. Middlings, cts. 23 @ 24. Oil Cake Meal, cts. 23 @ 24. Straw, bale, cts. 70 @ 75.

EXTRA CITY MILLS. 25 @ 25.50. do, Country Mills, 45 @ 45.50. do, Walla Walla, 45 @ 45.50. do, Superior, 45 @ 45.50.

FRESH MEAT. Beef, 1st quality, lb., 7 @ 8. Second, lb., 6 @ 7. Third, lb., 5 @ 6. Mutton, lb., 4 @ 5. Spring Lamb, lb., 6 @ 7. Pork, unadressed, lb., 6 @ 7. Dressed, lb., 10 @ 11. Veal, lb., 7 @ 8. Milk Calves, lb., 9 @ 10.

GRAIN, ETC. Barley, feed, cts. 1 27 1/2 @ 33. do, Brewing, cts. 1 35 @ 41. Chevalier, cts. 1 35 @ 41. Buckwheat, cts. 1 35 @ 41. Corn, White, cts. 1 62 1/2 @ 65. Yellow, cts. 1 62 1/2 @ 65. Small Round, cts. 1 62 1/2 @ 65. Oats, cts. 1 60 @ 62 1/2. Milling, cts. 1 70 @ 85. Rye, cts. 1 75 @ 80. Wheat, No. 1, cts. 1 65 @ 68. do, No. 2, cts. 1 50 @ 53. do, No. 3, cts. 1 50 @ 53. Choice Milling, cts. 1 67 1/2 @ 68 1/2.

HIDES, dry, cts. 20 @ 22. Wet salted, cts. 9 @ 11.

HONEY, ETC. Beeswax, lb., 23 @ 25. Honey in comb, cts. 12 @ 13. Extracted, light, cts. 10 @ 11. do, dark, cts. 5 @ 9.

HOPS. Oregon, cts. 62 1/2 @ 65. California, cts. 62 1/2 @ 65. Wash. Ter., cts. 62 1/2 @ 65. Old Hops, cts. 50 @ 55.

NUTS, Jobbing. Walnuts, Cal., cts. 10 @ 11. do, Chile, cts. 7 @ 8. Almonds, hdsbl, cts. 15 @ 17. Soft shell, cts. 10 @ 12. Brazil, cts. 10 @ 12. Pecans, cts. 14 @ 15. Peanuts, cts. 7 @ 8. Filberts, cts. 14 @ 15.

ONIONS. Red, cts. 25 @ 30. Silverskin, cts. 25 @ 30.

POTATOES. (WHOLESALE.) WEDNESDAY M., Oct. 25, 1882.

FRUIT MARKET. Apples, bx., cts. 35 @ 1 25. do, East, cts. 40 @ 50. Apricots, bx., cts. 50 @ 75. Bananas, bnch., cts. 2 50 @ 4 00. Blackberries, cts. 10 @ 15. Cantaloupes, crt., cts. 50 @ 75. Casaba, each, cts. 12 @ 15. Cherry Plum, bx., cts. 25 @ 30. Cocoanuts, 100, cts. 60 @ 70. Crabapples, bx., cts. 50 @ 60. Cranberries, bbl., cts. 15 @ 20. Currants, chst., cts. 4 00 @ 5 00. Figs, box, cts. 75 @ 1 00. Gooseberries, cts. 4 @ 8. Grapes, bx., cts. 40 @ 50. do, Rose Peru, cts. 50 @ 60. do, Muscat, cts. 50 @ 60. do, B. Hamb's, cts. 50 @ 60. do, Tokay, cts. 50 @ 60. do, Isabella, cts. 70 @ 75. Limes, Mex., cts. 4 00 @ 6 00. do, Cal. box, cts. 75 @ 80. Lemons, Cal. box, cts. 80 @ 90. Sicily, box, cts. 80 @ 90. Australian, cts. 80 @ 90. Nectarines, cts. 80 @ 90. Oranges, Cal. box, cts. 50 @ 60. do, Tahiti M, cts. 35 @ 40. do, Mexican, 150 @ 170. do, Loroto, cts. 10 @ 15. Peaches, box, cts. 50 @ 1 25. do, Smocks, cts. 50 @ 60. Pears, bak., cts. 65 @ 1 00. do, Bartlett, lb., cts. 1 50 @ 2 00. do, do, bak., lb., cts. 1 50 @ 2 00. Pineapples, doz., cts. 90 @ 1 00. Plums, cts. 40 @ 60. Quinces, bak., cts. 75 @ 1 25. do, box, cts. 75 @ 1 25. Prunes, cts. 60 @ 75. Raspberries, crt., cts. 60 @ 75. Strawberry, chst., cts. 8 00 @ 10 00. Watermelon, 100, cts. 100 @ 120.

DRIED FRUIT. Apples, sliced, lb., cts. 4 @ 6. do, evaporated, cts. 9 @ 11. do, quartered, cts. 5 @ 6.

TAILOU. Crude, lb., cts. 8 @ 9. Refined, lb., cts. 11 @ 12.

WOLLS, ETC. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

BERING, 1882. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

FRUITS AND VEGETABLES. (WHOLESALE.) WEDNESDAY M., Oct. 25, 1882.

FRUIT MARKET. Apples, bx., cts. 35 @ 1 25. do, East, cts. 40 @ 50. Apricots, bx., cts. 50 @ 75. Bananas, bnch., cts. 2 50 @ 4 00. Blackberries, cts. 10 @ 15. Cantaloupes, crt., cts. 50 @ 75. Casaba, each, cts. 12 @ 15. Cherry Plum, bx., cts. 25 @ 30. Cocoanuts, 100, cts. 60 @ 70. Crabapples, bx., cts. 50 @ 60. Cranberries, bbl., cts. 15 @ 20. Currants, chst., cts. 4 00 @ 5 00. Figs, box, cts. 75 @ 1 00. Gooseberries, cts. 4 @ 8. Grapes, bx., cts. 40 @ 50. do, Rose Peru, cts. 50 @ 60. do, Muscat, cts. 50 @ 60. do, B. Hamb's, cts. 50 @ 60. do, Tokay, cts. 50 @ 60. do, Isabella, cts. 70 @ 75. Limes, Mex., cts. 4 00 @ 6 00. do, Cal. box, cts. 75 @ 80. Lemons, Cal. box, cts. 80 @ 90. Sicily, box, cts. 80 @ 90. Australian, cts. 80 @ 90. Nectarines, cts. 80 @ 90. Oranges, Cal. box, cts. 50 @ 60. do, Tahiti M, cts. 35 @ 40. do, Mexican, 150 @ 170. do, Loroto, cts. 10 @ 15. Peaches, box, cts. 50 @ 1 25. do, Smocks, cts. 50 @ 60. Pears, bak., cts. 65 @ 1 00. do, Bartlett, lb., cts. 1 50 @ 2 00. do, do, bak., lb., cts. 1 50 @ 2 00. Pineapples, doz., cts. 90 @ 1 00. Plums, cts. 40 @ 60. Quinces, bak., cts. 75 @ 1 25. do, box, cts. 75 @ 1 25. Prunes, cts. 60 @ 75. Raspberries, crt., cts. 60 @ 75. Strawberry, chst., cts. 8 00 @ 10 00. Watermelon, 100, cts. 100 @ 120.

DRIED FRUIT. Apples, sliced, lb., cts. 4 @ 6. do, evaporated, cts. 9 @ 11. do, quartered, cts. 5 @ 6.

TAILOU. Crude, lb., cts. 8 @ 9. Refined, lb., cts. 11 @ 12.

WOLLS, ETC. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

BERING, 1882. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

FRUITS AND VEGETABLES. (WHOLESALE.) WEDNESDAY M., Oct. 25, 1882.

FRUIT MARKET. Apples, bx., cts. 35 @ 1 25. do, East, cts. 40 @ 50. Apricots, bx., cts. 50 @ 75. Bananas, bnch., cts. 2 50 @ 4 00. Blackberries, cts. 10 @ 15. Cantaloupes, crt., cts. 50 @ 75. Casaba, each, cts. 12 @ 15. Cherry Plum, bx., cts. 25 @ 30. Cocoanuts, 100, cts. 60 @ 70. Crabapples, bx., cts. 50 @ 60. Cranberries, bbl., cts. 15 @ 20. Currants, chst., cts. 4 00 @ 5 00. Figs, box, cts. 75 @ 1 00. Gooseberries, cts. 4 @ 8. Grapes, bx., cts. 40 @ 50. do, Rose Peru, cts. 50 @ 60. do, Muscat, cts. 50 @ 60. do, B. Hamb's, cts. 50 @ 60. do, Tokay, cts. 50 @ 60. do, Isabella, cts. 70 @ 75. Limes, Mex., cts. 4 00 @ 6 00. do, Cal. box, cts. 75 @ 80. Lemons, Cal. box, cts. 80 @ 90. Sicily, box, cts. 80 @ 90. Australian, cts. 80 @ 90. Nectarines, cts. 80 @ 90. Oranges, Cal. box, cts. 50 @ 60. do, Tahiti M, cts. 35 @ 40. do, Mexican, 150 @ 170. do, Loroto, cts. 10 @ 15. Peaches, box, cts. 50 @ 1 25. do, Smocks, cts. 50 @ 60. Pears, bak., cts. 65 @ 1 00. do, Bartlett, lb., cts. 1 50 @ 2 00. do, do, bak., lb., cts. 1 50 @ 2 00. Pineapples, doz., cts. 90 @ 1 00. Plums, cts. 40 @ 60. Quinces, bak., cts. 75 @ 1 25. do, box, cts. 75 @ 1 25. Prunes, cts. 60 @ 75. Raspberries, crt., cts. 60 @ 75. Strawberry, chst., cts. 8 00 @ 10 00. Watermelon, 100, cts. 100 @ 120.

DRIED FRUIT. Apples, sliced, lb., cts. 4 @ 6. do, evaporated, cts. 9 @ 11. do, quartered, cts. 5 @ 6.

TAILOU. Crude, lb., cts. 8 @ 9. Refined, lb., cts. 11 @ 12.

WOLLS, ETC. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

BERING, 1882. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

FRUITS AND VEGETABLES. (WHOLESALE.) WEDNESDAY M., Oct. 25, 1882.

FRUIT MARKET. Apples, bx., cts. 35 @ 1 25. do, East, cts. 40 @ 50. Apricots, bx., cts. 50 @ 75. Bananas, bnch., cts. 2 50 @ 4 00. Blackberries, cts. 10 @ 15. Cantaloupes, crt., cts. 50 @ 75. Casaba, each, cts. 12 @ 15. Cherry Plum, bx., cts. 25 @ 30. Cocoanuts, 100, cts. 60 @ 70. Crabapples, bx., cts. 50 @ 60. Cranberries, bbl., cts. 15 @ 20. Currants, chst., cts. 4 00 @ 5 00. Figs, box, cts. 75 @ 1 00. Gooseberries, cts. 4 @ 8. Grapes, bx., cts. 40 @ 50. do, Rose Peru, cts. 50 @ 60. do, Muscat, cts. 50 @ 60. do, B. Hamb's, cts. 50 @ 60. do, Tokay, cts. 50 @ 60. do, Isabella, cts. 70 @ 75. Limes, Mex., cts. 4 00 @ 6 00. do, Cal. box, cts. 75 @ 80. Lemons, Cal. box, cts. 80 @ 90. Sicily, box, cts. 80 @ 90. Australian, cts. 80 @ 90. Nectarines, cts. 80 @ 90. Oranges, Cal. box, cts. 50 @ 60. do, Tahiti M, cts. 35 @ 40. do, Mexican, 150 @ 170. do, Loroto, cts. 10 @ 15. Peaches, box, cts. 50 @ 1 25. do, Smocks, cts. 50 @ 60. Pears, bak., cts. 65 @ 1 00. do, Bartlett, lb., cts. 1 50 @ 2 00. do, do, bak., lb., cts. 1 50 @ 2 00. Pineapples, doz., cts. 90 @ 1 00. Plums, cts. 40 @ 60. Quinces, bak., cts. 75 @ 1 25. do, box, cts. 75 @ 1 25. Prunes, cts. 60 @ 75. Raspberries, crt., cts. 60 @ 75. Strawberry, chst., cts. 8 00 @ 10 00. Watermelon, 100, cts. 100 @ 120.

DRIED FRUIT. Apples, sliced, lb., cts. 4 @ 6. do, evaporated, cts. 9 @ 11. do, quartered, cts. 5 @ 6.

TAILOU. Crude, lb., cts. 8 @ 9. Refined, lb., cts. 11 @ 12.

WOLLS, ETC. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 25. do, Valley, cts. 23 @ 27. FALL—1882. San Joaquin and Coast, cts. 9 @ 12. San Joaquin and Coast, cts. 12 @ 14. Northern, free, cts. 15 @ 17. Northern defective, cts. 11 @ 15. Northern Lamb, cts. 16 @ 17 1/2. Free Mountain, cts. 11 @ 15.

BERING, 1882. San Joaquin, free, cts. 18 @ 20. do, fair, cts. 18 @ 20. do, dusty, cts. 15 @ 17. Southern Coast, cts. 14 @ 20. Modoc & Siskiyou, cts. 24 @ 25. Humboldt, cts. 26 @ 27. Calaveras & Foot, cts. 22 @ 24. Stanislaus & Tuolumne, cts. 22 @ 24. Sonoma & Mendocino, cts. 25 @ 27. Napa & Sacramento, cts. 23 @ 25. Oregon, eastern, cts. 20 @ 2

HARROWS. } BYRON JACKSON, { HARROWS.

WOODEN HARROWS WITH V-SHAPED SOLID STEEL TEETH.

THE
BEST!

WHY IT IS BEST:

First, Invented, improved and perfected by a practical farmer of large experience, the result of the most patient study and experiment.

Second, The V-shaped tooth presents a sharp edge to the soil, which materially lessens the draft over any other form of tooth.

Third, Every principle of mechanical science declares the V-shape to give greater strength to same weight of metal than any other form.

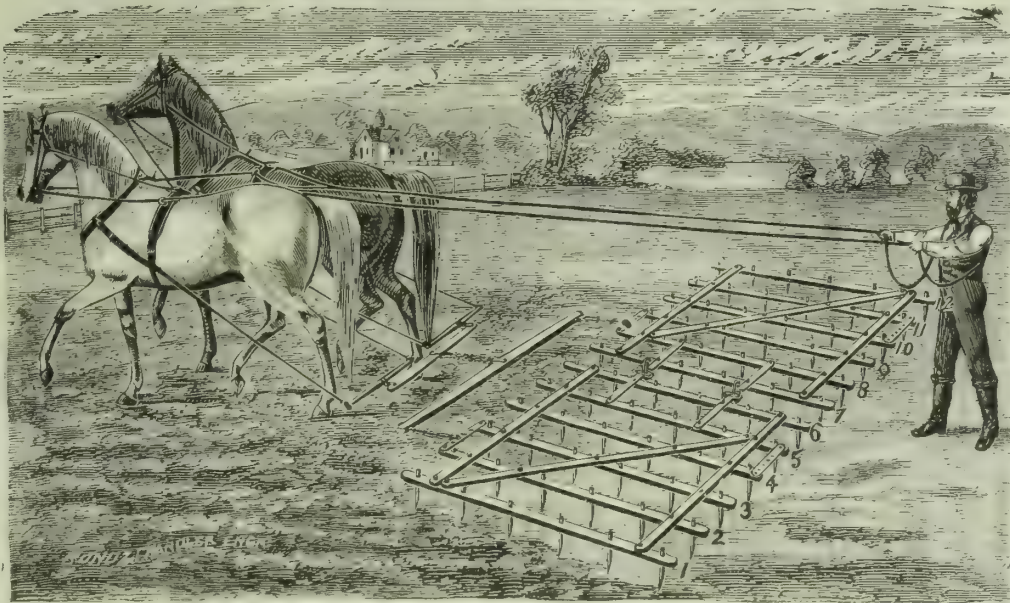
Fourth, Having a V-shaped rib on the back makes it self-fastening, and it is the simplest and most perfect method known to mechanics.

This Superior Harrow is Made in the Following Regular Sizes:

No. 1, 8 bars, 2 sections, 48 teeth, 8 feet cut, weight, 135 lbs.	Price, \$20
No. 2, 10 bars, 2 sections, 60 teeth, 10 feet cut, weight, 160 lbs.	Price, \$25
No. 3, 12 bars, 2 sections, 72 teeth, 12 feet cut, weight, 190 lbs.	Price, \$30
No. 4, 15 bars, 3 sections, 90 teeth, 15 feet cut, weight, 235 lbs.	Price, \$36
No. 5, 18 bars, 3 sections, 108 teeth, 17½ feet cut, weight, 285 lbs.	Price, \$43

Sent on Trial.

THE BEST WOODEN HARROW IN THE WORLD.



THE V-TOOTH HARROW AT WORK.

Solid Steel V-Shaped Tooth Harrow.

CHEAP, STRONG,

LIGHT OF DRAFT.

BEST FORM OF TOOTH,

Greatest Strength.

NEVER GETS LOOSE,

KEEPS SHARP LONGER.

IS THE HARROW OF THE AGE! AND THE LIGHTEST FOR A GIVEN WIDTH.

FOR CLAY, SOD AND ROUGH GROUND IT IS UNEQUALLED! FAST WORK, MOST PERFECT TILLAGE AND STEADY SHAKE!!

BYRON JACKSON,

625 to 621 Sixth Street,
149 to 169 Bluxome Street,

SAN FRANCISCO.

UNIVERSAL FAVORITES. MINSTREL SONGS, OLD AND NEW.

Here, at last, we have nearly all the world-famous, universally admired, sung and whistled melodies, in one book. 100 popular Ballads and Plantation Songs, with piano accompaniment. This number includes "Old Folks at Home," "Old Kentucky Home," "Zip Coon," "Nelly Bly," "Camptown Races," "Golden Slippers," "Lily Dale," "Twinkling Stars," "By the Bright Light," and there are more than 90 others.

\$2 plain. \$2.50 cloth. \$3 gilt.

How to PRACTICE, by A. M. Pupin, is a capital little guide book for teachers and scholars, and such as every practical teacher will like to have. Mailed for 50 cents.

The Musical Favorite. This and the MINSTREL SONGS are the latest additions to Ditson's "Home Musical Library," have more than 200 pages each, full sheet music size, are handsomely bound, and give a great deal of music for a moderate price.

THE MUSICAL FAVORITE contains about 50 pieces of an average length of 3 to 4 pages each, of medium difficulty, and by the most popular composers, as Walteufel, Gottschalk, Blake, Wilson, Schumann, Aubert, Lamothe, etc., in all 33 composers.

\$2 plain. \$2.50 cloth. \$3 gilt.

OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.

SANTA CLARA NURSERIES, San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurestinus.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1½ "
Replupesti orate.....	1½ "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Monterey Cypress.....	2 to 3 "
Balsam Fir.....	2 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of Miscellaneous Fruit Trees, Small Fruits, Ornamental Shade Trees, Evergreens, Roses, Bulbs, Greenhouse Plants, Etc., etc.

RICHARD D. FOX,
San Jose, Cal.

THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.

Dewey & Co. { 252 Market Street, } Patent Agts

ELY-MEEKER SUN DRIER, FOR FRUITS, VEGETABLES, ETC.

First Premium Sacramento State Fair, 1882.

The Drier revolves easily, so as to constantly face the sun, while reflectors above, below and at the sides multiply the power of the sun's direct rays.

The superiority of Fruit preserved by the ELY-MEEKER SUN DRIER is indisputable. All of the sugar of the fruit is crystallized and preserved. The flavor and all the peculiar qualities of the Fresh Fruit are retained, while by artificial heat all these qualities are greatly changed or entirely destroyed. The chemical influence of the sun's rays in purifying and bleaching is well known, and cannot be imitated by any artificial process. The sun, which has grown and perfected the fruit, is the natural agency for drying and preserving it.

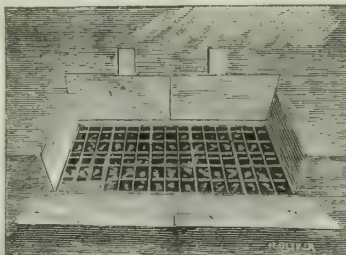
Simple, Economical, Quick and Effective.

Sun Heat only used. No Fuel. No engineer needed. It drifts evenly.

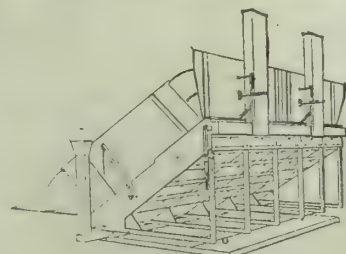
All the Flavor and all of the Sugar preserved.

No Chemicals used.

No Flavor of Smoke, Sulphur Acid or Rusty Iron.



FRONT VIEW.



REAR VIEW.

Does not burn the Fruit. No Failures. Fruit never spoiled.

Inaccessible to Dust and Insects.

The only Drier which makes Raisins of High Quality.

Women and Girls can handle it.

Simple in construction, Simple to manage.

Easily moved from place to place.

It will in one hour do the work of one day's open sun drying.

Those ordering ahead for next spring will be allowed a considerable Discount.

Orders have been received for these Sun Driers from all parts of this coast, and from Mexico and Guatemala.

J. STODDART PORTEOUS & W. A. MEEKER, Props..

Office and Factory:

EXCELSIOR MILLS,

Bryant Street, S. F.

(Between Fifth & Sixth Sts.)

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments, with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

Sewing Machines.

Several first-class styles, good as new, will be sold at a bargain. Call on or address H. F. D., this office.

Reporter AND NEWSPAPER Correspondent WANTED

Either lady or gentleman, in every city, town or precinct not already represented, to furnish the American News Exchange with prompt and reliable reports of all events and news of importance—political news, amusement notes, crop prospects, society events, labor items, sporting news, personal mention, railroad news, accidents, literary matter, etc. Previous experience not necessary. Position permanent, pay liberal, and every privilege enjoyed connected with the profession. Address at once, AMERICAN NEWS EXCHANGE, 251 W. 5th St., Cincinnati, O.

Newspapers supplied at favorable rates with full particulars of any event transpiring in any part of the world. Correspondents detailed for special work at a moment's notice. Branch offices in all the principal cities.

Arrears of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1862.

Pensions for all soldiers disabled in line and discharge of duty, either by accident or otherwise.

Widows of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty. Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges. Honorable Discharges procured; also duplicates. Send for blanks.

Increase of Pension. Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps,

STODDART & CO.,
Washington, D. C.

Box 623.

**COPP'S
AMERICAN SETTLER'S GUIDE,**
A Popular Exposition of our Public Land System.

Send to the office of this paper and get a copy of this popular book.
PRICE, 25 cents, postpaid.

To Settlers and Fruit Growers.

Purchasers who wish to secure land in large or small quantities, for cultivation, that will give satisfaction every season, or that will produce a diversity of crops, should call on, or address Edward Frisbie, Anderson Shasta Co., Cal.

McSHERRY GRAIN DRILLS

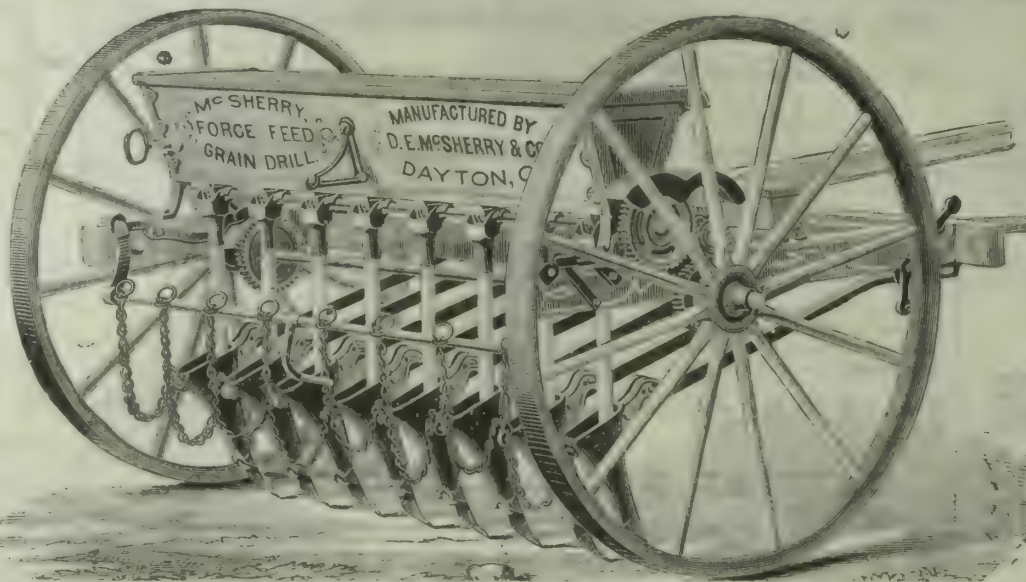
And Broadcast Seeders,

WITH IMPROVED FORCE FEED, COMBINE ALL THE LATE IMPROVEMENTS AND CANNOT BE EXCELLED.

Quantity Sown Regulated by
Cog Wheels Governed by
Established Rules.

This is the only sure and reliable method possible, for the amount of seed discharged is controlled by the revolutions of the spiral feed wheels which must be uniform.

Much is said about changing feed without gear wheels, as though it were a new thing. Really, it is only a return of the old and unreliable way of regulation by changing the size of the discharge openings. The drills made and widely popular 15 or 20 years ago, were all regulated in this way, by means of a dial and indicator plate. But popular as they were, they all gave way to the superiority of "The Force Feeds," changing quantities by the reliable method of cog wheels.



The great and fatal difficulty was the impossibility of making the whole series of openings exactly alike, or to make the dial and gauge-plate infallibly correct, so that it could be depended on and the Drill be found always to sow just what the dial indicated. It is well known that the very slightest difference in size of feeder or discharge opening, makes a very decided difference in quantity of seed per acre. Lapse of time has not altered the case, nor removed the difficulties or objections. They still remain against that whole principle of regulation, when, as now, it is again brought forward. We insist, such regulation is all guess work; there is and can be no certainty about it. With cog wheels the case is different; because the openings remain always the same, and the cog-wheels being correct once, it is utterly impossible for them to vary the next time they are used. Therefore, it is the only correct method. The change of wheels is so very easily made that the item of trouble is insignificant.

Hoes changed from Zig Zag to Straight Rows by New Lock Lever Attachment. Sows all the seed out of the hopper, straws and obstructions being carried out by the spiral feed wheels.

PRICE LIST OF McSHERRY GRAIN DRILLS:

9 Hoe, 6 or 7 inch.....\$105	11 Hoe, 6 or 7 inch.....\$115	13 Hoe, 6 or 7 inch.....\$130	15 Hoe, 6 or 7 inch.....\$155
10 Hoe, 6 or 7 inch.....110	12 Hoe, 6 inch.....125	16 Hoe, 6 or 7 inch.....165	20 Hoe, 6 or 7 inch.....200

McSHERRY BROADCAST SEEDERS:

8 feet, 16 Hoes.....\$125	10 feet, 20 Hoes.....\$150	12 feet, 24 Hoes.....\$170
---------------------------	----------------------------	----------------------------

BUFORD & CO.'S ROCK ISLAND PLOWS.

THE BROWNE IMPROVED THREE-LEVER GANG.

The Browne Sulky, Black Hawk Clipper Single Plows and Chilled Plows of all Sizes.

FRANK BROS., 319 and 321 Market St., San Francisco.

HAWLEY BROS. HARDWARE CO.,

Successors to

MARCUS C. HAWLEY & CO.



Schuttler Farm Wagon,

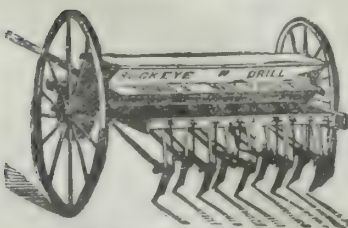
THE BEST IN AMERICA!

Made Especially for the Pacific Coast
and Warranted

To Run Easier

And Last Longer

Than any other Wagon.



"BUCKEYE" SEED DRILL.

A WORD TO FARMERS

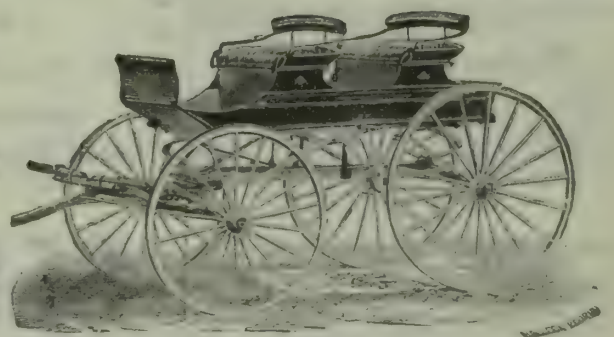
ABOUT THE "BUCKEYE" DRILL.

The agents for another Drill are advertising it as "the best," and we wish to caution farmers that they be not misled, and induced to purchase any other than the "BUCKEYE," which is acknowledged THE BEST EVERYWHERE by practical farmers. The Drill to which we refer has an old-style periphery feed, and is not an improvement over any of the ordinary Ohio Drills.

The manufacturers attempted to evade the patents of some of the acknowledged inferior Drills, but it is not an improvement even over them, as it is much more complicated, and more liable to get out of order than theirs. The "Buckeye" has a much better feed, is more easily regulated, and will sow oats and other grain more evenly. Besides this, the lifting device on the "Buckeye" is much better; its frame and hopper more substantial, and better made in every way. It is a well-known fact that the poorest drills in the country make the biggest blow, and when the parties to whom we refer put such cards in the papers as they have been recently doing, it only proves the claims of our DRILL as being THE BEST.

The fact that to build up a reputation for their own drill they are obliged to single out and name the "Buckeye," and compare theirs with our machine, is evidence of the high standing of the "Buckeye." We do not honor their drill with the name of competitor, but, to the thinking farmer, their being obliged to single out the "Buckeye" as a standard of excellence, is sufficient guarantee that their machine will not fulfill their wordy promises. It only goes to prove the claims we make for the "Buckeye" as being the best.

The manufacturers of the drill to which we refer, not being able to sell their machines at the East, where "Buckeyes" are generally used, are seeking, by a system of blowing and misrepresentation, to introduce them on the Pacific Coast and in foreign countries, where the "Buckeye" has not been so thoroughly introduced. But, where farmers see them in the field, the superiority of the "Buckeye" will be manifest, and our wordy neighbors will find that their misrepresentation will ultimately be to their discredit and disadvantage.



Schuttler Spring Wagons,

Specially adapted for use in California, being superior to anything else manufactured here or brought to the Coast. STRONG, DURABLE, HIGHLY FINISHED and especially adapted for use in mountain localities.



"BUCKEYE" BROADCAST SEEDER.

HAWLEY BROS. HARDWARE CO.,

San Francisco, Cal.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, NOVEMBER 4, 1882.

Number 19

Oleomargarine.

The product of the newly opened oleomargarine factory is now in the market, and is quoted at about two-thirds the price of average fresh butter. We are not informed how it sells—that is, how kindly the retailers take to it—but it may be presumed that avarice will tempt many to offer it for sale, because of the margin for profit which it offers. It is put up in butter rolls and in butter boxes, and the retailer will sell it as butter. The sample of the first day's make which was shown us was a good imitation of butter in color and consistency, but it had an unmistakable tallowy odor, which will be overcome as the makers acquire more skill. As the oleomargarine company now has its product in the market, it is setting its literary bureau at work to educate the people, through the daily press, to believe that counterfeit butter is really a good thing. This is the usual course taken by oleomargarine makers everywhere; they always assume the garb of injured innocence, and attempt to assure the people that, instead of counterfeiters and deceivers, they are public-spirited men, whose lives and energies are consecrated to the task of liberating the people from the thralldom of poor butter. The *Chronicle* of last Sunday had a long essay written in the oleomargarine interest, and the *Bulletin* of Tuesday afternoon had a gentle feeler in the same direction. We have no doubt that all the papers in the State will, sooner or later, have an opportunity to tell their readers how good a thing it is to make and sell a sham butter from tallow and sour milk, and how glad the people ought to be that they can now have doctored slaughter-house fat to eat instead of the abominable stuff made by the dairymen. It is wonderful how much of this sort of doctrine a daily newspaper can swallow without showing signs of nausea.

The claim that flooding the market with counterfeit butter will not injure but rather help the value of the genuine article is a disingenuous fallacy. That the oleomargarine will not compete directly with the product of the fancy butter dairies is true; that its presence in the market will lead many dairymen to greater effort to improve their butter product is also true to a certain degree; but these are exceedingly small favors to the dairy interest compared with the evil it will do. It is well enough to say that the way to escape the competition with the false butter is to make the genuine so good that it cannot be successfully imitated. This can only be done to a certain extent. There are hundreds of dairymen who for various reasons cannot strike the fancy point with their manufacture, and no amount of competition and no exhortation can lift them to that quality, and yet they are follow-

ing an honest industry and earning an honest livelihood by producing the large quantities of fair, ordinary butter, which the mass of the people find wholesome and agreeable. The industry of these honest and legitimate producers will be seriously interfered with by the manufacture of oleomargarine, for in a state where the consumptive ability of the population is limited as it is here, the infliction of a few tons of a substitute material will bring the market value of the genuine speedily below a profitable figure. There is no use of endeavoring to disguise the issue. If the oleomargarine makers here attain the excellence reached by the same process at the East the price of ordinary butter next summer, if not before, will compel the owners of many herds to close their business. What can be done? We notice that the oleo-

A Famous Clydesdale.

We give on this page an engraving of a Clydesdale stallion, of high breeding, and the winner of many equine victories. He is Prince of the Machars (1798), foaled May 25, 1875; imported by Powell Bros., "Shadeland," Springboro, Crawford county, Penn. Prince of the Machars was sired by "Young Prince of Renfrew" (1014), winner of the premium of the Horse Breeders' Association of the lower district of the Machars of Wigtownshire. He was by "Prince of Renfrew" (664), winner of second prize at Johnston's Open Show when a yearling; of second at Barrhead, first at Kir-

Iron for Grape Vines.

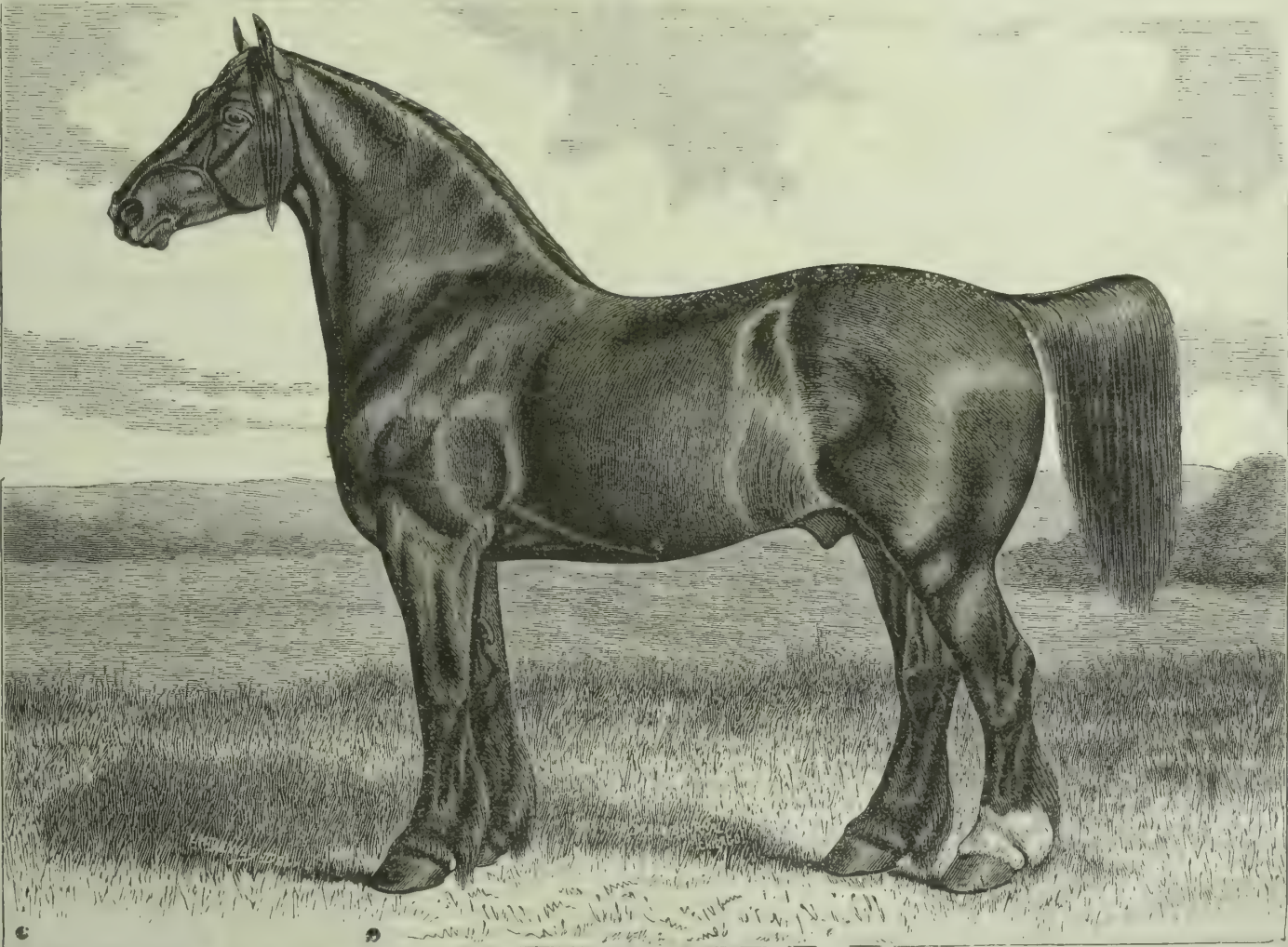
At the last meeting of the State Horticultural Society, Mr. Eckley, of Contra Costa county, exhibited Muscat grapes, part of which represented the product of the body of his vineyard of about a quarter of an acre, the rest being from six rows which had last winter received a dressing of iron filings and turnings at the rate of about six tons per acre. A small amount had previously been applied to the entire vineyard; but the difference in the quality of the fruit was very striking, the berries from the "unmanured" part being quite small—about the size of Missions—and of a yellowish or golden tint, while those having received the dressing of iron were large and full, quite twice the size of the former, and of the light-green tint belonging to well-developed berries of the variety, and would have brought a very much higher price in the market. The small berries from the unmanured part were, however, very sweet and highly flavored, and would doubtless have made a better wine. Mr. Eckley stated, upon inquiry, that he did not think the weight of the product would have differed much in the two portions, the bunches in the unmanured being more numerous, though smaller and lighter, than in the portion treated with iron. The soil, of which a sample was also shown, is light hill adobe of blackish tint. It contained numerous particles of the iron scrapes, much corroded by rust; also numerous small fragments or gravel of the country rock, a soft sandstone tinged yellow with iron, naturally.

Prof. Hilgard remarked that as such soils, according to his analysis, and characters obvious to the eye, contain from 4 to 6 per cent. of iron oxide the effect of the dressing of iron scraps could not

be ascribed to the supplying of a deficiency of iron compounds in the soil, but must be due to a direct effect of the metallic iron in process of oxidation or rusting upon the soil or the plant. In that case the effect on the iron dressing would disappear a year or two after all the metal was converted into rust; and it would be highly interesting to follow up the outcome of Mr. Eckley's experiment in this respect. The effect here resulting seemed to be quite similar to that claimed to have been obtained from the driving of iron nails into weakly fruit trees.

A dispatch from Panama says: The *Estrella de Talima* reports that new rubber districts have been opened up in the vicinity of the village of La Plata.

LIEUT. DANENHOWER lectured in Tremont Temple, Boston, on his experiences from San Francisco to the Lena.



IMPORTED CLYDESDALE STALLION "PRINCE OF THE MACHARS," OWNED BY POWELL BROS.

margarine literary bureau is doing its best to persuade the readers of the daily papers that no laws can hold against oleomargarine, and that all the Eastern enactments are of no account. We admit that there has been a great deal of ineffectual legislation at the East on this subject, but the end is not yet. Perhaps, if Eastern legislators cannot find out how to prevent people from selling an imitation for the genuine, California law-makers may give them some points this winter. There is another thing which can be done, and that is to inform people that they are liable to be deceived by the dealers, and put them on their guard. Very few will deliberately choose to eat this tallow and sour milk mixture, and all the public needs is a thorough waking up to watchfulness. The oleomargarine makers seem to be trying to spread abroad the impression that the imitation cannot be distinguished from the genuine by certain tests. That is untrue.

kintilloch, and third at Highland and Agricultural Society's show at Glasgow when two years old. When three years old he won first prize at Glasgow Open Show, and second at Highland and Agricultural Society's show at Aberdeen. When four years old he gained \$250, offered by Linlithgow Agricultural Society; when five years old \$200, premium of Haddington District; and when six years old gained the \$300 premium from the Strathmore Tenantry.

His pedigree runs back to "Glancer, alias Thompson's Black Horse" (335), foaled about 1810, and the most noted of all the great founders of the Clydesdale breed. The dam of the Prince of the Machars was "Kate," by "Young Clyde" (944), winner of first prize at Killarochan as a yearling; first at Johnston's Open Show as a two-year-old, and same year first at Killarochan, and thence back to the old Clydesdale founders. Prince of the Machars is bay with white markings, and a noble animal, as his portrait shows.



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

The Santa Cruz Fair.

EDITHS PRESS:—We have just concluded a six-days' fair in Santa Cruz. It has been a decided success. Besides the money received, the best feeling and satisfaction prevailed, and the exhibit was novel, large and a surprise to everybody. It had been nearly seven years since this county had held anything like a general fair. We have had church fairs and such like, and a very excellent rose fair last spring; but a real best, squash, mat, picture and bed-quilt fair, free to everybody to make entries, was what we were hungry for. Some time ago, some of our enterprising folks circulated a subscription paper and obtained quite a respectable number of respectable signers at \$25 each to an Agricultural Fair Association. There is something in a name, and this was a good name for the association. But nearly all the good was in the name, for behold, when the fair was held, we had a large representation of "the gambling fraternity" from San Diego to Siskiyou, and from the "Sierras to the sea." There was a great deal of gambling and some horse racing, the usual accompaniments of such combinations. It was a grand monopoly. There was no chance for the horticulturist, or the farmer, or the manufacturer. The jockey club had it all its own way. And this oppression of the monopoly resulted, as in other cases, in an uprising of the people, which culminated in the exhibition just closed. Farmers and mechanics, art, science, and the many industries were well represented. There was also a good showing of stock—horses, cows, calves, sheep, pigs and poultry.

For the success of this fair we are largely indebted to F. A. Hihn, Belle Kooser, Martha Wilson, Martin Kinsley, E. B. Cahoon, W. W. Waterman and Joseph Francis, a committee appointed at a public meeting some time in August.

The plan selected for the fair, although not in all respects entirely adapted to that purpose, was fortunately near the center of Santa Cruz, and consisted of the Olympic hall, a club-room and bowling alley, a dancing hall with side-rooms, a carpenter shop and alley way. These are all situated just back of the Ocean House, and were placed in connection with each other by closing the alley. The Olympic hall was used for the display of machinery, butter, cheese, furniture, hardware, etc. The club-room was used for the fruit exhibit, and the bowling alley attachment served a better purpose than it ever served before as the "Floral Hall." The dancing hall, which was fitted up last summer mainly to accommodate visitors at the Ocean House, made a splendid art gallery, whilst a side-room was devoted to a natural history collection. The alley way was given up to plows, buggies, wagons, etc., and one side was used for a portion of the pictures that could not be contained in the art gallery.

The Fair opened Thursday, Oct. 19th, at 10 o'clock A. M. F. A. Hihn, the president, made an address in the evening. Singing and literary entertainments were attempted each evening, but with a moving, talking, laughing crowd, intent on seeing rather than hearing. Such attempts were a failure. When Saturday night came (the time fixed for closing) the interest was so great, and half the people had not seen the grand exhibition, the managers decided to keep the rooms open three days longer (not counting Sunday during which the doors were closed.)

Each department was in charge of a superintendent and assistants. There were no entry fees required, and no premiums offered by the managers. (One flour manufacturer offered premiums for the best bread made from his flour). Admission fee was placed at \$3 for a season family ticket; \$1 for single season ticket, and 25 cents for single admission. Those who wished to dance retired to the Ocean House at 10 o'clock each night for an hour's hop. The receipts for the six days amounted to nearly \$1,200, which sum, after deducting expenses, is to be used towards the purchase of grounds on which to erect fair buildings.

I would gladly try to mention all the many interesting exhibits and give due credit to each exhibitor; but you have not the space and I have not the time to give at present. It is desirable that each county, or neighborhood, should, at least once a year, hold an exhibition of a kind similar to this. Santa Cruz has resolved to do so if we may trust the feeling prevailing now.

The display in the Floral Department, stimulated and benefitted by the Rose Fair last Spring, was something that no words can do justice to. The ladies and gentlemen who took that department in hand spared no pains to transform the bowling alley into a hall of enchantment. It was a combination of the wild woods, with ferns, lichens, mosses, springs, etc., with the garden and the greenhouse all so artistically arranged that the most aesthetic critic, I fancy, would hardly have a reasonable chance to discover a fault. I wish all the persons who made such a wonderful success of Floral Hall could be named and thanked individually without creating envy in the Department of Art,

which, also, was a scene of astonishing success and display of native talent. But, alas! that would lead into trouble with the other departments, and I would find it necessary to write a detailed description of all, for there would be no stopping place where all was so equally deserving of the highest praise. OBSERVER.
Santa Cruz, Cal.

Placer County Notes.

EDITHS PRESS:—The region usually known as Western Placer extends from the base of the foothills of the Sierra Nevada mountains westward towards the Sacramento river 15 miles, extending north to Bear river and south to the northern boundary of Sacramento county, a distance of 25 miles. The foothill region of Placer county is one of the finest sections in the world for the cultivation of grapes, berries and other fruits, as a trip through this portion of the county will show. This fruit belt extends five or six miles below the base of the hills, while grapes seem to thrive almost anywhere on the bare hills or plains. Land can be obtained at very reasonable rates, but many years of experience among grape growers and fruit raisers have led us to advise people who are "crazy," as it were, on the grape business that it requires more labor, perseverance and skillful management to be successful in this department of agriculture than in any other.

I do not wish to discourage enthusiastic would-be vineyardists; but a few years of practical experience in this line will convert a man's enthusiasm into dried-up raisins, and turn his sweet spirits to sourst vinegar. By the time he has planted cuttings and pulled out grape brush, plowed his vines and suckered them in the spring time, picked grapes till his back cramps and his stomach aches, I think he will realize the importance of the grape business, and see it in a practical light. He will see the business through a pecuniary glass when, after five years have been spent in starting his vineyard, to say nothing of thousands of dollars, he looks for returns and finds that grapes are "down," wine is plentiful and cheap, and the raisin market is over-stocked.

We have in Placer county two or three of the largest vineyards in the State. The California Raisin Company's vineyard, within two miles of Rocklin, comprises two or three hundred acres of vines, and is of recent date, but well started and bearing heavily. The old Nicholson orchard and vineyard, three miles north of Lincoln, comprises about 175 acres of vines and fruit trees and berries. This old pioneer vineyard has recently passed from the hands of Mr. Barrett into those of Mr. Laurence. Mr. Barrett still remains in the business in the immediate neighborhood. In the vicinity of Auburn, Ophir and Newcastle large and fine vineyards are very numerous. The apples raised in the mountains of Placer county are the finest in the world.

The major portion of Placer is mountainous, and mining constitutes about an equal industry with agriculture. In the extreme eastern part of the county, which extends east and west about 120 miles, that magnificent inland sea, Lake Tahoe, is dashing its breakers against the walls of its highland home.

The Central Pacific runs through the county from one end to the other almost, and on the line of this road are magnificent sights. Among them not least are 40 miles of snow sheds, long-drawn mountain palaces. Along the Bear and the Yuba rivers deer are abundant, while quail are plentiful from one end to the other. The principal points of interest to tourists are the head waters of the Bear and the Yuba rivers, Bear Valley, Blue Canyon, Cisco, Summit, Lake Tahoe and vicinity, Cape Horn, Little Cape Horn, American river scenery, and many other attractions.

The forests of the county are fast being laid low. Saw-mills have done a great deal of the devastating work, while the railroad is responsible for the major portion of the remainder. Through western Placer runs also the California & Oregon Railroad. The crops never fail here entirely, and the farmers are generally prosperous.

At Lincoln there is a large pottery, giving employment to 30 or 40 men, besides a flourishing coal mine in the neighborhood, which daily and nightly extracts an average of 18 tons.

The grass is springing up here everywhere, the fields are beginning to look green in places, and farmers are plowing, the ground being in excellent condition.

PHILLIP DUFFEL, JR.

UTILIZATION OF OLD CASTINGS.—Mr. F. Becker of Neuss, Germany, wishing to utilize an old casting that was too large to take to the cupola and could not be conveniently broken up, hit upon the expedient of building a furnace against it and tapping it off on the spot. Carefully covering the mass of refractory material to prevent the radiation of heat, he lighted a coke fire at one corner, and as soon as that portion melted ran it off into a ladle, and by repetition of this process with the other corners the casting was reduced in size until it could be moved without much trouble. It would seem that there must have been local circumstances preventing the use of dynamite to reduce the casting to smaller pieces, since if this was not the case it would appear that an unnecessary amount of labor had been expended in achieving the end aimed at.

SHEEP AND WOOL.

The Mohair Industry.

'Tis not in mortals to deserve success,
But I'll do more, Sempronius, I'll command it.
—Shakespeare.

EDS. PRESS:—In groping through the indelible records of oblivion I next draw forth an artless communication from Hollister. It tells its own story:

HOLLISTER, July 1, 1870.—This is to certify that I sold three thoroughbred Angora goats to Martin Kirby, of Mariposa county, Cal. Name of buck "Gardner," from an imported ewe got by Pasha, aged 15 months. Ewe "Emblem," from an imported ewe, got by imported Pasha, aged two years. Kid "Sympathy," from "Emblem," by imported "Sultan."—JOHN S. HARRIS, San Benito Co., Cal.

Mr. Harris delivered the goats in person, and the kid was only three weeks on the place, when she was bitten by a rattlesnake and died in about two hours.

Conversation.

Grove: As I sauntered through the corrals, I observed a couple of emaciated animals. Where did they come from?

Kirby: They are the goats that I took in exchange for Waiting Mary and her mother. The cost of the exchange was \$56. They are labeled Peters, 135, and Alvord, 53.

Grove: White elephant! Why, there is not a man in the world that would take those animals to be Angora goats. They look to me like a pair of broncos.

Kirby: It appears that our white elephant when in low condition is unable to accomplish the usual phenomena of changes, for after all, he is nothing more than a machine of nature to convert food that is unsuitable to other animals, or is inaccessible to them, into valuable mohair. In connection with this subject it occurred to me that at some time in the year, in the vicinity of Arizona, there must be an immense quantity of nitrogenous food, and that the goat has the power of storing it away in his tissues, and that when the severity of the winter overtakes him he moves but little, lying in the snow, which is as dry as a sandbank, and gives his whole substance to the production of mohair, not to suit the Turk, but to save his own existence. To acquaint myself completely of the rectitude of this doctrine, I wrote to the Commissioner of Agriculture at Washington, asking him who was the proper person to apply to for authentic information concerning the Angora goat in his native home, whether he, himself, (the commissioner), or the American Consul at Angora. I have never received an answer to my questions, but about the time that I was expecting an answer I obtained from Washington through the mails a pamphlet on the origin and growth of sheep husbandry, with some remarks on Angora fleeces. It contains a steel plate engraving of the buck that in the consecutive order of history is to fill the place of No. 1, B. Here it is.

Grove (reading): Geredeh Angora goats. Buck Mahomet, ewes Fatima and Lulu, imported from Asia Minor by Charles W. Jenke, of Boston, Mass., for Richard Peters, of Atlanta, Ga., January, 1880.

Grove (speaking): I wonder where the Government derives its authority to use its printing office to pander to the sordid instincts of professional goat breeders? If the artist has not drawn on his imagination, they certainly offer an instructive contrast to Peters, 135, and Alvord, 53. Did you obtain the pedigrees of these goats?

Kirby: Of Alvord, 53, all I could learn was that she is an imported goat, and is said to be an excellent breeder. The pedigree of Peters, 135, is in the handwriting of the distinguished professional who bred her, and is accompanied with notes which read thus:

I find 135 designated as one of the very best kids of 1860. She is not checked off for California, and I can't state whether she was sent out in the Holland lot or with those purchased by Mr. Landrum. Buck No. 1 B was sent from Constantinople during the year 1854, by Col. Brown, of the United States Legation, to a relative in Baltimore, from whom I purchased at \$500 for the buck and a ewe. Buck No. 1 was a large, extra fine animal with a heavy coat of mohair. He lived until 14 years old.

Grove: I see by the pedigree that one-fourth of her blood is No. 1 B., and it comprises one-half the blood of Peters' 85. If you do not look out how you breed these animals your whole fleece will partake of a shortness that will be unprofitable to us and objectionable at the factory.

Kirby: It was to counteract this that I made the purchase from Mr. Harris. I saw that he had me for both length and weight.

Grove: How long did you sojourn with Mr. Harris?

Kirby: A night and half a day. Every phase of the white elephant was debated, past, present and prospective. Here is a piece of the hide of the true Cashmere goat that he gave me; please to accept it as a present for your wife. I found in Mr. Harris a man of much practical information, with two characteristics in common with yourself. He is an enthusiast on goats and a skeptic on science.

Grove: I thank you for the specimen of cashmere skin. I am sure Mrs. Annie will prize it highly. While I would agree with Mr. Harris that it is science that has obstructed the mohair industry of America, yet I am a believer in one science, and only one, and that is the science of war.

Kirby: Perhaps the trend of your existence has been such as to inculcate corrupt principles of science.

Grove: It is true that I never was even into a school-room, and my amusement at 14 was carrying dispatches through the rabid ranks of the battle-ground. Mark me, it is not in the mohair industry alone that I derive any advantages from the sciences; in the occupation that I am following, that of mining, the scientist is intolerable. As soon as you sink 300 ft. on a ledge and disclose a large body of ore, if you allow him, he will come down and knock you as cold as a wedge with such terms as "miocene" and "lacustrine." I never allow one of them to put a foot on the first round of the ladder. I tell them plainly that this mine owes them nothing; it was discovered by chance and is worked by industry.

Kirby: Here is a letter from Georgia:

MR. MARTIN KIRBY:—Yours of 10th inst. received; also the *Alta* and *shear*. The samples are very good—far beyond an average. I am glad to get the *Alta*. Oblige me by sending copies of it to me when Angora statistics are published. At the year 1873 I sold all of the females from my flock that were not first-class. I then gave up keeping the pedigrees from the number of the ewes. I selected bucks of the Davis-Brown strain, and have from year to year improved my flock. I keep up my system of numbers, and inspect my flock twice each year, making notes on each. My Texas and Western customers have not called for pedigrees in detail, and I found the keeping up the pedigrees each in detail very troublesome. I selected from my February kids four of the best bucks such as I considered perfect, and such as I believed would show when two years old six pounds of mohair per head, and I reserved 10 head of perfect ewes. I would like to send you a pair of the February-selected kids, both of the Davis-Brown buck No. 1 B strain. I know they would be of great service to you, and in California the buck ought to yield seven to nine pounds per year, according to Landrum. My price for the pair would be \$200, the express freight one rate, same as merchandise prepaid, \$21 per 100 lbs to Sacramento, and probably the same to Merced; if no express agent at Merced you should name a consignee at Sacramento. On some portions of the route they may increase the rate to the usual stock rate. If so you would have to pay it, probably not over \$5. Each goat would be boxed separately, the weight of box and goat being abt 80 lbs, but would be rated at 100 lbs. I have shipped to Oregon and California, and have not failed to ship through in safety. I shipped last week a fine buck kid to Col. B. W. Scott, of Frankfort, Kentucky, at \$100. He was truly pleased.—Yours truly, A. PETERS, Atlanta, Georgia.

Grove: What *Alta* is it that he refers to?

Kirby: It was a copy of the *Alta-California* newspaper that contained a series of questions propounded to Mr. Harris on the mohair industry.

Grove: Oh! I remember now, Mr. Harris in one of his answers said that he did not wish to "dive" into the causes, etc. I should think he would not have had to dive very far; the principal causes are the cost of the production and the inferiority of the produce.

Kirby: And yet the answer was as good as the question. Mr. Harris could not at that time have treated the subject without the agricultural press teeming with vituperation.

Grove: As there is a different hand at the helm it is to be hoped that the *Alta* may be induced to lay aside its scientific goggles and give the subject a more candid examination. If this newspaper was published in another country we could afford to treat its teachings with a lofty indifference. But it is otherwise; it is read and its doctrines adhered to by a large and respectable portion of agriculturists.

Kirby: I am aware that one-half of the country is governed with money, and the other with grips, pass-words and countersigns, and yet if I do not wrest from the remainder sufficient of a "Utopia" to sustain the firm foot of an American Angora, then let the readers of the *Alta* hold my name in execration through the whole of time and the half of eternity.

Grove: Although we have groped our way in darkness and under an expense that has been actually corrosive, there is nothing in our experience to cause solicitude for the ultimate success of the enterprise whenever the obstructions of science shall be removed. She cannot annihilate the industry, and she has no right to retard it.

Kirby: I see that Col. Scott has been obliged to draw from headquarters. I expect his fleece has been running to lightness.

Grove: How much does the Representative from Kentucky shear?

Kirby: His heaviest yield has been two and one-half pounds. Observing that his lightness of fleeces was an idiosyncrasy, I sold him to Mr. Hite for \$50 less than he cost me.

Grove: If the venerable colonel and his erudite son-in-law could have caught a glimpse of the "usurper" instead of sending their representative across the continent with laudations, they would have cut his throat.

MARTIN KIRBY (73).

Darrah, Mariposa Co.

[We must acknowledge we do not catch the point of the shafts aimed at science in the dialogue. Do the speakers mean "so-called science," the form without the essence? Science is nothing but truth or knowledge, and we had supposed that this whole series of articles was inspired by a desire to get at the science of Angora growing in California.—Eds. Press.]

WHAT BECOMES OF THE OLD WIRE CABLES.—The new wire cable recently laid on the western division of the California Street railroad was manufactured in this city. The cable which it replaces was of Eastern manufacture, and was made of Bessemer steel. It had been in use 13 months. The cables made here have exhibited various degrees of quality of endurance. One lasted 20 months; others have worn out in six and four months. Formerly the old cables were shipped to Japan, where they were converted into tacks and other manufactures, but the market becoming overstocked some of the cables are now out into short lengths and utilized in the hydraulic mines, where they are used as guys for derricks.

ENTOMOLOGICAL.

Scale Insects on Deciduous and Ornamental Trees.

(Report by S. F. CHAPIN, M. D., Commissioner for the San Francisco District, to the Board of State Horticultural Commissioners of California.)

(CONTINUED FROM LAST WEEK.)

[Furnished for publication in the PACIFIC RURAL PRESS.]
Experiments with Steam.

It was at one time thought that steam might be effectually applied for the extermination of insect pests upon trees. In the summer of 1881 a test of this agent was made in an orchard near San Jose. A large tent was made to hang upon a frame, which could be run on either side of, and overhanging the tree; the tent then being dropped, the tree was entirely enclosed in an air-tight bag, into which the steam and other ingredients were forced, and left to act upon the tree and insects as long as was thought necessary.

Horticultural Commissioner D. C. Vestal and myself carefully noted the experiments made and placed the results upon record. These experiments are also numbered for convenience in describing.

No. 1. Sept. 8, 1881. An apple tree infested with scale insect, woolly aphid and other pests, was covered by the tent, under which was hung upon the tree cloths saturated with bi-sulphide carbon, one-half pound. It was thus left for three-fourths of an hour, and then the tent was removed. Result, apparently of no effect. The woolly aphid was not injured, but found crawling about. The red spider was found crawling about; also a small caterpillar was observed unharmed. The scale insects were not affected in any way, so far as could be observed. Sept. 12, 1881—Examination made on this date showed that no effect had been made by the application upon any of the insects mentioned as infesting this tree. Mr. J. H. Wheeler, the maker of the bi-sulphide carbon, thought that the agent had not been properly brought into contact with the insects, and for that reason failed to destroy them.

No. 2. A pear tree was treated with steam forced under the tent covering the tree. The temperature was raised to 165°, and maintained for 10 minutes. Observations immediately afterwards showed that the foliage of the tree and the young wood of the tree was destroyed. Everything was cooked thoroughly. September 12th—The tree and the scale were both killed.

No. 3. An apple tree was treated in the same manner, with steam at 140°, for three minutes, and afterwards with sulphur fumes (caused by putting two handfuls of sulphur upon live coals) for five minutes. The result showed that the tree did not appear quite so much injured at this time as the preceding tree at first showed, but as seen on September 12th the effect was the same. The scale was killed, and also the entire tree, except the oldest part of the trunk.

No. 4. Apple tree steamed for five minutes at 140°; dried for five minutes, and then fumed with sulphur for five minutes. Result the same as the preceding.

No. 5. Apple tree moderately covered with scale and woolly aphid. Steam applied with which had previously been mixed three gallons of kerosene, pumped into the boiler of a threshing engine. This application was made at 110° and maintained for four minutes. September 12th—No effect was perceptible upon the tree, except that the foliage was somewhat injured. The scale insect was not killed or even injured. The woolly aphid was found alive and uninjured.

No. 6. Steam and coal oil applied four minutes at 140°. September 12—Tree pretty nearly killed. Only the oldest wood alive—all new wood and buds killed.

No. 7. Steam and coal oil for six minutes at 130°; No. 8, same for six minutes at 150°; No. 9, same for 12 minutes at 120° to 130°. This tree was steamed four minutes, and then, after an interval of six minutes, was steamed two minutes more. September 12th—The result upon these trees was the same. The trees were all destroyed excepting the trunk and oldest wood.

From these experiments it will be seen that steam cannot be applied in such manner and at a temperature sufficiently high to destroy the insects without, at the same time, destroying the tree.

During the season of 1881 strong efforts were made to introduce the use of

Various Patented Mixtures,

Which were claimed to have great merit in destroying the scale insect. One of these was to be used by simply spreading it on the trunk of the tree, which application it was stated would, through the poisoning of the sap, kill the insects. This, as well as others of a like nature, were given careful consideration and tested, and resulted in entire failure.

Another method, which was persistently forced upon the public, was that of boring into the trunk of the tree to the centre, and filling the auger hole with the so-called cure. A careful investigation of many trees so treated was made by Mr. Mathew Cooke, Mr. D. C. Vestal and myself, for the purpose of determining the actual effects, if any, of this treatment. Oct. 17, '81, we visited the orchard of one person, who had allowed his name to be used in recommending this exterminator, and first examined two pear trees bored and the holes filled with

the preparation. These trees were found to be covered with live scale insects in all stages of development, and showing no signs of injury. The young female insects were found crawling about the trees in great numbers. The wood, the seasons growth, was covered with scale. An apple tree, the trunk and large limbs of which had been washed the previous winter with strong lye, showed that the scale which completely covered it when the lye was applied were entirely destroyed where the wash had reached, but on the smaller wood which had not been washed with the lye the scale was found alive. This tree had also been bored and treated with the application referred to, and which had no effect whatever. On the trunk of this tree, where the lye had been applied, the green layer of bark was found replacing the old, which had nearly been destroyed by the scale. At another place we examined a pear tree which had been bored and treated with this preparation. This tree was in no manner whatever affected by this so-called remedy, but was completely covered with scale insects in every stage. We found the young females crawling about, and on this tree was found the male scale in the first pupa stage of development for the third winged brood, and also on this tree was discovered the perfect winged male of the third brood. In no case has the slightest good resulted from these secret and patented preparations. We have treated this subject thus fully because, to our knowledge, prominent and careful horticulturists have been induced to purchase these things at an exorbitant charge.

The treatment of trees by

Crude Petroleum

And its different products has been thoroughly tried in this vicinity, and, it must be confessed, with conflicting results. Some still claim that coal oil is efficacious, and if properly used, safe; but the advocates of this practice are very few now, although at one time, orchardists were pretty evenly divided in the use of coal oil on the one hand, and that of concentrated lye on the other. The treatment of orchards by crude petroleum was commenced in 1879-80, but was not extensively tried until 1880-81. Many orchards were then drenched with crude petroleum, greatly to the regret of the users. The following season the advocates of coal oil abandoned the use of the crude, and applied a partially refined product which is little better. This is called tree wash, and was used this past season very extensively.

This whole subject may be treated as with one agent. Many orchards have been visited where this treatment has been adopted, and where the result has been disastrous. One prominent orchardist used the tree wash upon about 20 acres of all varieties of trees, and has lost almost the entire number. A great part of the dead trees have this season been dug out. Another used this wash upon 60 fine cherry trees, 10 years old, killing them all. Another adjoining the last-named washed with the same and killed 125 choice cherry trees. Another had used crude petroleum, with the result of killing all his trees except apples and pears, which partially rallied and put forth a sickly new growth. These results can be substantiated by many other orchardists who have met with a greater or less degree of loss from the use of oil, and almost every person who has been in favor of using coal oil has abandoned its advocacy. Indeed, I now know of but one orchard where it is the intention to apply it again. This one, from some cause, appears not to have suffered from its use, and a visit to this orchard on the 14th of October showed a very large and fine crop of apples being gathered which were almost free from scale. This orchard, belonging to father and son, the Messrs. L., has been washed in the following manner: In 1879-80 some trees were treated with kerosene of 150 test. In 1880-81 crude petroleum was applied to the trees of the entire orchard. These were principally apple trees, numbering about 600, although there were trees of every other variety. In 1881-82 the tree wash was applied to the same trees and in the same manner. As stated, this orchard is almost free from scale, and the trees appear healthy. The Messrs. L. attribute their success with coal oil to the following means of procedure. It is applied in the middle of the winter, or before the sap begins to flow. It is applied in the finest possible spray, and is allowed to touch any part but once. The work is done when there is no wind, and when there is no moisture upon the tree. All this evidence leads to the conclusion that the products of petroleum are most hazardous to the life of the tree, and while one or two may not experience the loss of their orchards, the hundreds of others would destroy their trees. Therefore, with all this added experience before me, I most emphatically condemn the use of petroleum or refined coal oil of any grade for the purpose of an insecticide.

The effect of coal oil upon trees of all varieties of stone fruits is particularly disastrous, being less upon apples and pears. I now again refer to the use of

Concentrated Lye,

Which, as before seen in this report, has been of such signal service, and which I consider to be the specific, or at least so far as we now know, the best means of destroying the scale insects of deciduous trees. In the case under consideration where the *Aspidiotus perniciosus* is involved, no other application will do the work as well, as a winter remedy which can be used when the tree is denuded of foliage and when the tree is dormant. The lye, while

causing little if any harm, but on the other hand in most cases positive benefit to the tree, is, where used with care and in the proper strength, an effectual remedy. The only other remedy which can be recommended is the Whale Oil Soap and Sulphur Mixture (codlin moth wash), which is applicable as a summer wash particularly.

A few prominent examples of the employment of lye on a large scale will be given to show its usefulness and success. Great results had been obtained by the application of concentrated lye, but the definite strength in which it should be used was only determined in the season of 1881, consequently the past winter preparations were made for applying it on a large scale to entire orchards. In the early part of this paper reference was made to the losses of one orchardist, Mr. T., as an instance to illustrate the condition of many orchards in this vicinity. This orchard was visited a few days since (Oct. 14th) and a vast improvement noted in the health and appearance of the trees, which had by careful treatment been made to survive the devastating effects of the scale.

As was before stated, many of the trees destroyed had been dug out. These were particularly apple trees. Some, however, had survived, though badly injured. These being heavily cut back had put forth a new growth, which is this year most satisfactory. The pear and plum trees, especially, have shown the good effects of treatment, and are now vigorous and on the way to great fruitfulness. Owing to the fruit spurs and all small wood of the pears being killed by the scale two years ago, there could be but little fruit this year, but from the fine thrifty growth on these trees a large crop of fine fruit is promised for the coming season. The plum trees, of which there is a large number, have made a fine recovery from the effects of the scale, and yielded this year a valuable crop of fruit, obtaining of French prunes at the rate of eight tons to the acre of fresh fruit. The total yield of fruit this season exceeded in value that of the last by a large percentage. The fruit has been of fine quality and very clean. At least 90 per cent. of the total yield has been entirely free from scale, and of the 10 per cent. remaining none of that was as bad as the fruit of the entire crop of last season. The coming season he expects to have a very large crop of fine and perfectly clean fruit. Mr. T. has used both oil and concentrated lye on his trees, not however together, but separately. He says he shall not use oil again as he is satisfied that it injures his trees. Lye has given him his fine results. It has been used in the strength of about 1 lb to 2½ gals. water, but in this strength it has required a longer time and a larger number of applications to destroy the scale. Although some scale is still to be found there, the orchard is nearly cleaned of the pest. It is intended to use lye and the caustic soda the coming winter.

Another extensive orchard near to the above belonging to Mr. R. has been thoroughly treated by concentrated lye. This orchard of 30 acres in which are 5,000 trees, has been one of the worst infested by scale. Last winter the entire orchard was drenched by lye, applied by fine spray in the strength of one lb to one gallon water, and one lb. three oz. to one gallon water; some few trees with even a stronger solution. This application was made from December, 1881 to February, 1882. A visit made on April 25th last showed the scale to be pretty thoroughly destroyed. The trees at this date were in a most vigorous and healthy condition with beautiful green foliage and hanging full of fruit, well set in all varieties, far enough advanced at the time. Other trees were in full blossom at that time. On October 16th I again visited this orchard to ascertain the season's results, and find it has borne out the estimate made of it in April last. The growth of wood has been very fine and healthy. The crop of fruit has been good this season, and has been almost entirely clean. The cherries were entirely so. The plums and prunes, of which there was an immense crop on about 1,200 trees, were also wholly free from scale. Also the pears and apples were most of them clear of scale, though a few were slightly infested. Some scale remains in this orchard, but so little compared to last season, that although the quantity of fruit was about the same, the quality was far superior, and therefore in value far greater. A portion of the pear trees, which still showed some few scattering scale, were washed in September with a solution of lye showing 4° by the lycometer, in which was mixed sulphur as much as could be forced through a coarse nozzle, and whale oil soap in small quantity. This has apparently cleared away the few scale that were present. It is intended to wash with lye the coming winter in the same manner as last, wherever it may be required.

Another prominent example of the use of lye is that upon the orchard of Mr. G., in the celebrated fruit growing locality known as the "Willows," San Jose. This orchard is chiefly devoted to the culture of the cherry and is one of the best known in the State for that product. There are also a few hundred French prune trees. All of these trees, both cherry and prunes, range in age up to 15 years. Two years ago the *Aspidiotus perniciosus* appeared on the white cherries, nearly destroying a number of trees. In the winter of 1880-1881 the trees were washed with concentrated lye, 1 lb. to 5 gallons of water. It resulted in some good, but did not kill many insects. In January, 1882, with the exception of one tree mentioned further along, the entire orchard was washed with concentrated lye, 1 lb. to 1 gallon of water,

All varieties of trees subject to scale were washed twice—the applications being made two weeks apart. The method employed was by heavy spray continued upon the tree from 5 to 20 minutes for each tree. The fluid dripped from the tree upon a table arranged under it, and thus saving the material from waste. October 14th I examined this orchard. On the cherry trees all of the scale has been destroyed upon almost the whole of the trees washed. On a few trees, however, there are at this time a few scale to be found, bred from some not reached by the wash. The effect upon the cherry trees was not injurious, except that a few fruit spurs were killed. The trees this year bore a very fine crop of fruit, wholly free from scale. Not a single specimen of scale could be found upon any of the fruit, as a careful inspection was made of it for that purpose. The effect upon the prune trees was a little greater, killing a larger number of fruit spurs. This is partly attributed to the state of the atmosphere, as it was warm and dry when these were washed. Not a scale insect can now be found upon any of these trees, although very large trees and very badly infested with scale. Mr. G. intends to wash his trees the coming winter with lye in the strength of one pound to two gallons of water, using also the table as before. The saving caused by this was at least two-thirds of the material.

The Drain Table

The table is made of sheet zinc fixed upon a frame in halves, which are placed against the trunk of the tree on either side, thus forming a circular basin 14 ft. in diameter, and requiring but one minute for transfer from one tree to another.

An Insulated Tree Attacked.

The tree mentioned as not being washed was a Cleveland Bigarreau cherry, standing in the orchard 100 yards from any tree infested, being surrounded by the Black Tartarian trees, which are never infested. This tree last winter, at the time of washing the orchard, had no scale upon it. Now, however (October 14th), I find this tree covered with scale already matured, as well as many young crawling about upon it. This is an interesting observation, as it shows the rapidity with which a tree may become covered with this pest, and also that the scale will single out and colonize itself upon trees to its taste. In this orchard no cherry of the black varieties has been infested. The Black Tartarian, the Black Bigarreau, Knights Early Black, the Black Eagle, and the Early Purple Guigne, are none of them troubled; and neither has the Belle d'Orleans shown any insects. The white varieties of cherries are among the worst infested trees we have.

Caustic Soda.

Some orchards have also been washed with the English caustic soda. One stated to me that he had used it upon his entire orchard of all varieties of trees, mostly however, Newton pippin apples, in the strength of 10° by the lycometer. It was not used in this case for the purpose of destroying scale, for the orchard was free from it, excepting some of the *Aspidiotus conchiformis*, which it destroyed. The object was to clean the trees of moss, and also to kill the red spider. The trees were cleaned, and a large proportion of the red spider eggs killed, but not all by any means. This caustic soda is obtained in large drums of 600 lbs., and is somewhat cheaper than the concentrated lye, which fact may cause it more frequent use hereafter. Many other instances might be cited to show the efficacy of lye as an insecticide, but sufficient facts are stated.

How the Insects are Spread.

Attention must be called to the means of spreading this serious pest, the *Aspidiotus perniciosus*. The system of "return boxes," and packages of any character, is known to be pernicious and a fruitful source of the spread of all kinds of noxious insects, which, either as insects, eggs or larvae, are fastened to them and taken into the orchard, to be developed in due time, and then to spread devastation to everything attacked. Indeed, to me, so obnoxious is the return box that I will not permit one to be brought into the orchard or on the premises. I prefer to pay the cost of new boxes, and give them with the fruit sold. As the female insect has no wings, she can, of course, only be spread about by becoming attached to something by which she is carried to different localities, and by crawling about during the short period after hatching before becoming fixed for life.

Birds will carry them most frequently about an orchard, and it is thought that one source of danger is little regarded, viz: carrying them about on one's clothing by brushing against infested trees.

If boxes or packages are returned, they should be disinfected as soon as received by dipping in boiling water, to which is added not less than one pound of potash to 25 gallons of the water used.

The nursery trees sent over the State have been the means of spreading the scale extensively, and while nurserymen are anxious to make sale of their trees they must take every precaution to see that their patrons do not suffer by neglect to first destroy the scale, which may be done by dipping the trees in a solution of concentrated lye of 1 lb. to 2 gallons of water. I am glad to say that most nurserymen are desirous to do all in their power to destroy the scale.

Among other means of preventing the spread of scale, thorough and constant cultivation of an orchard should be kept up, and one promi-

(CONTINUED ON PAGE 353.)

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

(Continued from Last Week.)

Roll Call of Granges.

PESCADERO GRANGE.—I. C. Steele, W. M., said that Pescadero Grange contained 47 members. The Grange has met regularly ever since its organization, missing a meeting for the first time this summer. He advised those interested in dormant Granges to interest the ladies in the cause, and revival and advancement is certain.

PILOT HILL GRANGE.—N. Wentworth, W. M., said that this Grange, which he had the honor to represent, was the first Grange organized in the State. It was still in working order and in good spirits. One great drawback was, that many of its members lived such a great distance from the hall, that regular attendance was often out of the question.

PLACERVILLE GRANGE.—C. F. Carpenter, W. M. This Grange was reported in a healthy condition and making some progress. The county thereabouts is composed of mining camps and small farms. The latter our membership represent, who are fraternal in spirit and united in purpose.

PLYMOUTH GRANGE.—J. Sallie, W. M., reported Plymouth Grange in good working order, and increasing in interest and numbers, with encouraging prospects ahead.

RIO VISTA GRANGE.—J. H. Gardener, W. M., reported no improvement in this Grange for the past year.

ROSEVILLE GRANGE.—J. T. Cross, W. M., reported the membership of this Grange at 84, and still increasing. Its meetings are well attended, and the Grange is in better condition than it has been for the last five years.

SACRAMENTO GRANGE.—John Keeth, W. M., made the following report in writing: Worthy Master, I have the pleasure to report Sacramento Grange a live Grange. To illustrate it will only be necessary for me to say that our Grange is represented here by 26 of its members. We have added to our membership the past year 19, many of whom are young members whom we are glad to see manifest a growing interest in the Grange. Our present membership numbers 102. We have no hall of our own; we meet in Pioneer Hall, Sacramento, the second and fourth Saturday of each month. Our meetings are always interesting, and we have an average attendance of 35. We have essays by the brothers, and sisters have charge of a manuscript paper, called the *Matrons' Offering*. These exercises, the work of initiation and questions arising under Good of the Order, keep our time fully occupied. We always have money in our treasury to meet all worthy demands. There is at present in the treasury about \$150, \$100 of which is loaned out at interest. We have an organ, the property of the Grange, and whatever time can be spared from the work of the Grange is devoted to music and singing. In regard to the *California Patron*, I don't think there is a family represented in the Grange who does not take the *Patron*, and we are all earnest workers for the paper, soliciting subscribers at all times. Sister Hattie Sprague spoke encouragingly of the prospects of Sacramento Grange, closing with an invitation to all present to visit the city Grange whenever convenient.

SAN JOSE GRANGE.—Pomeroy, W. M., said that San Jose Grange was among the first Granges organized in the State. At one time our roll contained the names of nearly 300 members. Indifference, dissensions and divisions and desertions reduced our membership until our organized existence ceased. We have recently re-organized and taken a new lease of life. If the next State Grange should be fixed for San Jose the live members there will give the Patrons of the State a hearty welcome.

SANTA CRUZ GRANGE.—G. C. Wardell, W. M., reported that his Grange was not in a prosperous condition. Meetings are being held at the houses of members, and are consequently informal.

SANTA ROSA GRANGE, SONOMA CO.—W. M. said that Santa Rosa Grange was neither increasing nor diminishing, but was moving along in its accustomed way.

STOCKTON GRANGE.—James Marsh, W. M., said his Grange was in a very healthy condition. At the date of the State Grange session last year we numbered 66 members; to-day we have on our rolls 103 members. The Grange was organized nine years ago, with only 20 charter members to start with. So we feel justified in saying that our Grange is in a prosperous condition, and very hopeful for the future.

SUTTER MILL GRANGE.—Sterns, W. M., said: Our Grange has 50 members. El Dorado county has a small amount of Grange material on which to work. Nevertheless, we are fairly prosperous and happy.

VALLEJO GRANGE.—J. F. Demming, W. M., said that Vallejo Grange was organized in 1873, with 22 charter members. At one time we numbered 70 members. We have 34 members, so long as we have a quorum it is our purpose

to hold on to the charter. In fact, we propose to hold it under any circumstances. Formerly we have had several Granges in the county, but they are at present either lukewarm or sleeping. We are always pleased to have Patrons visit our Grange. It is held in Pioneer hall, Vallejo, the 2d and 4th Saturday in each month, commencing at 1 o'clock P. M.

WATSONVILLE GRANGE.—A. Roach, W. M., reported that the membership in his Grange numbers about 40. Socially we are a great success. Our county is a very rich one, consequently our people are prosperous. We have \$350 in the Grangers' Bank. We have built a warehouse, and in our competition with other houses have reduced the average rate of storage. We have also managed, to some extent, to reduce the rate of freights, and next year we propose to fight the Southern Railroad Company.

WHEATLAND GRANGE.—Bro. Filcher, representing the Grange, said it was organized in 1874, with 45 charter members. The Grange went along swimmingly for a time; subsequently there came a relapse, but now we are on the uphill grade. Last year we admitted 25 new members; this year we have taken in 15. The Grange is in good condition, socially and financially.

The Rise and Progress of the Grange.

(Read before California State Grange by SISTER M. B. LANDER, of Alameda Grange.)

Worthy Master, Brothers and Sisters:—Not many years since there was developed into Ritual work some very queer notions; these crude ideas were at first seemingly so preposterous that prophecies alike of death and life flew thick and fast, quite regardless of the great issues at stake—namely, equal rights of the farmer with his contemporary professions. These new found principles were scoffed and hooted at as though they were the wildest fantasies of a demented mind. But, sisters and brothers, those pioneer grangers *built well*, for the keenest shafts of criticism failed to fell or the boldest stroke of policy to weaken this new tree organization, even though its rootlets sprang into life in the midst of the turbulent surging waters of the 19th century, and at a time, too, when from out her ripening years that stern fiat, "nothing new under the sun," had gone forth to a questioning, doubting people. Those same little roots have spread outward and upward, been transplanted into hills and valleys, and made to dot our land with a grange growth that is healthy and fragrant with good works; and this tree, with its fruit for good, is in your hands, entrusted to this body of men and women who to-night listen to these words. In the conception of our Order, appalling was that decree which said, the grange, like a well-regulated farm, has its gateways, which must be well guarded, that no intruders may enter. Said the outside world, you are erecting your own barriers to our help. Hitherto, has not your calling been sacred to hewers of wood and drawers of water, and, furthermore, has not the advice and patronage of the mercantile and commercial world been your sole moving power. Despite these croakings, the professional world was startled at this innovation of the Patrons of Husbandry, when, as if by magic, that great superstructure of society, the tillers of the soil, arose and placed themselves as self-supporting branches midst a forest growth of society organizations. Serious surely such a transformation, and the masses held their breath as ploughman and milkmaid whirled themselves into the foremost ranks of this world's onward march that they might royally keep step with those inalienable rights, the asserting of which, little more than 100 years ago, threw off all of England's shackles, reaching from the birthright of citizenship to the "throwing overboard the tea."

When once husbandman and matron had looked beyond their own little home-field to their great country home, or rather, merged their tiny home nest into the scale with that of his weary, toiling brothers of the nation, then did the clear, blue skies of freedom and equality begin to light their footsteps, and there was a famous subscribing to a noble Declaration of Purposes, giving such forcible expression to their wants, desires, rights and aims as shook almost to the center the foundation of all commercial life, and brought forth a wailing expostulation from lawyer, merchant, politician and monopolist, saying: Why rise ye to take this extra burden of thinking upon yourselves? We are ready at your call, will fly always to your aid, are subservient to your lightest wish, are, in fact and always have been, the unselfish, self imposed guardians of the weary, unthinking farmers.

This totally unlooked-for movement of the soil turner was by no means the least important of this country's changeful workings. Every other profession had their nut to crack; why should not the development of Time drop one for the farmer? Patrons, again we say, that nut is ours, and as we open it and get to the kernel, so will its history be printed on this age and make us each historians of no mean degree, and the creations of this life work may be as much a masterpiece as are the graven thoughts of the master minds of old. Are we gathering the fruits of this gift, or are we as of old cracking the shell for an obliging, waiting brotherhood at large to garner the kernel? This should be a leading question and go to the inner life and business of every brother and sister. Are

your hard and brawny hands getting for your sales the comfortable marginal percentage of the middlemen? Are you sending to legislative halls minds sufficiently in sympathy with your needs to get your iota of justice? Are you instilling into boy and girl minds the beauty and credit of labor, the dignity of justice and equality, and crowning all with such solidifying thoughts of truth and charity as will tend not to tear down other callings, but rather to raise this last born brotherhood of grangers to as high a plane as is occupied by any competitive society?

This Grange nut, whose flavor is now but half suggested, was a God-given boon, and is being speedily gathered, everywhere giving forth an oil that is slowly but surely lubricating the clogged wheels of the agriculturist and raising his status from an almost unknown one of lonely, isolated individual life to that of responsible co-operative community organization, thus putting upon the shoulders of the many the heavy burdens bequeathed by past generations upon the few. All its sweets were not to be gathered in a day, nor was its kernel to be laid bare to the gaze of idle curiosity, but were preserved for those who labor long and patiently wait. Do not the hearts and lives of our sisterhood respond to these virtues? Have they not, many of them, when on the outskirts of civilization, watched and waited long for any scant crumbs of society's pleasures and intellectual associations that might, perchance, fall to hungry, starving minds? Have not scores of our mothers helped to build pioneer heartstones, and then been put reverently away under the green sward ere their watchfires were gladdened by the light of their attained life-work, namely, the successful rising of their home nestlings from backwood loneliness and disadvantages to cultured men and women. Sisters present, as well as those anxious ones at home who could not be with us, did it ever occur to you that we are favored women, standing, as we do, welcome guests at inviting, wide open Grange doors, and when we have stepped over their threshold, even from the most retired pathway, at once become honored workers in the car of progress, and are most cheerfully greeted into a great procession of National Grange dimensions; thereby are opened many new avenues for those powers hitherto so potent in home government, and yet not in one iota encroaching upon that true womanhood which has, from time immemorial, been the wife's and mother's glory, as well as shield.

Sisters, the strength of our brothers stands in its finest light, when guiding and helping a timid sisterhood to greater intellectual heights, and as to sterner manhood is given the reins of power, let us strive through the purest and highest traits of womanliness—in the words of the old song, "show them the way to go;" then women of America, will not our words of thanks be quickened to anthems of gladness for our present social privileges, and will we not in the future, as we have most cheerily in the past, keep up our end of the plough-beam and till, if possible, still more beautiful grange fields for our coming sons and daughters?

Hard work, poor pay, still poorer crops, is ever the burthen of the average farmer, and his many times overworked wife shows her kinship feeling by doing everything and having almost nothing to do with. Old clothes, scant, patched and cheap, too, often hide the social side of her character, hence it is that many a grange hour is denied that lonely, retiring home mother who has not engrafted into her morbid life that beautiful thought of our illustrious Irving, that in patched, well kept garments there is "poverty not only honorably attained but decently maintained."

Brother and sister patrons the day is long past for us to rail at Father Time for our non-success, for every day is teeming with blessings, and if in their midst we "act well our part, there all honor lies."

The Influence of Association.

(Read before the late meeting of the State Grange by SISTER S. J. CROW.)

Worthy Master, Brothers and Sisters:—Seeing a request by our Worthy Master some time since that some of the sisters would write essays to read at this meeting, and thinking, perhaps, it might be here as in the subordinate Grange, one sister would wait for another, I concluded to write something to show my willingness to try and please our Worthy Master.

Looking around among the brothers and sisters, I see a few faces that I met at Santa Rosa a year ago, and it is very pleasant to see them again, even if we have had no personal acquaintance, and the people we meet here, as well as all with whom we associate, furnish us much food for thought. Those who observe persons they meet form some idea of their lives and character. Although each sister has a home of her own, with different surroundings and associations, yet our lives in many particulars are very similar. Our domestic duties, care of our children and household work must naturally be about the same. Therefore, there should be much sympathy between us, more than is apt to be; and one of the blessings of our Order is to bring us more together and give us a better opportunity of exchanging ideas, and we can, if we choose, make our work much easier, benefiting by each other's experience. We should, if we find a good method of doing any part of

our work, making butter, raising poultry, or anything that even comes under our observation that will benefit another, not be chary of our informations, but in a brotherly or sisterly way help each other to make our work as easy, our lives as pleasant and cheerful as possible.

I find the books we read have much to do with the current of our thoughts, and even our lives. If we read only books that are good and pure, our thoughts will naturally be led in that direction. Books are now so cheap that every farmer's wife can afford sufficient reading matter, and how pleasant, when one is tired, to take a good book and have a quiet hour with the author. Even the reading of history can be made very pleasant and profitable in our homes by reading it aloud winter evenings, and having the children who are old enough read it with us, and the next morning, during breakfast hour, talk over what was read the evening before, and ask questions and see what has been remembered. We will find that each one has something to say to instruct and help us to remember the past events. All good books of poems improve the reader; and while stories of different kinds will interest us, they do not rest one so much, as there is generally some anxiety or curiosity to finish, and unless the author is well known to write stories of the character of which we have no doubt, our time is not always well spent that is consumed in reading them. The stories of T. S. Arthur and Virginia F. Townsend, which carry with them household morals, always furnish us pleasant thoughts, and tend to make us happier and better.

If one has ever drawn the comparison between an hour spent with a newswy person, or an hour with a good book, it will not take long to decide which was the greater benefit. While we do not object to news, we should be careful that in repeating what we have heard, not to tell what would injure another, and never to repeat what we think to be incorrect, no matter who our authority may be. In speaking of anyone let it really and truly be our motto to speak of all the good we can, and if we can say no good, in charity let us keep silent.

I hope our meeting together here in this beautiful city of Stockton, this season, may be a lasting benefit to each one of us. May we be able to carry home many pleasant thoughts of those we meet here, and as from year to year we shall meet some familiar faces, and see new ones, and form new acquaintances, even if our meetings are only annual, they will be looked forward to with pleasure and pleasant anticipations, for—

Who would forbid the flower to bloom
Because so soon its petals fall,
Or, lest the day yield to night's gloom,
Forbid the sun to shine at all?

The tiny warblers come and go,
Yet who would bid them stay away,
Or shun the moonbeam's silvery glow
Because it cannot always stay?

Thus would I yield to friendship's power,
Though but a day its influence last;
Though o'er our pathway but one hour
Its radiant halo it may cast.

Dedication of Grange Hall.

EDITOR PRESS: The dedication of the American River Grange Hall was a complete success. A large attendance from the surrounding country and city were present, and all were much pleased with the dedicatory service, the first witnessed in the county. Due credit should be given to the officers in going through the same. The W. M., D. Flint, dedicated the hall, and was followed by a few remarks by your humble correspondent. In the afternoon a general love feast was participated in, in which many officers and aspirants mingled their voices with the matrons and husbandmen in speaking in good terms of Grange influence accomplishing throughout our State. Music and songs interspersed the remarks. In the evening a fine ball closed the exercise. All will remember the social gathering and the kindness received by the members of the Grange. GEO. RICH.
Sacramento, Cal.

SEEDING THIN OR THICK.—The late Mr. Mechi's belief in thin seeding is well known to all who have followed up his hints in regard to farming. Of course, in seeding land, more or less reference must be had to the character of the soil. In this regard he once wrote: "I consider the subject of thin or thick sowing of great national importance, and one that should be most carefully considered and studied. No rule can be laid down for every soil and climate, but let every one try on a small scale, and so arrive at a proper conclusion in regard to the seed required for his particular location or field." Farming, to be successful, must be carried on with care and thoughtfulness. One's own experience and the experience of his neighbors should be carefully noted and compared. There are but few lines of business that require more brains for successful management than that of farming.

TEAMS IN DEMAND.—A resident teamster informs the *Tuscarora Times-Review* that double the number of teams already there could have obtained employment during the past three months, and should the weather settle, a hundred teams could be kept busy until the winter blockade in hauling fuel for the mines, and freight from Elko.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

THE LUSK CANNERY.—*Oakland Times*: The factory of Lusk & Co., although not so active as it was a few months ago, is still busily engaged in packing fruit and shipping it east, where it finds a ready sale by reason of the superior quality of the fruit and of the canning. In connection with their fruit they ship large quantities of salmon, which they receive from British Columbia, the fish being used for the purpose of filling out the cans, as the firm never ships less than a carload at a time. The fish is brought to Broadway wharf, and is then taken by them to Sixteenth street, where it is loaded on the cars.

BUTTE.

GRAIN AND GRAPES.—*Chico Record*, Oct. 28th: There is much of the last season's crop that has not yet reached the shipping points, and some of the great wheat-growers have not even concluded their threshing, especially in the northern counties. Some individuals have suffered more or less from the early rains of several weeks ago, but the aggregate loss will not be much, unless perhaps, to the wine and raisin interests. Some varieties of grapes suffered severely, and there will be a noticeable shortage in the returns from the vineyards. The *Oroville Mercury* of a week ago reported that large quantities of grapes had been ruined by the rains, and several car loads that were unfit for raisin-making were shipped to Sacramento and Marysville.

HAULING EXPOSED GRAIN.—The steamers of the Sacramento Wood Co. are busily engaged hauling exposed grain from the banks of the upper Sacramento river. Calculation shows that if the boats do as well to the last day of the month as they have been doing since the first instant, over 19,000 tons of wheat will have been taken down during the month. The steamboat men report that it is now known that little damage was done to grain by the recent rains.

GRAPE SHIPMENTS.—*Oroville* is sending a carload and Marysville two carloads of grapes every day to Sacramento. Those shipped from this point come principally from the vineyards of Rideout, Grass Bros., and McAdams. Dr. Chandler has also shipped to Sacramento a few carloads of grapes that rain had made unfit to be converted into raisins. The distillery here is now receiving grapes from Oroville. It will get about 100 tons of grapes from that point.

FRESNO.

WINE.—*Expositor*, Oct. 25: The wineries all expect to close down in the course of a few days. About all the best wine grapes are used up. There are still a number of grapes on the vines, but they are sour and of but little use. Another season the wineries will be prepared to crush grapes as soon as they begin to ripen.

ALFALFA.—For the purpose of showing that an industrious man can make money on a 20-acre tract of land properly cultivated, we give the following: C. Carlson, at the Scandinavian colony, has a patch of two and three-fourths acres of alfalfa, and he has taken five crops of hay from it this season. The last and lightest crop he harvested a few days ago, and sold it in the field for \$60. This is at the rate of more than \$100 per acre for the season. Twenty acres at these figures wouldn't be bad to take.

COST OF RAISINS.—*Fresno Republican*:—Much has been said the present year discouraging to raisin culture and many have wished that they had planted wine grapes instead of raisin grapes, as the wine men would not pay more than \$15 to \$18 per ton for them. I have sold many thousand raisin cuttings in this vicinity, and have expressed my opinion that the raisin grape would pay. Now, in justice to that opinion, I would present the following figures showing what I have already done the present year, the exact cost of curing, packing, shipping, the price received for the raisins in San Francisco, and the value of raisin grapes as compared with wine grapes. First take the expense of curing and packing one box, 20 pounds, after they are picked from the vine (I will not figure in the picking and hauling, as wine grapes have to be picked and hauled to the winery):

Turning and taking up.....	10c
Box.....	15
Paper.....	20
Packing.....	20
Freight to San Francisco.....	17
Commission for selling, 5 per cent.....	10
Drayage in San Francisco.....	1
Total.....	80

We find it costs 80 cents per box for the expense of curing, packing, selling in San Francisco, etc. For one ton (100 boxes), the expense would be \$80. The grapes shrink 66% in drying, taking three tons of grapes to one ton of raisins. Three tons of grapes at say \$20 per ton, would be \$60 for the grapes, which, added to the \$80, aggregates \$140—the total cost of one ton of raisins delivered in San Francisco, including expense of selling. I have made five shipments the present season for which I have received \$275 per ton immediately on their arrival in San Francisco. From this we will deduct the \$140 per ton expense, and we have \$135 clear profit, equal to \$65 per ton for our grapes. Raisin grapes in full bearing will yield from three to six tons per acre, about the same as the average varieties of wine grapes.—T. C. WHITE.

LOS ANGELES.

THE COMPTON CHEESE FACTORY.—*Times*, Oct. 28: Mr. Omry Bullis, the cheese manufacturer of Compton, who received a premium at the fair last week, has built up from a small beginning a business that is close at the heels of Mr. Harshman's, and his success demonstrates what can be accomplished by dint of energy and good business ability. It can safely be asserted that the present resources of Los Angeles county could profitably employ 50 such cheese factories, in view of the fact that our alfalfa, alfalfa, splendid corn and barley, together with a superb climate, combine to render this section unrivaled as a dairy produce country.

MERCED.

SUMMER FALLOW.—*Merced Argus*. Farmers are actively engaged in putting in their summer fallow and cultivating their volunteer crops, and they report the ground in the finest condition. Many have plowed their summer-fallow the second time, and the early rains having started the weeds, they are harrowing in their grain, and the ground being broken deep and well pulverized the harrow effectually destroys the first crop of weeds, and the young grain shoots forth boldly and clean of grass or other impediments to its growth. Many have finished putting in their summer-fallow and are plowing for the winter sowing. On the whole the outlook is exceedingly favorable.

MONTEREY.

THE HARVEST.—*Salinas City Democrat*, Oct. 28: We understand that this week winds up threshing in the county. With this information comes the statement from well-informed persons that the grain which was caught out by the rain at the first part of the month sustained very little damage. Compensation for that little is to be found in the fact that the wet caused the seeds of grain left in threshing and of innumerable worthless plants, such as wild oats, "tecolete," etc., to germinate, so that when the land is plowed for the regular seeding they will be turned in, and so got rid of for the season following. The rains, therefore, inopportune as they might have appeared, will prove to have worked much good, cleansing the fields of a quantity of foul stuff.

NAPA.

THE WINE CROP.—*St. Helena Star*: The crop is considerably short of what was expected, being in many vineyards not much more than half. This deficiency is owing to the spring frosts. The general report among grape-growers is that the crop was only slightly injured by the rains, but it had the effect generally to lessen the saccharine percentage of the juices and in some instances affect the color of the wines.

PLUMAS.

ROUGH ON SHEEP.—*Greenville Bulletin*: The late storm was very severe on the flocks of sheep still remaining in the mountains at that time. The band of Alfred Weed, of Chico, then near the upper end of Big Meadows, got scattered and about 300 head were lost. Some of these have been recovered; these were found near Burt Johnson's place, two or three together. It is thought that of the 300 lost not more than 125 will be recovered. The last band of sheep in the mountains near Prattville passed out of the Meadows last Thursday.

SAN BERNARDINO.

GRAPE GRAFTING.—Chas. H. Larrabee, in *Press and Horticulturist*: "I report the result of our experiments in grafting made by myself this year. I have about three acres of Mission vines about 12 years old, and as they adjoin my raisin vineyard I think to graft them with Muscats next spring. I selected a healthy vine, and removed the earth to the depth of three inches, cut it off, with a sharp one-quarter-inch bit bored three holes in the crown of the vine one and one half inches deep. One just touched with its edge the inner bark of the stock, one was one-quarter of an inch inside the bark, and the third one was one-half inch from the bark. The scions were short-joined Muscats, the lower end cut off square, the outer bark removed and selected to fit snugly in the holes. A bud of the scion was put at the top of the stock, and two buds above. The scion nearest the bark has made a fine growth, the branches being three feet in length. The union is perfect, and the supply of roots is good. The wound of the stock was well covered with grafting wax. The scion one-quarter inch inside made feeble growth, and the one one-half inch did not start at all."

SACRAMENTO.

PERSIMMONS.—*Bee*, Oct. 31: On the premises of F. W. Sauze, on the south side of F street, between Twelfth and Thirteenth, are two persimmon trees in bearing. The trees are four years old, and one has now on it 15 persimmons, and the other four as large as fair-sized apples. The trees are quite a curiosity in this State, (although there are several growing in Sacramento), and a glimpse of them would gladden the heart of any native of the "sunny South."

SONOMA.

HAY.—*Cloverdale Sentinel*, Oct. 28: Hay is selling here at \$16 per ton, and scarce at that. Our stables and feed yards have to import the bulk of their supply from the southern section of the county, and the quality of the hay thus imported is said to be very inferior to that raised on the highlands in this vicinity.

CROP OUTLOOK.—*Petaluma Courier*, Oct. 25: Potato digging has commenced on some of the farms in this section, and the average yield and quality of the potatoes are fully as good as was anticipated earlier in the season. The area

planted, however, is not large for this county. Threshing is about over, and the damage caused by early rain was not near so large as was anticipated. In fact the damage to exposed hay and grain was comparatively insignificant. On some lands plowing and cultivating is very good, and the farmers are as busy as bees. The new grass is growing rapidly and on most of the pastures, and especially where well protected by the old grass, is high enough to afford good feed for stock. Several ranchmen have told us that their cattle prefer the outside grazing to good hay. Our apple crop is abundant and of very fine quality, except certain varieties which have been inoculated by the "borer." Fruits of all kind have been unusually plentiful this season and extra good as to quality. The wineries are all at work, and a few days more of clear weather will finish grape crushing. The grape crop is not near so large as it was last season, and owing to unfavorable weather has been slow about ripening. The yield for the county will be about two-thirds the crop of last year. Most of the grapes in this section are bought up by the Swiss dairymen, of Marin county, many of whom make their own wine. On the whole, this has been a most prosperous year for farmers of Sonoma county.

TULARE.

SWEET POTATOES.—*Delta*, Oct. 27: The boss bunch of sweet potatoes brought to Hanford, by James Andrews, weighed 18 lbs. There were 11 potatoes on the bunch—all from one hill. A sweet potato was brought to Kutner & Goldstein's that weighed five and a half pounds, but the *Delta* is not informed who raised it.

YOLO.

GRAIN.—*Democrat*: Farmers in the vicinity of Madison and Winters have about completed the work of putting in their summer-fallow. The early rains were sufficient to start the grass, and most of these lands had to be ridged of the grass and foul herbage. The summer-fallow is in splendid condition for receiving the seed, and as the ground is now pretty well moistened, it is thought that it will retain moisture until the winter rains begin to fall.

NEVADA.

CATTLE.—*Reno Gazette*, Oct. 24: Nolly Wiley drove in yesterday 500 head of cattle for Al Longley, of Reno. They came from Drexler, Ayres and Wheeler, of Warner valley. Mr. Longley will feed them this winter and fatten them for the San Francisco market. They are now in fair condition. Though cattle are said to be scarce in the northern country, there is a large number of good-sized bands within a few miles of Reno, which are being held in anticipation of higher prices.

RANCH SOLD.—**LIVE STOCK NOTES.**—J. F. Burns has sold his ranch and cattle in Harney valley to W. B. Todhunter. The price paid was \$35,000. E. W. Crutcher, of Paradise valley, has sold 950 head of beef cattle to Poley, Heilbron & Co., San Francisco, for shipment to that place. W. B. Todhunter, of Winnemucca, has had a lot of fine stallions and bulls brought from Sacramento for his ranch at White Horse, Oregon. The stallions are "Idlewild," "General Reno" and "Nutter." The bulls comprise three thoroughbred Shorthorns, two of which weigh over 2,200 pounds each, and four yearling Durhams.

WINNEMUCCA STOCK NOTES.—*Silver State*: Frank Button, on the Eastern Humboldt, is feeding about 160 head of beef cattle, and will probably increase the number. James Farrell has sold over 200 head of beef cattle and 400 tons of hay to Wm. Dunphy. H. J. Pratt has some 200 head of beef cattle in his pasture. He has 2,500 tons of hay stacked, a part of which he has sold to Dunphy. T. D. Parkinson shipped Saturday to a prominent stock man of Elko a carload of thoroughbred Durham bulls, said to be the finest ever seen in eastern Nevada.

PASTURE SPOILED.—In Douglas county, it is said, the pasture lands were so thoroughly soaked by the late rains that the sudden coming of the frosts killed the grass, and the result is that the usual fall pasturage is greatly impaired.

SIERRA MADRE TRACT.—We are pleased to learn that N. C. Carter, who lately sold his charming place, "Willowdale," at San Gabriel, to Capt. J. E. Ellis, has now under way a nice residence in the Sierra Madre tract. He is building on the solid rock on a spur of the mountain, while below he has 200 acres, one-half of which will be set in vines this winter. He has already 50 acres of vines growing finely. The Sierra Madre tract is going forward under Mr. Carter's management. They have now a postoffice, Sierra Madre, and a schoolhouse and other signs of progress are noted. The situation is unsurpassed, and we look for a thriving settlement ere long from the beginning already made.

GRAVEL IN CARP PONDS.—Mr. Levi Davis writes to correct an error we made in printing a former article of his on carp ponds. He wrote that there is no need, neither should there be any stone or gravel in the pond—and our printers made him convey another impression. Understand, Mr. Davis says no stone nor gravel for carp.

A NEW colony, to be called Ontario, is being laid out near Cucamonga, San Bernardino county.

News in Brief.

Measures for the relief of sufferers by the cyclone in Vuelta Abajo region, Cuba, continue. The General Manager of the Tehuantepec railroad, who is an American, has left the City of Mexico for the Isthmus. Work begins at once on the Pacific side.

The Socialists continue to hold large and enthusiastic meetings in all parts of France. Gambetta's name when mentioned is received with hooting.

A DISASTROUS fire has occurred at Margate, England. The Assembly rooms, vicarage and one whole side of Cecil's Square are burned. Loss, £300,000.

The Philadelphia Musical Festival Association has been organized, with a guaranteed fund of \$30,000, for the purpose of getting up a festival in April.

A SUIT at law is pending in Ohio against a telephone company which removed a telephone from plaintiff's premises "because of the use of profane language."

The Flint cotton print mill at Fall River was burned Saturday. The total loss, including the mill, machinery and goods in process of manufacture will be about \$750,000.

SETH GREEN will start for Florida about the middle of November, to study the habits of migratory fish, under instructions from the State Commissioners of Fisheries of New York.

In the season of 1881-82 more than 3,000,000 trees were planted in Great Britain, out of which number Scotland claims about 2,000,000, England, 600,000, Ireland, 300,000, and Wales 40,000.

The governments of England, Germany, France, Austria, Belgium and America have declared their intention to support the proposed International Agricultural Exhibition to be held at Hamburg next spring.

The Central Pacific railroad company's new steam collier is nearly ready for sea, and will sail direct for San Francisco in the course of 10 days. Her sister ship, the *San Pedro*, will follow in the course of three weeks.

Mrs. Mary Austin, who lately died at Washington, had 44 male children, 11 of whom survive. She had triplets six times. She was a doctor of medicine and a surgeon, and served through the war with the rank of major.

The Special Committee of the Mexican Congress on Postal Reforms has prepared a code, embodying the leading features of the American system. The code will be submitted to the Press for discussion before action by Congress.

The Austrian Government has granted concessions to an English company to build an elevated railroad in Vienna, and contracts for most of the 150,000 tons of iron which will be needed for the work, have been already awarded to Austrian furnaces.

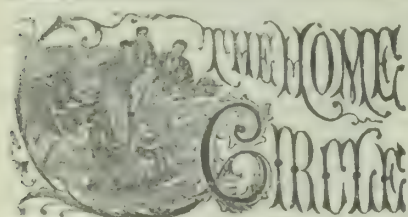
LEAVING local traffic out of the calculation, it is said that more travelers use the railway station in Kansas City than any other in America, a number of important lines coming together at that point. The keeper of the restaurant has to pay a rental of \$20,000 a year.

RUSSIA hopes that her trade with China will be increased by the line of steamers she has recently established between Chinese ports and Vladivostok, her new port in Eastern Siberia. Tea destined for Russia can now be conveyed from Vladivostok by river boats to Irkutsk, which is expected to become the chief mart of the Russian tea trade. Heretofore 35,000,000 pounds of tea have been carried annually by caravan to Krachta en route to Moscow.

C. M. SILVA & SON'S NURSERIES.—These well-known mountain nurserymen, at Newcastle, are proceeding with their testing and introduction of new small fruits and large fruits, and have this year a good list of promising novelties to offer to the planter. Silva & Son are experienced fruit-growers, and conduct their business with much enterprise. Everything brought at the East with a show of value is secured and planted in their experimental grounds. As trees and plants come into bearing young in this State the experimenter is soon able to gain some practical observations of value. We expect soon to have some engravings of new small fruits tested at Newcastle.

FRUIT LAND FOR SALE.—Our readers can hardly overlook the advertisement of the Pacific Coast Land Bureau in this issue of the *RURAL*, announcing the sale at auction of a tract of land in the famous fruit region near Vacaville. This, as is generally known, is the famous early fruit region of the whole State, and is the home of hosts of prosperous men who are rapidly building up fortunes from the produce of their trees and vines. This sale of land by auction on Wednesday, Nov. 25, will give an opportunity to many to get a foothold in a famous district, and we doubt not the sale will be largely attended. Messrs. Easton & Eldridge are doing much enterprising work with the Pacific Coast Land Bureau, and are helping to bring forward many desirable parts of the State.

THE CHICAGO SCREW PULVERIZER.—H. P. Nichols, of Stockton, has in another column an advertisement of the "Chicago Screw Pulverizer," which is worthy of attention. This implement is coming into wide favor for fine working of the soil.



By the Cow-Yard Bars.

With the kim looked on with reproachful eyes,
And waited outside the cow and barn,
On the dewy grass, at the milking hour.
He lay, as he gazed at the dancing stars.
And who knows what they were saying to him?
For his wondering eyes grew bright—grew dim,
While they danced in glee, and seemed to keep time
To his quickened heart with its throbbing rhyme.

"Is the milking done?" said his father's voice;
"What! here are the cattle outside the bars.
And that stupid boy lies there in the dew,
With his face upturned to the moon and stars!"
And the boy stood up, and was scolded well;
For, how could the father, impatient, tell
Of the lights to which he would some day rise,
His stupid boy with the dreamy eyes.

How could the father, my children, know
That the greatest astronomer earth can show,
Stood faltering there in his little son,
Who was late in getting the milking done?
But, weary of honors in after years,
A man looked back through smiles and tears
To the old home scene and the silver stars,
And the dreaming boy by the cow-yard bars.

Little Companies—Parlor Games and How to Play Them.

[Written for the PRESS by LUCY UNDERWOOD McCANN.]

Persons living in small towns or villages away from the stream of popular amusements, to be found in the theater, lecture-room, or concert hall of the larger cities, are more dependent upon their own resources for having "a good time" than their more fortunate fellow creatures, to whom all these entertainments come as a matter of course without any especial seeking of their own.

In the absence of these things, the cultivation of social amenities in small towns becomes a matter of the utmost importance to the young people of the community. Their appreciation of them, however, depends greatly upon the ability of the village host or hostess to successfully entertain the guests whom their hospitality gathers, from time to time, under their roof. It often happens in one of these out-of-the-way places, where her parlors are too small for dancing (even if that were not overdone elsewhere), that the hostess, dependant upon home resources entirely, is at her wit's end to know how best to amuse and amalgamate a little company of a dozen or more young folks into perfect harmony with each other, and send them all home, with every pulse of their young hearts tingling with enjoyment, to report to their mothers that they have had a "lovely time" and "lots of fun."

The question, therefore, constantly recurs to the genial hostess, who delights to invite a few friends "from half-past seven to twelve P. M.," as to what shall be done for their amusement during the evening. Of course, there are the time-honored stand-bys of whist, cribbage, casino, backgammon and checkers, in the way of household games, some one of which almost everybody plays. Chess, though delightful to its devotees, is too serious and absorbing a game to be at all admissible under the circumstances. Any of the former, however, may be used if one is in desperate straits and happens to have so ill-assorted a company that it is not possible to mix them with any hope of their ultimate amalgamation.

Sometimes an unfortunate hostess finds herself in this awkward situation, through no want of care in the issuing of her invitations, and her only help for it is to exert all the ingenuity of which she is possessed to prevent any unpleasant clashing of antagonistic parties. In such a case, separate little tables for whist, with congenial groups around them, may assist her in solving her difficulties by keeping the belligerents apart during the evening.

Should such an unpleasant situation occur through the thoughtlessness of the hostess in selecting her company so as to be congenial to each other, she really deserves to suffer for her temerity; and it is greatly to be hoped that she may insist upon Mr. Jones taking Miss Smith down to supper until the unfortunate young man is obliged to confess that the young lady in question declines to speak to him, or some other such mortifying event occurs, to teach her that until she has learned to assort her company more carefully she had better not attempt to have any. It were far better to divide the community up into congenial groups, and take each in turn, than attempt to "kill two birds with one stone" by inviting together parties between whom no assimilation is possible. Without forethought in this respect, the hostess may be inveigling her friends into situations which may cause them the utmost annoyance and discomfort, instead of contributing to their pleasure, as no doubt she had intended her little company should do.

Let us concede that all these preliminaries have been properly attended to. The invited

guests are known to be congenial. Our hostess has given her finishing touches to the table, and her floral decorations are eminently to her satisfaction, as she takes a final review of them whilst awaiting the arrival of her guests—let us say from twelve to twenty young friends. Although this number may seem small, and scarcely deserving the name of "a company" at all, to some people, yet to the average American housewife, with the average American servant and the average American house, it is as many as her small parlor will accommodate, her table pleasantly seat, or her servant conveniently wait upon. There is nothing more vulgar than to invite to one's house more guests than one has room to entertain, causing, after all one's trouble in their behalf, the miserable, unsatisfied crowd to go home gnashing their teeth as they repeat the old adage, "Fools make feasts," etc.

A small company is, in many respects, more manageable than a large one. The hostess has them all under her own eye, and can give her personal supervision to their entertainment, drawing out the diffident, preventing the woes of the wall-flowers, and inviting only true musicians to favor the company with music.

Our hostess has settled upon a sort of a programme, subject to variations, of course, for the entertainment of her guests, which if she have bright sons and daughters to assist her in carrying out, simplifies her labors very much. If not, some bright girl is elected in her mind as her aid-de-camp for the evening; or some rollicking fellow is taken aside, and greatly complimented by being asked by his hostess to help her give vim and spirit to the games she has chosen for the evening, which he knows so well how to lead, etc. The young man will lend his assistance with pleasure! There is a great deal dependent upon the manner in which you put things to people!

Half past seven has arrived, and soon after all the guests come pouring in. Among them, of course, are those pleasant people, Misses White, Brown and Black with Messrs. Jones, Smith, etc., without whose presence the pleasure of no little company is complete, as they are the "general utility" people of society. Our hostess seldom receives "regrets" from those she honors with her invitations; for all feel assured of spending a pleasant evening by the consideration exercised before hand in making out the list of her guests, and the care bestowed upon them when they are once under her hospitable roof.

The gentlemen leave their hats on the rack in the broad, well-lighted hall. The girls are conducted upstairs to the pretty spare room, fragrant with flowers and the sweet incense of exquisite freshness, from the snowy bed with its lace pillow-shams to the dainty accessories of the bureau and toilet stands.

There they take off their wraps, dust a little more violet powder on their fresh young faces, give their frizzes a loving pat here and there, with a "how do I look?" to some sister or friend. To this question common charity demands, under all circumstances, an affirmative answer. That is, something after this fashion: "I never saw you look so well;" "too sweet for anything;" "too too, you dear, and you know it." "Just like a picture," is often a great resource to a girl troubled with conscientious scruples, and bound to maintain at the same time both her snavity and her integrity, leaving the type of picture represented to be supplied by the imagination of her hearers, who will invariably construe it in a complimentary sense. This form is entirely safe, and one need have no hesitancy about using it in all questionable cases. And why not say pleasant things like this when one can, when the temper of the world is sweetened so marvelously thereby?

Bye and bye the girls flock down into the parlor like a bevy of bright birds, whereon the usual social interchanges take place with their hostess, each other and the gentlemen whom they join. The observant eye of the hostess notes everything and sees that all are enjoying themselves, while she listens with interest to a criticism upon some late works from one of the gentlemen, brought forth by the sight of the new novels, magazines and illustrated works, spread with careless profusion upon the library table. These have been skillfully culled from out her treasures by the provident hostess and placed here as topics of interest to assist the diffident, amuse the silent and afford entertainment to all.

As before remarked, the parlor or sitting-room of the ordinary American house is not arranged for the accommodation of dancing parties, and it is ridiculous to attempt such a performance in a small, crowded room to the uncertain music of a hastily impressed amateur pianist. Our hostess is too wise to make a mistake of this kind. As the evening wears on and conversation begins to lag, she gives a bright glance to her foreordained assistants, and suggests that they all forget for awhile that they are grown up people, and sit in a circle around the room (the largest one, whether it be sitting-room or parlor), while they try what fun may be had from some old-fashioned parlor games. The proposition is heartily received, the circle soon formed, and looks of expectation illumine every face.

"Perfection in playing games is a matter of practice and progression," announced their hostess, "so we will begin with the simplest. I suppose," looking doubtfully around, "that all here know their A B C's, nor would hesitate a second to mention, if called upon, a word beginning with any ordinary letter of the alpha-

bet. Mr. Jones—to her lieutenant—"will you take this parlor ball," (a pretty conceit, crocheted of bright wool and stuffed with horse hair, or a rolled up handkerchief will answer every purpose), "and we will inaugurate the game."

"My ship comes laden with"—
"A," we will take in this instance. You toss the ball to any one you choose, crying,

"My ship comes laden with"—when the person struck must answer, before one can count ten, the name of some article commencing with "A;" as apples, axer, etc., and instantly toss it on to some one else, with the same formula. Those failing to give a word in the required time pay a forfeit. The same word is not to be given twice in the same game. The faster the ball flies the merrier the game.

"Attention! Ready," cries Mr. Jones, as he tosses the ball to a pretty girl behind him. "My ship comes laden with—one—two—three—"

"Alligators!" she exclaims. "My ship comes laden with —," as she tosses it on.

"All-spice!" answers another, and so the ball goes bounding on, from one to another, in all directions, whilst "apples" and "ale," almonds and artichokes, ammonia and asafetida are bestowed upon the company, until at last words beginning with "a" begin to get scarce, and "ale" and "alcohol" are ruled out a score of times, whilst many ludicrous mistakes occur; as, when a pretty girl throws the ball into the arms of a poor fellow without another "a" in his brain, counting rapidly, "one, two, three, four, five, six, seven," until at last he shouts out in his despair: "Pie!" in vain attempting to explain, amid the laugh that followed, that of course he meant "apple pies."

It is needless to say that his answer was ruled out. He then threw the ball into the lap of the girl nearest him, who seemed equally uneasy as she vainly sought to find some other inappropriate word beginning with "a," whilst several of the company begin to count, "one, two, three, four, five," until at last in desperation she tosses the ball clear out of sight into the other room, declaring the game ended, as there was not another word beginning with "a" left in the English language.

Other variations of the same old game were tried, called "Earth, Air and Water," and "Fish, Flesh or Fowl." Taking the first, for instance, the leader throwing the ball at any one he may fancy, cries "Air!" or "Water!"; when the party struck must instantly name some animal inhabiting that sphere—as "air," "eagles;" "water," "whales," etc. These games, however, were quickly laid aside for others more intellectual.

Magic Music

Wherein one person is required to leave the room. The rest remaining, secretly agree upon something that he must do, or article that he must touch upon his return. The music of the piano, played all the while, is to guide him in his actions; growing very loud when he is near the wished-for goal, and dying away to the faintest whisper of sound when he is going in the wrong direction, until, at last, under its "magic influence" he touches or does the thing appointed by the company. Having a fine musician at the piano in one of the girl guests added wonderfully to the enjoyment of this game, aside from all the fun created by the individual under its inspiration.

After this the curly-headed aid-de-camp, Miss White, proposed that they try a curious game she had seen in her last visit to the city, called

Mind Willing,

Wherein the subject of operation leaves the room until it is agreed upon what he shall do upon his return; when those supposed to be most mesmeric, or possessing most will power among the company, stand around him and make the mesmeric chain in this fashion: Both hands of each person are spread to their fullest extent upon his chest, with the little finger and thumb of each hand crossing those of the hand next to it, until the circle extends entirely around his breast, when the "mesmeric chain" is complete, and those forming it, with the whole company in absolute silence, will intensely that he shall do the thing appointed. The person to be operated upon is charged beforehand to think of nothing, and be as receptive and sympathetic in mind as possible.

The result of this experiment was really astonishing, as the person chosen was placed in the center of the room, securely blind-folded, after which he was turned round and round for several times, so as to utterly confuse his ideas of locality concerning the room, its inmates, etc., when, with the chosen circle around him with their linked hands upon his breast, the operation commenced. It had been decided that the gentlemen should go to a mantle at the other side of the room and ring the small silver bell that stood upon it. Silence reigned. After standing motionless and confused for a little while, the subject began to turn around, and with slow uncertain steps, followed always by the circle surrounding him, with their hands upon him, and in utter silence, gradually drawing nearer and nearer to the mantle, where he stood a while, then slowly raised his hand, touched the bell and rung it, to the amazement of all present. The experiment was tried upon other members of the company with variable results. The girls, without exception, seemed to understand, clairvoyantly, what was expected of them, with much more readiness than any of the gentlemen, whilst it was found impossible to move some of the subjects from their original

positions. This the pretty aide de camp explained to an obdurate old bachelor, by saying that he had hardened his heart against woman's influence so long, that it had changed to adamant with him, and left him now, past all help or hope from their administration.

After the enforced silence of this game it was a relief to take up that bright old play, the pet of many a rhythmic heart, which allows so much larger scope for ingenious puzzling than is usually supposed to belong to the game called

"I think of a word and it rhymes with"

"Nigh," let us say. The player is not to ask "Is it sigh?" but must put his question to the leader in as puzzling a manner as possible, as, for instance, after this fashion: "Is it that unwritten expression of the soul when burdened with sorrow?" To which the leader, after guessing the word selected by the player, answers, "No, it is not sigh!"

Should the leader fail to guess the player's word, that person takes his place, and in his turn thinks of a word that rhymes with—anything he chooses, until some player guesses at the word thought of, when he takes the leadership. As an example of this play, from which all false rhyme is barred, let us take the following one. Among the young people included in our hostess' invitation was a bright young German, speaking English fluently, but with a slightly foreign accent. Karl was delighted with the game, and very quick at guessing the words. It soon became his turn, when he announced that he had thought of a word which rhymed with "bed."

"Is it some of the most fashionable colors of the day?" Asked one of the girls.

"No, it is not red," answered Karl.

"Is it the feeling that would overcome a person who should see a ghost?" asked another. "A ghost? A feeling of terror? Ah! no; it is not dread. Is it what so many heroes have done for their country? Heroes! fought and bled! No, it is not bled."

"Is it that indispensable article of commerce which assists in clothing the whole world?" asked Miss White.

This came very near being a puzzler, even to quick-witted Karl; but, at last he guessed her meaning, and answered triumphantly, "No, it is not thread."

And so the game ran on, until, like the poetess in Edward Eggleston's "New Timothy," they commenced at the beginning of the alphabet, and ran through it, "bed," "dead," "fed," etc., failing, however, to find the word Karl had thought of.

"It is so strange you do not guess it," cried the German. "It is a gardener's implement, in every-day use."

"Why, I guessed sled," says one of the girls.

"Ah, but it is not sled," said he.

After a few more ineffectual trials all gave it up, and demanded that he should tell the word of which he had thought.

"Well," laughed he, "I thought you would have guessed it the first round. The word is 'sped'; the tool the gardener uses to 'sped' up his flower beds," he explained, as they looked from one to another, inquiringly.

A burst of laughter, loud and long, from all present, greeted the innocent German, and it was a good while before any one was serious enough to explain to him the reason of their merriment, or his mispronunciation of the English word "spade."

"Ah!" cried one of the young men, "let's change the game before Karl gives us any more 'garden implements.'"

Dumb Crambo

Was next introduced, which game is like the last one in some respects, but with this difference: In the latter the company divide into two parts, one going into the adjoining room, whilst those remaining select a word to be guessed, rhyming with "Jet," let us say, which they announce to the other party. These then come in, one by one, and act out their guesses, instead of speaking them, just as they would in acting charades. For instance, a girl comes in with an open umbrella, dressed in a long waterproof cloak, with her rubbers on her feet, and steps, carefully lifting her skirts, over imaginary puddles of water. The first party, guessing her meaning, declare at once that the word is not "Wet." A gentleman then comes in with an old blue army coat on, a bandage over one eye, one arm in a sling—hobbling along as if he could scarcely walk, even with the help of the heavy cane upon which he leaned, as he went from one to another holding out his hand, begging charity. "It is evident he wishes us to take him for a 'vet,'" laughed one of the men, "but it's no go, old fellow. We know you to be an outrageous tramp. So off with you." The joke was all the more appreciated by those present as the pretended "veteran" was known by all to be an enthusiastic pedestrian. Another young man comes in, hastily rigged out as a fisherman, with a net (cleverly improvised with a lace shawl, with imitation corks out from brown wrapping paper, pinned around it,) thrown over his shoulders. He is soon sent back by the declaration that the word is not "net." Then a pretty girl comes in who personifies "a woman in a pet," which happened to be the right one; when the other side go out and take their turn at acting guesses. "Dumb Crambo" is, after all, only a variety of Acting Charades, which, being familiar to all, needs no description here, though the suggestion may be of service, that almost any leaf of the dictionary will furnish a number of words easily acted out in impromptu affairs of this kind.

[TO BE CONTINUED.]

Boys' and Girls' Aid Society.

This association is one which deserves aid and encouragement on account of its practical results. Since May 1st, a period of only 24 weeks, it has given 1800 lodgings and 4411 meals to friendless children. It has also distributed among these homeless ones 906 articles of clothing. It has found employment for 98 boys and girls in this city, and has found homes for 132 others; 70 of the latter were taken directly from the courts or prisons.

Its objects are worthy, and it saves many children who otherwise would soon have been numbered among our criminals. Until suitable homes can be found for these neglected children, it provides quarters with which are connected reading-rooms, baths, a gymnasium, savings banks, a school of cookery, a sewing school, a class in music and classes for instruction in other branches. Lectures and entertainments are given for the instruction and amusement of the children, and a temperance organization is connected with the society.

At present the society is greatly in need of money for the prosecution of the work; also, homes and employment for children. Clothing for both sexes, and all ages, is earnestly requested. Ladies and gentlemen in every town to whom the society can look for information in regard to applicants for children, and through whom children placed in their vicinity may communicate with the society are greatly needed. The society is situated in the midst of our city and should receive the attention of the creditably disposed. Communications or parcels should be addressed to 68 Clementina street, S. F.

THE STEPMOTHER.—It is time that the cruel prejudice against stepmothers should die out. Novels do much toward fostering this feeling; but surely writers should now be wiser in this respect. Cold-heartedness and oppression toward the children of one who has preceded her in heart and home are no doubt at times to be met with; but cannot many households tell another tale—a tale of love and gentleness, and mutual affection and peace? And cannot, too, some homes tell a third story, where the sufferer is the one who is looked upon as an interloper? Are there not cases where a man whose hearth has been early desolated, and who is left with little ones whom he cannot look after, with a heart still yearning for affection, brings home some warm-hearted girl, ready to pour out no stinted measure of love on the motherless ones; and what do he and she find on settling down to their daily life? That foolish relatives have already poisoned the baby minds against their second mother, and that her efforts to win their affection and trust are blighted by the influence that has been wielded. And when other little children come, too often, instead of being welcomed with brotherly or sisterly love, they are greeted with feelings of bitterness and jealousy. And yet many homes are held together by the stepmother alone. We might tell of sick beds watched with all a mother's devotion; of dying hours soothed with all a mother's faithful self-forgetfulness; of the young spirit sinking to the grave, clinging with fond affection to the representative of that real parent whom it was soon to greet in the spirit land; and we turn with just anger from pictures laid before us as false as they are ill-judged. Let us hope that this only prejudice may soon be unfelt amongst us.

WHAT GIRLS SHOULD LEARN.—By all means let the girls learn how to cook. What right has a girl to marry and go into a house of her own unless she knows how to superintend every branch of housekeeping, and she cannot properly superintend unless she has some practical knowledge herself. Almost every man marries without thinking whether the woman of his choice is capable of cooking him a meal, and it is a pity he is so short-sighted, as his health, his cheerfulness, and indeed his success in life, depend in a great measure on the kind of food he eats; in fact, the whole household is influenced by its diet. Feed them on fried cake, fried meat, hot bread, and other indigestible viands, day by day, and they will soon need medicine to make them well. A man will take alcohol to counteract the evil effects of such food, and the wife and children must be physicked. Let all girls have a share in housekeeping at home before they marry; let each superintend some department by turns. It need not occupy half the time to see that the house has been properly swept, dusted, and put in order, to prepare puddings and make dishes, that many young ladies spend in reading novels that enervate both mind and body, and unfit them for every day life. Women do not, as a general rule, get pale faces doing housework. Their sedentary habits, in overheated rooms, combined with ill-chosen food, are to blame for bad health. Our mothers used to pride themselves on their housekeeping and fine needlework.

THE VIOLIN.—Fashion now thoroughly admits the violin as an instrument for women. At the late competition at the Paris Conservatory of Music seven female pupils were admitted to compete with the men on the violin, and one of them—Mlle. Hillemacher—was fortunate enough to carry off one of the three first prizes, while another young lady took a first accessit—a sort of honorable mention. There are a number of women in both violin classes at the Conservatory.

YOUNG FOLKS' COLUMN.

Dora's Neighbors.

"Mamma," said Dora May, rushing, quite out of breath, into her mother's neat sitting room, "our new neighbor's little girls were at school to-day, and I feel sure they are just the sort of children you would wish me to associate with. They wore beautiful dresses trimmed with wide embroidery, and then their names; they must be genteel people, the oldest girl is Maud Lily, and the youngest, Ethel May." "So, then, you think that names express character? In that case a little girl who is called Theodora, (the gift of God), ought to be very good indeed in order to merit her name." Dora blushed as she answered: "You know, Mamma, you told us that as we cannot see into people's hearts, our imperfect idea of their characters must be gained from outward appearances, and that we judge of the refinement and culture of people and of nations by their dress, manners and surroundings."

"You remembered very well," said Mrs. May, "and I dare say time will tell us all about our neighbors, and I hope your anticipations of enjoyment in their society will be realized."

It will be easily seen that Dora was prone to believe that all well-dressed, good-mannered people were possessed of moral qualities to match, and that shabby, awkward persons expressed their want of virtue outwardly.

At school Dora took the Spencer girls under her own particular care, and they walked, and talked, and studied their lessons together for several weeks. But after awhile, almost imperceptibly, the intimacy waned as all too violent friendships do.

The final cooling of Dora's affection for her new neighbors occurred in this wise: Miss Monroe, the teacher, asked one morning quite unexpectedly,

"Who is sharpening a slate pencil?"

Nobody answered, of course, and Miss Monroe had no alternative but to question each pupil separately, asking,

"Was it you, Dora?"

"Was it you, Mary?"

And so on through the school, and received negative replies from each girl, and also from the culprit, Ethel May Spencer, who answered quite boldly,

"No, ma'am."

Dora's conscience was hurt by this equivocation; she herself might not have had the honesty and moral courage to speak out boldly and avow her breaking of the rule, but she never would have told a direct falsehood when questioned.

She avoided Ethel the rest of the day. It began to dawn upon her for the first time that beautiful dresses, sweet faces and pretty ways were not all that she desired in a friend. She did not feel very perfect herself. She was conscious of many little faults which she had not yet overcome, and she did not feel capable of acting as monitor to these girls, but still less could she renew her intimacy with them when she knew now, by many little indications, that they had not been taught to respect the truth. Dora's altered manner at first excited the concern of her friends, but being bright girls, they soon detected the element of disapprobation in her treatment of them, nor were they long, for school-girls are notoriously frank, in eliciting her objections to their conduct.

"Mamma says," said Dora bravely, although a bright spot burned in her cheek, "that no one can put any confidence in us or have any respect for us at all, unless we are altogether truthful."

Ethel turned away, and linking her arm within that of a passing schoolmate, walked off with much assumed dignity, assuring her new friend in a loud tone of voice, "that for her part, she never intended to speak to that stuck-up Dora May again." Maud fired a parting shot which hit the center of the target exactly. "I think, Dora May, your mamma must be an exceedingly tiresome old woman."

"Tiresome!" "Old woman!" Dora's outraged heart prompted her to return an angry reply, but at first she could not find words enough to hurl at the offender, and when this feeling subsided she dried her streaming eyes and resolved to seek from her mother a solution of this mystery, for surely these people were well-looking and surrounded by all the appliances of polite life.

Her mamma answered to her questions:

"Culture, like all good things, may be imitated, but true refinement springs from the heart, and if the heart is not true within, is the refinement genuine?"

CHILDREN'S CHANCES OF LIFE.—An English writer on vital statistics calculates that of ten children born in Norway a little over seven reach their 20th year; that in England and the United States somewhat less than seven reach that age, while in France only five reach it, and in Ireland less than five. It is also ascertained that in Norway out of 10,000 born, rather more than one out of three reaches the age of 70; in England one out of four; in the United States, if both sexes be computed, less than one out of four; in France less than one out of eight, and in Ireland less than one out of 11. Further, it appears that in Norway the average length of life, or the effective population, is 39; in England, 35½; in France not quite 33 years, and in Ireland not quite 29.

Kind Words.

(Written for the RURAL PRESS by MYRTLE.)

If we only knew how, by a little thought and patience, we could make many a poor tired soul happy, we ought to try. So many think that if a person does one wrong act he ought to be shunned and despised; but is it going to make them better? Is it very encouraging? Stop and think a moment. Kind and encouraging words cost but little, and do so much good we ought to be willing to give them.

I hardly think there are many lives so badly wrecked that they cannot be made better; that is, if they have a desire to improve. Many are impressed with the idea, that as no one cares for them, what difference does it make how they act, or what they do? But I am certain there is One who cares for us all, and we ought to strive harder to please Him than anyone else. Do your best and what is right and you will be sure to be happy and make others happy without being aware of it. But if in the first attempt at being good to others you do not succeed, don't give up. It is really no sign that a person is mean at heart because he offends or hurts others' feelings. We often do things with the best intention, but before we are aware of it we have injured some one's feelings, and we would be glad to recall the words. But often, so often, very dear friends are made bitter enemies for one little mistake. Do not haste to take offense. Do not throw away your friends for one mistake. What would we do if our Heavenly Father should give us but one trial to become better? I am thinking we would soon go to destruction.

Mason valley, Nevada.

GOOD HEALTH.

EXERCISE AND REST.—Exercise can kill as well as cure. To be taken advantageously, it should be done with judgment. Sometimes a particular part of the body needs exercise, but the whole body is too weak to give it. In such cases only the part needing it should have it. But there is one rule which is applicable to all—never go against the instincts. Many persons have hurried themselves into the grave by endeavoring to "keep up" when they ought to be in bed; and they do keep up, too, for so long a time that when they take to their beds their strength is so completely exhausted that the system has no power to rise, and they fall into a typhoid condition and all is lost. When anything serious is the matter with domestic animals they court quietude and perfect rest. Sometimes we feel indisposed to exercise from sheer laziness; in all loose conditions of the bowels, debility, an instinctive desire to sit down and stay there, is universal. In most of such cases quietude is cure. But there is one safe cure for all under all circumstances; if every step you take is with an effort, do not take another—go to bed; if you feel the better for a walk, then walk, but stop short of great fatigue.—Dr. W. W. Hall.

BITTEN BY A TARANTULA.—Louis Gurado, an Italian fruit vender, who keeps a stand at Second avenue and Fourth street, was bitten on Saturday by a tarantula, and was nearly frightened to death. He was in the act of cutting a banana from a bunch on his stand, when the insect, which was evidently hidden on the stalk of the bunch, stung him on the right thumb. Gurado struck at the insect and killed it. Soon after he felt a sharp pain in his thumb, began to feel dizzy and uncomfortable, and in a few minutes fell on the pavement like a man under the influence of liquor. His hand and arm swelled to nearly twice their natural size, and the swelling increased and communicated to his face and neck. His wife, who was with him at the stand, became alarmed and cried out that her husband was dying. A crowd collected about the man, and this attracted a policeman. An ambulance was summoned, and Gurado was sent to Bellevue Hospital. When he arrived at the hospital the swelling had already begun to subside. A cooling salve was applied to the wounded thumb, and yesterday morning, having fully recovered, he was allowed to go to his home.—N. Y. Times, October 9th.

THE MEDICAL PROFESSION.—There is no department of human effort and study that is held in a higher degree of honor at the present day than the medical profession; nor is there any other that contributes more materially to the happiness and welfare of mankind. To noble minds there has always been a great charm in the pursuit of the healing art, and it has been the chosen study of some of the most brilliant minds that have made their mark upon the history of the world. In this new world the science of medicine has outgrown many of the trammels that bound it in the old, and year by year its resources become richer and more varied, and its capabilities greater. To what ultimate pitch of perfection it may come it is not given to man to foresee.

DEATH FROM SEA SICKNESS.—A recent Boston paper states that a gentleman, whose name is not given, but who is said to be well known in the Western States and connected by marriage with the late Congressman, Thos. Allen, of St. Louis, after spending a few weeks at Nantucket, accompanied by his family, joined a fishing party, and while on the excursion had a violent attack of sea sickness, which passed into convulsions, in which he died.

DOMESTIC ECONOMY.

CHICKEN PIE.—Take two full-grown chickens, joint them, and cut the backbone, etc., as small as convenient; boil them with a few slices of salt pork in water enough to cover them; let them boil quite tender, then take out the breast-bone. After they boil and the soup is taken off, put in a little onion cut very fine, not enough to taste distinctly, but just enough to flavor a little; rub some parsley very fine when dry, or cut fine when green; this gives a pleasant flavor. Season well with pepper and salt, and a few ounces of good fresh butter. When all is cooked well have liquid enough to cover the chicken; then beat two eggs and stir in some thick cream; line a dish with a crust, put in the chicken and liquid; then cover with a crust. Bake till the crust is done, and you will have a good chicken pie.

TOMATOES FOR SUPPER.—By this mode tomatoes are good for supper or for breakfast: For half a dozen persons take six eggs, boil four of them hard, dissolve the yolk with vinegar and about three teaspoonfuls of mustard, and mash as smooth as possible; then add the two remaining eggs raw, yolk and white, stir well; then add oil to make altogether sauce sufficient to cover the tomatoes well; add plenty of salt and cayenne pepper, and beat thoroughly till it thickens; skin and cut the tomatoes one-fourth of an inch thick, and pour the sauce over. Though a little troublesome to prepare, yet if once eaten by persons who are blessed with palates to enjoy good things, they will be pronounced to be far superior to any other mode of preparation.

BROILING FISH.—In broiling fish the gridiron should be buttered to prevent the fish sticking to it; the inside of the fish should first be seasoned with salt and pepper, and then be exposed to the fire until brown, and the skin side next broiled without burning. Halibut sliced makes a nice broiling fish; trout, shad, salmon wrapped in buttered paper, large smelts split down the back, fresh mackerel, Spanish mackerel, small bass, weak fish, perch and many others, are excellent broiling fish. One of the nicest dressings for broiled fish is *maitre d'hotel* butter, which is made by mixing together one tablespoonful each of butter and chopped parsley, one teaspoonful of lemon juice, and a little salt and pepper.

FRENCH PUFF PASTE.—To make French puff paste take one pound of flour, half pound of butter, one egg, of which use the yolk only; rub half the butter into the flour, stir the beaten egg into a cup of water, and work the flour into a stiff dough; roll out thin, add one-third of the remaining butter, fold closely, roll out again, and so on until the butter is used up; roll very thin, and set the last folded roll in a very cold place for 10 or 15 minutes before making up the crust; wash with beaten egg while hot. This paste is very nice for oyster patties, as well as for fruit pies.

VIENNA COFFEE.—Equal parts Mocha and Java coffee; allow one heaping tablespoon of coffee to each person, and two extra to make good strength; mix one egg with the grounds, pour on the coffee half as much boiling water as will be needed, let the coffee froth, then stir down the grounds, and let it boil five minutes; then let the coffee stand where it will keep hot, but not boil, for five or ten minutes, and add the rest of the water. To one pint of cream add the white of an egg, well beaten; this is to be put in the cups, with the sugar and the hot coffee added.

VEAL CAKE.—Cut a few slices from a fillet of veal. Place a layer of the meat at the bottom of a pie-dish, next some sliced cooked ham and hard-boiled eggs cut up, then another layer of veal, and so on until the dish is full. Have ready a pint of good brown gravy, well-seasoned; dissolve a quarter of an ounce of gravy in a little water, stir it into the gravy, and let it simmer over the fire for a minute or two; then add a glass of sherry, pour over the meat, and when cold turn out.

WATERPROOF BLACKING.—Dissolve one ounce of borax in water, and in this dissolve gum shellac until it is the consistency of thin paste; add lampblack to color. This makes a cheap and excellent blacking for boots, giving them the polish of new leather. The shellac makes the boots or shoes almost entirely waterproof. Camphor dissolved in alcohol, added to the blacking, makes the leather more pliable, and keeps it from cracking. One dollar will buy material enough for a gallon.

FRIED EGG-PLANT.—Pare your egg-plant; cut in slices a third of an inch thick, and lay them in strong cold salt and water for three hours, putting a plate and weight on them to keep them under the water; wipe each slice; dip in egg beaten with a tablespoonful of cold water and fine cracker crumbs; fry in boiling drippings or half lard and butter.

POTATOES A LA DUCHESSE.—Take cold, well-seasoned mashed potatoes, roll out and form into little biscuit-shaped cakes (a little flour may be used to form them, but do not mix flour with the potato); arrange cakes on a pie plate, glaze them over with beaten egg, and bake to a delicate brown.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.

Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$6.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	6.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, November 4, 1882

TABLE OF CONTENTS.

EDITORIALS—Oleomargarine; A Famous Clydesdale; Iron for Grapevines, 341. The Week; The Duty of the Hour; The Secret of Success, 348.

ILLUSTRATIONS—Imported Clydesdale Stallion, "Prince of the Marches," 341.

QUERIES AND REPLIES—Jersey Milk for Cheese; The "Kieffer" Pear; Amber Cane Seed for Fowls, 348.

PATRONS OF HUSBANDRY—Annual Meeting of the State Grange of California; The Influence of Association; The Rise and Progress of the Grange; Dedication of Grange Hall, 344.

AGRICULTURAL NOTES, from the various counties of California and Nevada, and 345.

NEWS IN BRIEF, on page 345.

CORRESPONDENCE—The Santa Cruz Fair; Placer County Notes, 342.

SHEEP AND WOOL—The Mohair Industry, 342.

ENTOMOLOGICAL—Scale Insects on Deciduous and Ornamental Trees, 343-53.

HOME CIRCLE—By the Cow-Yard Bars (Poetry); Little Companies—Parlor Games and How to Play Them, 346. Boys' and Girls' Aid Society; The Stepmother; What Girls Should Learn; The Violin, 347.

YOUNG FOLKS' COLUMN—Dora's Neighbors; Children's Chances of Life; Kind Words, 347.

GOOD HEALTH—Exercise and Rest; Bitten by a Tarantula; The Medical Profession; Death from Sea Sickness, 347.

DOMESTIC ECONOMY—Chicken Pie; Tomatoes for Supper; Broiling Fish; French Puff Paste; Vienna Coffee; Cold Cake; Waterproof Blacking; Fried Egg-Plant; Potatoes a la Duchesse, 347.

HORTICULTURE—Annual Meeting of the Horticultural Society, 349-50.

PISCICULTURE—Carp Culture—No. 3, 350.

METEOROLOGICAL—How to Predict Frosts, 350.

Business Announcements.

Plows and Seed Sowers, Baker & Hamilton, S. F. "Aero" Pulverizing Harrow, Nash Bros., New York. Chicago Screw Pulverizer, H. P. Nichols, Stockton. New Process Roller Flour, Sperry & Co., Stockton. Seeds, J. P. Sweeney & Co., S. F. Squirrel and Gopher Extirminator, Wakelee & Co., S. F. Groceries, Cluff Bros., S. F. Household Sewing Machine, Mark Sheldon, S. F. Farm Mills, Simpson & Gault Manfg. Co., Cincinnati. Wild Grape Seed, James M. Hutchins, Kelseyville, Cal. Jersey Bull for Sale, J. T. Hoyt, San Mateo, Cal. Selected Steel Wire Fence, Sedgwick Bros. Choice Fruit Land, Pacific Coast Land Bureau, S. F.

The Week.

The rains have returned and will keep along the growth which had started briskly, but was endangered by the drying north winds. The signs are now surely for a wet, growing winter, for the rain comes easily and gives the husbandman confidence. It is probable that a year of unusual fullness is at hand, for there will be a long working season, and all available land will be put to good use. It may be one of the full years in the San Joaquin valley, at which we shall rejoice, for many have been patiently waiting for one of the old time harvests.

Everything is shaping for a general observance of Thanksgiving. The State will be in its most lovely dress, and the promise of the year will gladden all hearts. The vexation and turmoil of the political campaign will have passed away, and we trust that the choice of good men will invite thanksgiving. Let all prepare to observe the day in the spirit in which it is appointed by the President, and the country will be the better for it.

In every tobacco factory in Key West there is a "reader." Cubans cannot talk without gesticulation, and in order to keep them from talking a person is hired to read aloud to the hands during working hours.

The Duty of the Hour.

But a few days remain before election, and it becomes all to earnestly think of the manner in which they will discharge their high duty as citizens. Whether the government of the State and its representation in the National Legislature shall be such that the liberties and rights of the people shall be fully asserted and maintained, or whether these liberties and rights shall be subjected to the greed and ambition of the few, is, after all, the main issue in the present campaign. There never has been a time, perhaps, when there was greater need of honest, intelligent and independent exercise of the elective franchise than at present. There have been important issues before, and it must be acknowledged that the victory has not always been with the right, because those who aim to secure wealth and power by overriding the popular interests and rights, have made not a little progress in their evil ways, and are emboldened to press forward to greater oppressions and exactions. And this is being done in the face of the fact that the rights of the people are being more and more definitely defined by the courts, and the advantage is on the side of popular privileges and prerogatives. The plan seems to be, as it has been hitherto, to lift men into office who will be so weak in their executive functions that the laws shall fail of execution, or to secure as representatives of the people men who will make laws in the corporate rather than in the public interest. The duty of the voter is, then, to throw his full weight and influence in favor of the election of clean, honest men who can be trusted in the possession of upright motives, and wide-awake and intelligent men who cannot be misled or persuaded to the support of specious but dangerous enactments.

The selection of such men is the problem to which the voter should address himself, and no doubt he will be led to independent action in many cases, for he may often find the candidate with the proper qualifications on another ticket from that he has usually voted. That fact should not prevent his giving his vote to the best man—to the man with clean hands, with a record for integrity and uprightness, and whose associations are with men of similar character. The State and the nation need that public affairs shall be trusted to the care of honest and incorruptible men. Such men can only be elected by the determination of the electors to vote for candidates whose lives have shown them to possess the sterling qualities of truth, integrity and intelligence, rather than for those who are full of professions of virtue, which they have never shown by their acts or their associations.

Candidates for local offices are generally personally known to the electors, and here the voter should place his first stake and abide by it fearlessly. No inducement or persuasion should tempt one to vote for a man unless he is already known to be of the right stamp. Beyond the range of personal acquaintance, the voter has to trust to his information and belief, and to the association in which the candidate is found. If the election of any one is urged by those who have private interests to serve it may be surely inferred that they advocate their man because he will advance their designs and interests. If he is urged by the majority of the disreputable element in the district it may be well inferred that he has something in common with them, and, therefore, upright and public spirited men should vote and labor for a better man, upheld by better men.

The effort to secure the best men for places of public trust is not easy; for one man who votes honestly and in accordance with his knowledge and convictions, there are many who are led by the pothouse politicians and saloon bosses, and thus rallied to the support of men and interests who care not for the public good, but for the promotion of selfish ends—dangerous men who are ready to dispose of their influence for private emolument; corrupt, unprincipled men, in whose hands no measure of public weal can be advanced, because they will sacrifice everything to their personal appetites or avarice. Any man who will consent to give his vote for such men is an enemy to himself and to the State.

Let, then, everyone address himself to the task of placing in office at the next election men of good repute, of creditable records, either in public or private life, and men of honorable associations. From the highest to the lowest places shun those who are doubtful men. The clear, ringing metal of manhood and citizenship is what the trying times demand. Avoid any man's man, unless the friends of the candidate be those whose motives you know are upright and in the public interest. Beware, also, of startling sensations and discoveries heralded just on the eve of election to deceive the unwary. Study the candidates well; choose the good and reject the evil and the doubtful, no matter at what cost of old political affiliations. If we can get the State and local offices and the Legislature full of thoroughly good men, we shall secure in them a force of truth and principle which will lead in a new era of popular rights and prosperity which will illumine all homes and enrich all lives.

Let every good man be sure to vote, and not, by indifference or disgust, allow unprincipled men to carry the day through the apathy of better-hearted and better-minded voters.

THE artesian well at Weed Island is down nearly 500 ft., and no flowing water found.

The Secret of Success.

It is well known that both France and England produce much more to the acre of cereal and vegetable products than is realized from the same area in the United States. The estimate for France is fifty per cent. more, and a much larger per cent. for England. Why is this? How is it that English farmers can so exceed our own—especially when we consider the many centuries during which English farms have been under cultivation, in excess of those of this country?

The secret of their success is due to greater care which they exercise in raising and selecting seeds and in all the various processes of cultivation. American farmers appear to think that anything will do for seed; that drainage is of but little account; that heavy manuring will damage the soil and "burn out" the crops; that deep plowing is hurtful and careful cultivation will not pay for the extra labor. In California a farmer has been heard to boast of a new and valuable labor saving process which he had introduced on his farm in turning a small stream through his stable and stock-yard by which he was enabled to "sluice out" the manure and get rid of it much cheaper than by use of the shovel and cart! It is full time that such folly was done away with; it has had its day. Let our farmers adopt the more reasonable plan of feeding the land, that it in turn may feed the crops. When that is done we shall have no more of worn-out lands, and our average wheat crop will go up to the English standard of thirty or thirty-five bushels to the acre, instead of the present yield of only fifteen.

No one quality is more needed by the average Californian than carefulness. Our people waste enough to support comfortably another population equal to the present one. This wastefulness which is manifested in almost everything is what keeps the majority of our people comparatively poor. We ought to be the most prosperous people on the globe, and the reason we are not so is because of the endless little leaks which we certainly permit if we do not indeed encourage.

To go back in our remarks to the farm—Manure lost is money lost; and yet we go on throwing it away, or at least the great bulk of it, year after year, as though it was of no value. The Chinese and many of the Italian gardeners are exceptions to the rule, and they realize from an acre of ground fully double the value which an average American will obtain.

Take the case of farm produce; the past month tells a story of carelessness which is absolutely astonishing to a resident of even the Atlantic States. Take our stock ranges, innocent almost entirely of anything in the shape of shelter from winter rains and cold. In addition to a large percentage of actual loss from exposure, those that survive require about double the amount of food which would be needed for stock properly sheltered. The animals are compelled to generate the heat from food, which is radiated from their bodies by lack of shelter. That much food is lost for all practical purposes.

In regard to our grain crops, there is not one farm or ranch in twenty which produces anything like the yield which might be derived from a more careful cultivation and proper preparation of the soil. There is also much unnecessary waste in harvesting.

Then, again, there is great carelessness and loss in and about the farmer's home. His wagons and farm tools are too often allowed to needlessly deteriorate by reason of exposure to the weather. The same carelessness is quite too often seen in the house and especially in the kitchen. The custom of driving two horses instead of one in a single buggy is also oftentimes a reckless wear of horses and horseflesh. Shelterless homes, sans trees, sans shrubbery, sans garden, sans paint or whitewash are too often the rule, where cosy cottages, shaded with trees and covered with vines and flowers might beautify the landscape and add immensely to the pleasure and prosperity of our farming community. A well kept house and a well tilled farm is a comfortable living and a fair competence to any man; while on the other hand slackness and carelessness about the house and farm is an almost sure cause of poverty, which is too often the parent of wretchedness, if not of crime.

Carp Culture at Lincoln.

Mr. James E. Young, one of the enterprising and industrious citizens in Lincoln, Placer county, has interested himself in this department of pisciculture, and with what results a visit to his premises will show. Though he has started out on a small, experimental scale, his venture has thus far proved a complete success, and he is now enlarging his pond. He has demonstrated that a single hand with comparatively no capital can raise carp in abundance and to great advantage and pleasure.

Mr. Young dug his own pond, supplied it with water from his own tank and windmill, and purchased 27 young carp from three to five inches in length from a carp pond near Grass Valley, with which he started his little pond, originally 20 by 30 ft. in dimensions. He is now enlarging it to 20 by 40 ft., and purposes to line the bottom with gravel. The depth of his pond is about three feet. The pond is located on a slight incline, and by this means he is en-

abled to change the water. The 27 carp were placed in the pond last spring, and all but six have lived through the long, hot summer and are healthy and growing fast even under the worst circumstances. Mr. Young takes great pride and pleasure in attending to his carp pond, and has done all the necessary work to establish it himself before and after business hours. The fish are now large and fine, and in the early morning may be seen jumping out of the water in high spirits. They are not particular about what they eat so long as there is plenty of it.

QUERIES AND REPLIES.

Jersey Milk for Cheese.

EDS. PASSES—I would like to ask a question of some of your Jersey breeders through your valuable pages, as I know most of the stockmen of the coast take, or should take, the PASSES. I am told on what seems to be good authority that the cheese factory at Compton, in this county, will not buy milk from Jersey cows because it will not curd. As I am somewhat interested in Jerseys I would like to know if this is true.—R. M. D., Santa Ana.

Our correspondent appeals unto Cæsar, to-wit: the Jersey breeders, and the subject is therefore committed to their attention. We may remark, however, that there is no trouble with coagulating Jersey milk. On general principles the infusion of a portion of Jersey milk with that of common cows would be decidedly to the advantage of the cheese-maker. We can see how a man might not like to buy a straight lot of Jersey milk to make into cheese by itself, especially if he were not skillful in preventing the escape of the butter oil in the whey, for in this way he might possibly lose weight, but for a batch of Jersey milk to mix with other there could be no such objection. There is, however, a disadvantage in delivering Jersey milk at a cheese factory, but it is on the side of the milk producer, not the factoryman. The Jersey milk producer will lose money by selling his milk with its high percentage of cream to the factory at the same rate that is paid for the poorer milk of the average herd. He had better make butter of it, and thus realize its full butter value, which he would not get by selling by weight at the factory.

It is quite likely that in working up all Jersey milk into cheese the maker would have to modify his process somewhat to prevent the escape of the cream, just as the makers of English stiltons (made from milk with cream added) work differently from the cheddar makers; but from the amount of Jersey milk a man is apt to get from a number of dairies taken together, there could be no precautions needed, except the usual gentle handling of the curds, etc., to get the extra oil into the cheese and not into the whey vat. We imagine that if the Compton factoryman has had to decline Jersey milk, it is because of some other reason than that the milk is from Jersey cows. What has the Compton factoryman to say on the subject?

The "Kieffer" Pear.

EDITORS PASSES—So far as I know, I am the first fruit-grower in California to show the famous "Kieffer Hybrid Seedling" pear—the third year from the grafting; scions from Wm. Parry, of New Jersey. One tree fruited last year, having five pears; but this year I have ten large trees in full bearing, with a further plant of over one hundred. By the express to-day I send you some of these pears for examination, and when sufficiently ripened—say, some few weeks hence—for tasting. They have yet their reputation and market to make, for the table and for canning; but it would be difficult to add anything to their exceeding beauty of form, as well as size. The vigorous growth of the Kieffer, its large, glossy leaves of a deep green, and its being a very prolific and constant bearer, as well as its quality as blight-proof, combine to make this the coming pear for this coast; provided, as I believe will prove to be the case, it exhibits a corresponding high quality. I can supply from ten to twenty boxes of the fruit, and, at the proper season, a full supply of cuttings, of which due announcement will be made in the columns of the PASSES.—J. WINCHESTER, Columbia, Cal.

The pears were shown at the Horticultural Society meeting, and much admired for their beauty. We will see how they are on ripening. Mr. Winchester was the first to announce to us that he had the Kieffer about three years ago, but the first fruit we ever saw came from Dr. Chapin, of San Jose, about two weeks ago.

Amber Cane Seed for Fowls.

EDS. PASSES—I would state for the benefit of our chicken fanciers that I have completely dried up my hens by feeding amber cane seed.—R. M. DUNGAN, Santa Ana, Cal.

Much misapprehension exists concerning the value of some sorghum seeds as feed. Their flinty husks defies digestion, and of course the eater suffers from malnutrition. Broom corn seed is often proclaimed in the newspapers as valuable for cattle food, and even as a bread material. The fact is, it is quite low in nutritive value.

JUDGE-Advocate Swaim, in reply to an inquiry of the Secretary of War, takes the ground that officers of the army who refuse to pay their debts are liable to process of the common law the same as civilians, and that where their acts tend to bring discredit upon the army, or in any way impair the efficiency or discipline of the service, will constitute sufficient cause for court-martial.

THERE are 43,000,000 acres of land in California still belonging to the United States, 20,000,000 of which are suitable for agricultural purposes.

A TYPHOON destroyed the greater part of Manila, Philippine Islands, September 29th, and beached 13 vessels.

HORTICULTURE.

Annual Meeting of the Horticultural Society.

The annual meeting of the State Horticultural Society was held Oct. 27th, in the Academy of Sciences building, President Hilgard in the chair.

The following named gentlemen were elected members of the Society: W. M. York of Berkeley, Richard Wheeler of Alameda, John Ellis of San Francisco, and W. P. Hammond of Oakland.

President Hilgard reported verbally that the business of the Society was in a satisfactory state, but it was to be regretted that no exhibition of fruits and flowers had been held this year.

Growth of the Society.

Secretary Wickson submitted his annual report, in which it was stated that since the organization of the Society in September, 1879, with 28 charter members, the whole number of members elected, including the charter members, was 136, of whom 96 had paid the entrance fee; loss of members by death, 2; by resignation and departure from the State, 5, leaving the actual membership 91, with 49 unqualified members, some of whom may be expected to qualify. The receipts from entrance fees and dues during the 13 months ended October 26, 1882, amounted to \$228 25.

Valuable Records.

The records of the society, it was stated, contained full copies of all written addresses made during the three years of its existence. These documents covered a wide range of horticultural topics, papers on all the leading fruits being carefully presented by members practically familiar with their culture. There were also valuable essays on the different branches of horticulture, from planting to marketing. The leading discussions had also been phonographically reported, and had received favorable notice from fruit growers all over the State. It thus appeared that the records of the society comprised a deal of practical information on horticulture of a character to be of great benefit to persons beginning fruit culture in California, and valuable for reference to all in the business. It was accordingly recommended in the report that measures be devised for the publication of the proceedings of the society. The increase of the membership roll and the income of the society was also needed, and would enable it to carry out on a broader basis important measures for the advancement of the interests of the horticulture of the State. To accomplish this end a more accessible place of meeting should be secured, and the operations of the society should be better systematized by the creation of standing committees, as contemplated in the constitution. Such committees should at once be appointed and urged to review the timely subjects in their province, and present their conclusions and recommendations to the society for final action. The society could then transact 10 times the business which it now did, and could look to the accomplishment of greater and better results. The report was received and referred to a special committee, consisting of Messrs. A. T. Hatch, E. Wollen and J. V. Webster.

Treasurer Trumbull also presented a report, which was read and referred to the Board of Directors. The report showed the receipts for the past year to have been \$228 25, and the expenditures \$186 35. The excess of receipts added to the balance carried over from last year leaves the society with \$216.25 on hand, and no debts outstanding.

Officers Elected.

The following officers were elected for the ensuing year:

E. W. Hilgard, President; A. T. Hatch, Vice-President; E. J. Wickson, Secretary; R. J. Trumbull, Treasurer; James Shinn, H. Jessup, W. B. West, Dr. J. Strentzel and Matthew Cooke—Directors.

Discussion on the Work of the Society.

Mr. Tisch: It is about a year ago that I became a member of this society. I attended two or three meetings. I was told that the society would do something in floriculture, and I received a notice that the meeting would be on bulbs. I came and waited an hour and a half, and the subject was not discussed, and I went home disgusted. I don't believe that once a month is enough for this society to come here and talk upon horticulture. I think we ought to meet here twice. There are a good many ladies that would attend if floriculture was taken up. I think that if we would take up this subject once a month it would draw in numbers; ladies would take an interest. We cannot all have fruit orchards, but we have our little gardens. Let, then, a man of knowledge come in and tell us his experience, and I know we would draw members. I am a florist and a nurseryman, and I would like to come and take up something about growing roses, sowing seeds and green-house work. I think it would help a great deal in this society.

Mr. Hatch: I have heard once or twice before of this; that it would be desirable to have something on floricultural subjects discussed at each meeting, and I have also heard such a subject appointed. It is rarely, if ever, that any person has been here to propose floriculture

in any of its branches. Therefore, it is more the fault of those who should have been here to propose it than any one else.

Mr. Trumbull: I can fully indorse the remarks of Mr. Hatch. There has been a disposition since the society was organized to take up all phases of the subject. When we were organized first, my impression was that in the floral department we would be more likely to succeed better than in fruits. Our early membership was largely composed of florists and nurserymen. That class of members abated themselves to a considerable extent. I suggested subjects on horticulture, in hopes of drawing in persons interested in the discussion. They were not present. The fact that so much time has been given to fruits is because of lack of interest in other subjects. I feel this much, that instead of fault-finding with the membership, there should be thanksgiving that we have an element among us that has carried the meetings along with such success. If we had been wholly dependent on floriculturists, we would not have been in existence. These subjects on floriculture will be gladly taken up if brought forward, and persons will open the discussions. If the leading members on floriculture absent themselves, whose fault is it?

Mr. Tisch: I don't find fault with the society; I merely thought it would be a very good idea to have these subjects discussed.

Mr. Shinn: I don't exactly wonder that our florists feel as they do. I remember on one or two occasions some of our florists proposed to discuss flowers and shrubs. There were two subjects taken up. The first one took up the whole afternoon. Some got disgusted. Let us do hereafter a little more than we have done. But it must be borne in mind that the great interest is in fruit—canned, dried and the like—and it can't be expected but that the Horticultural Society will be more interested in fruits, insects, and the like, than in floriculture.

Mr. Tisch: In regard to fruit orchards and fruit planting, I don't believe that they are taking the right course in planting out two or three kinds of fruit—the Bartlett pear, the prune and Royal apricot. I believe in five or six years from now there will be more fruit orchards for sale. I believe in planting an orchard to getting a variety, to find out which will do the best. If people go on planting apricots as they have been the last few years, there won't be enough tin to make the cans.

Mr. Hatch: I would make a motion that fruits and flowers alternate in their precedence; flowers one meeting, fruits the next.

Prof. Hilgard: That has been already done. Mr. Hatch: There has been no one here to speak about the flowers. If a floricultural subject was proposed, there was no one to discuss it.

Mr. Jessup: The fact is, the lack of interest in the men engaged in that part of horticulture. I have heard complaints on that subject before. We never found a man (and we tried two or three times) who would take up that discussion. I am not interested in it, although I would like it to succeed; but I want to see the men stir themselves, and not have the subject brought here every month and not a man to answer to his call. That has been the true case of the matter. Those gentlemen that find fault with it never come to take part in the discussion. Let those engaged in fruit raising discuss that question. Those interested in floriculture often come late, and then we can't disturb our discussion to take up the other subject. If those gentlemen will stir up their brethren engaged in that branch, I think they will find an opportunity to discuss those questions here.

Prof. Dwinelle: I don't propose to show how much about floriculture I don't know. It would be too vast a subject. I would say this, I have been a good deal interested to find out why we couldn't have discussions on floriculture. My conclusion is this, the floriculturists are altogether too prosperous to come here and waste their valuable time to come here and enlighten the average man or woman. I may be wrong, but this is my conclusion, that the floriculturists are too prosperous. They don't care to waste their time and give away their secrets in such a meeting as this. We have had a great many ladies in the society, but it was very hard to get them to express their minds. They were more interested in silk culture, and they ran away and formed a silk culture association. I don't think we are much to blame. I would like to have the subject of floriculture come up every time. I would like to have the time divided here. I will make a motion that a committee of florists, members of this society, be appointed to present a subject.

Mr. Shinn: I would amend that motion; let there be a floral subject every other month.

Mr. Wollen: Mr. Tisch's remarks were in part correct, and also the replies. When there was to be a discussion on floriculture, perhaps the members were here, but the time was taken up in pruning or fruit culture. We have five directors, most of them engaged in fruit culture; not one engaged in floriculture as far as I know. That shows the tendency of the society. It is a little one-sided.

Mr. Hatch: Do you see the name of any floriculturist on that list?

Mr. Shinn: Do you know why there are no other names? There was a florist who took enough interest to nominate a florist.

Mr. Wollen: I think the society has branched a little to one side. The State of California offers more possibilities to floriculturists than any other State in the Union. It was my hope in the beginning that we should take the matter up.

Mr. Trumbull: There is a good deal of truth in what he says, but I still insist on this view. When I became identified with this society (I was one of the first ones), my mind was unprejudiced. I supposed the whole subject would be developed; but I do know that when a floral subject has been proposed there was no one here to open that subject. I have had in my mind for some time, not only on floriculture, but also fruit culture, that it would be well to have a question drawer. Many persons come in here as visitors who, if they could ask questions, would be glad to do so. Why would it not be a good idea to have this question drawer and have a regular point in the proceedings to open it. Why can't we have both subjects in the same day? A floral subject first, and then a fruit subject. I don't know as the Board of Directors are going to furnish a subject. They have not done so heretofore.

Mr. Jessup: Can't a committee of florists be appointed to suggest subjects for discussion at alternate meetings, which at that meeting shall have the precedence over other subjects?

On motion of C. H. Dwinelle, W. G. Klee, D. Tisch, E. Wollen, E. Meyer and C. Neper were appointed a committee to choose some floricultural subjects for discussion at every alternate meeting.

Mr. Wollen moved that a drawer be placed in the Secretary's office, where all questions pertaining to horticulture might be dropped by any one. These questions will be answered by the society at its meetings. The motion was carried.

Fruit Statistics.

Mr. Hatch: I would like to propose one thing, and that is the matter of fruit statistics; and one thing gives it more prominence in my mind, and that is the fact that the canners took great pains to get statistics of some individual fruits, and have found it a great benefit. It was found out by one test this season that the fruit growers had better success in making correct statistics than the canners had.

The San Jose Meeting.

C. H. Dwinelle, of the Board of State Horticultural Commissioners, made the following statement:

Those present will note an important omission in the invitation to the Fruit Growers' Convention at San Jose which has been sent out. In the enumeration of subjects to be considered great prominence is given to insect pests and measures for their suppression. It is by no means intended that the attention of the convention shall be exclusively taken up by the disagreeable side of fruit-growing, however pressing that may be. There will be ample opportunity for the discussion of the brighter side of horticulture, as pruning, gathering fruit and marketing it, drying and other modes of preserving. Something was done in this direction last year, and as a three days' session is contemplated, much more of interest should be drawn out. It is particularly desired by the Committee of Arrangements that those engaged in fruit drying should bring samples of their products, put up as they are usually sent to market. There will be abundant space for any amount of dried fruit that is likely to be sent in. It would be well, however, for anyone expecting to need much space to send word at once to Dr. S. F. Chapin, of San Jose. Short statements of the method by which specimens were prepared should accompany them.

Grafting Over Almond Trees.

Prof. Dwinelle: There is a subject on which I would like to know something, and that is, what to grow on the almond trees which are not profitable.

Mr. Jessup: I would state that I have grafted over old almond trees 10 to 12 inches in diameter, shortening in the limbs all the way from six inches to two feet long from the trunk. I have cut them off and taken old sacks and clothed the trunk with them to keep from sunburn. Rub off the sprouts, except what you want for working on; then the following season cut those off and graft them. I have had excellent success both in grafting with plum, prune and apricot. One I grafted three years ago was so loaded with apricots that the limbs broke off. Those grafted with Bulgarian prunes had shoots of one year's growth nine feet long.

Prof. Dwinelle: I would like to ask Mr. Jessup whether the apricot that broke down broke in the apricot wood or tore out of the almond.

Mr. Jessup: It broke in the apricot wood, although the union is not a clean one; but it holds. It has not broken out at the graft. The Hems Kirk, Bulgarian and Yellow Egg are good ones to graft.

Mr. Collins: The Yellow Egg plum for one does well on almond, and there are several more. The Imperial Gage plum does first rate. The bitter almonds don't hold these kind of things as well as the sweet almonds.

Mr. Jessup: I would state in reply to that that the Yellow Egg and the Bulgarian prune are put on the hardest kind of bitter almond, and they do far better than on the sweet kinds.

Mr. Shinn: One of my neighbors has taken trees 12 or 15 years old, and of considerable size, and grafted in large limbs. He thinks that a good way is to cut the top off this year and let it throw out fresh shoots; then rub out what you don't intend to use. Let them remain until budding time that fall. You may put in the buds in July or August on good branches.

Mr. Jessup: A great many object to the cutting off of the trees that year and letting them throw out new wood on which to work, stating

that they lose one year. They rather gain one year than lose.

Mr. Collins: I took six branches in the top of a bitter almond tree and grafted them. I let the other branches grow until the grafts were two feet long, and then cut them off. In two years I got two boxes of Imperial Gage plums from that tree.

Prof. Dwinelle: I would state that last spring, in accordance with Mr. Collins' suggestion, and with some scions obtained from him, some almond trees were worked over, cutting off part of the branches, and grafting onto the old wood. I am told by the owner that on part of the trees the scions have taken perfectly. There were several varieties, but I don't know which took the best. The Yellow Egg was one of them. I was interested to note the other day in a Riverside paper that a gentleman had brought into town fine specimens of nectarines grown on the almond. In my opinion the nectarine is the coming fruit, and I think it is very well to note this fact. I know that large numbers of almond trees have been cut down this year that might have been worked over. It is not safe to cut the tree right off and graft into the old wood, for there will be such a rush of sap that a north wind will whip the scions out.

Mr. Jessup: This year I have grafted over a great number of almonds. I told my man to leave two or three limbs in the center, but in his avarice he wanted to leave too much fruit on. He has left so much top that it has injured the grafts a great deal.

Mr. Hatch: Talking about it being advantageous to graft the almond into something else, I would like to have all of you graft your almonds into something else. I have something that I graft into almonds, and that is the almond itself. I find them very profitable. Some varieties have not done well, but some varieties do do well. I am trying to find those varieties to graft onto my almond trees. I think it will be the most profitable tree in the State. It is a good-paying crop, easy to handle, and you have your own time to market it in.

Mr. Jessup: Our president speaks from experience. I know that for myself. He has a favored locality for the almond. The president has met with the most marked success in the production of seedling almonds ever produced in the world. He has secured 30 odd varieties of as fine almonds as were ever seen in the market from the seeds of one bitter almond tree. Then he is in a climate that when his almonds ripen the atmosphere is dry and the soil does not furnish moisture enough to keep the hulls green, so the hulls dry away and leave the fruit dry and clean and easy to handle. But when you come into our strong valley lands, especially in our section of the country, they refuse to dry, the tree furnishing moisture for the nut all the while. The consequence is we have to handle it all by hand and find it very expensive. Then, independent of that there are many sections in which the almond will not bear. In some places they scarcely get an almond. They have large trees, they fruit heavily, but the fruit drops off. Sometimes a tree won't have a pound of almonds on. Taking the advantage of those varieties that Mr. Hatch raises, I don't think that the almond will succeed in but very few places in the State. I have found it to pay \$250 an acre, but that was an exception and not the rule.

Mr. Shinn: I have been glad to hear this subject of the almond discussed, both as to its profitability and as to its prolificness. It is clear that wherever the almond succeeds well it is a reasonably profitable crop.

It is pretty evident that the almond, such as is generally grown here, does not do well. In some localities it must be discarded. In other localities, a few miles distant, they get a good crop. From an old orchard near Niles they get a good crop every year. Mr. Clough always gets a fair crop, but it begins to fail as you go down to the bay. A gentleman planted a large orchard, but never got enough almonds to pay expenses. If there is a variety of almond that is as fruitful as the peach, then it is a great success.

Mr. Hatch: If I had only when I got my first almonds, gotten the Languedoc, it would have been a total failure, and I might have been discouraged; but I found in the 300 trees I purchased of Mr. Kelsey one tree of another sort. It bore well. It was surrounded by the other trees and those bore well. I found now that where my seedlings are surrounded by Languedocs, those Languedocs bear better. In regard to the seedlings, if any of you would like some I will send you some scions.

Report on Fruit Exhibited at the Last Meeting.

W. W. Smith, of the committee appointed to examine the fruit shown at the last meeting, reported as follows:

1. Seedling Peach—From Dr. Grattan, of Stockton. Pure white; pit very small for so large a peach; very sweet and juicy. Well worthy of a further trial.
2. Seedling Peach—By Dr. McCowan, of Ukiah; sent by A. O. Carpenter. A yellow cling; round, smooth outline; no suture; to red at pit; flesh firm, fine grained and sweet. Has promise of being very fine.
3. Walter Peach—A chance seedling from a yard in Oakland; tree overbearing and uncultivated; white free stone. Of considerable promise. By Leonard Coates.
4. A White Cling Peach—Without name. A promising peach.
5. Red B. Heflower Apple—Seedling; raised by J. L. Marshall, of Brown's valley, near Napa City; exhibited by Leonard Coates. A very large, deep red, red apple—the red extending all over the apple, and covered all over with small whitish dots, somewhat resembling those of a strawberry. A very beautiful apple.
6. Specimens of Newtown Spitzenberg Apples—By J. Shinn, of Niles. Very fine.
7. Specimens of Japan Plums—By Mr. Hammond, of Oakland, which were very fine. Fruit growers should give their attention to the cultivation of this fine fruit.

8. Several specimens of Japanese Persimmons, but the specimens were generally too green to tell much about them.

9. Dried Specimens of Cuck's Golden Drop Plum—By W. H. Jessup, of Hayward. Very superior indeed.

10. Specimens of Dried Peaches—By R. B. Bowers, of Woodland. These specimens were certainly superior. The variety of it was that known in Pleasant's Valley as the "Mewer" peach.

11. Several specimens of Pears were exhibited by Mr. Klee, of the State University. The most notable were the "Howard" and "Napoleon I."

Several other specimens of fruit were exhibited, more or less worthy of notice, but the exhibitors did not give their names.

On motion of Mr. Jessup, the meeting named the peach first mentioned in the above report "Grattan's Late White."

Fruit Exhibits.

There were several very interesting exhibits of fruit made at the meeting. Mr. Shinn brought Newtown, Spitzenberg, Hoover, Ben Davis, Northern Spy and Dominie apples. J. Winchester, of Columbia, Tuolumne county, sent a fine exhibit of Keiffer hybrid pear, a very handsome fruit. E. Steele, of National city, San Diego county, sent quinces weighing 25 oz. and 17 oz. respectively; also some very fine apples. The fruit was grown without irrigation. John Eckley, of Eekleys, on Carquinez straits, brought muscat grapes, some from vines grown on soil to which iron filings had been applied, and some on soil not ironed. The grapes on the iron were notably larger and finer. Another member showed the buerre Alexander Lucas pear. John Rock, Jas. Shinn and C. H. Dwinelle were appointed a committee to examine and report next month upon the different seedling fruits shown at the meeting.

The Next Meeting.

The subjects chosen for the next meeting were "flowering bulbs," to be opened by Mr. Tiesch, of Oakland, also "raisin growing" and R. B. Bowers, of Woodland, A. E. Briggs, of Winters and James Boyd, of Riverside, were invited to join in opening the discussion.

PISCICULTURE.

Carp Culture.—No. 3.

EDITORS PRESS:—Well, I feel somewhat like a balky horse in a cold collar, and if I were to submit to my feelings I would lay down my pen to some one more able and willing to take it up. But it appears that I am hitched on a one-horse hack and must pull it or the cart will stand still. Hence, I will proceed to plod along the best I can.

Their Food.

We had dragged along to where the little beauties (the minnows) were hatched. They came forth supplied with a little bag of food attached to their mouths, which is sufficient to last them about one week, and by the time they have consumed all the yolk (as it is called by culturists) they are then able to take food, which they obtain from the scum of the water and otherwise. In a few days they will take food prepared for them, such as the curd of sour milk, meal, middlings, bran, bread, boiled cabbage and potatoes, melons, grain and vegetables of all kinds, or anything that a pig will eat. It is useless to enumerate; suffice it to say that they will eat anything in the vegetable line, even the excrement of the domestic animals. If ponds are rich in natural food they will do moderately well with but little or no attention. But experience teaches us that the better the care and attention to the domestic animal the better the development and the greater the percentage gained; even so with the carp. We also know from experience that there is a vast difference in stock of the same species. For instance, we obtain nearly double the amount of beef from the same amount of food given to a good Short Horn than we do from a common scrub. Or, for instance, take a scrub pig and a good Poland-China, and give them the same care and attention, and the scrub will remain a poor, mangy, noty thing, almost disgusting to look at, while the China will be always fat and ever fit for the oven. Now, there is still

A Greater Difference in Fish.

The carp having the ascendancy, while it consumes only the refuse vegetable matter (as you may say); while the trout require this to be transformed into animal matter before considering it food at all. See the difference. Then, again, the carp are not cannibals, and, therefore, all sizes can be kept and reared in the same pond, which is an item of considerable importance, and renders them preferable to all other good fish. Then, again, the rapidity of their growth and the enormous

Size which They must Attain.

The first season they gain in length from 3 to 6 in.; the second from 6 to 10 in., and the third from 10 to 20 in., and so on until they obtain their full growth. Mr. Hessel says that they increase in length only up to a certain age, but that their circumference increases up to their 5th year. Says he: I have seen carp in southern Europe that weighed 30 and 40 lbs. and more, and measuring 3½ ft. in length by 2½ ft. in circumference. Another account gives the weight of some weighing from 50 to 60 lbs. each, and a French engineer killed a carp in the Danube that weighed 65 lbs., the scales of which measured 2½ in. in diameter. There were two taken from the ponds of the Duke of Oldenburg that weighed 42 and 55 lbs., they being only

15 years of age. The chronicle of the Monastery of Molk gives the weight of one at 78 lbs. Still another account gives the weight of one at 90 lbs. However, they do not often exceed 20 lbs. in weight and 4 ft. in length. But Jovious mentions some caught from the lake of Como in Italy that weighed 200 lbs. each, and others have been taken in the Danube 5 ft. in length. We will now return to and speak of

Our Home Growth.

But before proceeding further I wish to correct another mistake which has got in public print, namely, that the carp acquire their growth at three years old, which is not the case by 32 years, according to the statements of Mr. Hessel. And, to speak personally, my three-year-old fish were always from 10 to 16 in. in length while my eight-year-old fish are still growing, and when they were six years old measured 32 in. in length and 14½ in. in circumference. We will now consider the home growth of some others. I let a Mr. Billings have two small fish which were no more than three or four inches in length, and one year thereafter he informed me that they then weighed five pounds. A Mr. Chas. Harris, of Hill's Ferry, Cal., writes me as follows:

"Last winter I wanted some breeding carp, but thought the price asked by some more than I could stand, but bought 75 carp, said to be two years old and weighing less than one pound each; some of them died in transporting; I opened some, finding both sexes full of spawn; 14 miles of the way they were very much shook up, and it may be that the spawn was killed, as I can see no little fish. My stock fish have grown three fourths and one pound to four and six pounds each in weight. Now, will you please give me your opinion and tell me what you think was the cause of my carp fish not spawning? Also, give me your lowest price for 500 carp (try)."

I might go on and give many more similar statements, but presume these are enough to show to readers of the RURAL PRESS what can be done. We need not expect all of our fish to make such giants, as these are exceptional specimens. Still these facts are encouraging illustrations, showing that it is possible for such specimens to arrive at under favorable circumstances. The carp live to a

Very Advanced Age.

The pond in the garden Enanel College, Cambridge, contained a carp that had been an inhabitant of that pond for more than 70 years; and Gesner has mentioned an instance of one living to be 100 years old. Mr. Hessel says there are specimens to be found in Austria 140 years old. Prof. Baird says that he has evidence of them living to be 200 years old. They are also very tenacious of life and will live for a considerable length of time out of water. I have shipped 25 miles in wet grass, and they were still alive and well when taken out. Mr. Geo. Finley, of Pittsburg, Pa., writes me that seven carps, six inches long, lived six days in four gallons of water with a large amount of fern therein, and that they were as well when taken out as when put in. I have shipped carp all over this western coast from Idaho in the north to Mexico in the south with less than three per cent. loss.

To Raise them Successfully for Market.

We want a pond for each year that we wish to keep the fish. For instance, we want a hatching pond; here we keep the breeding fish, and in the fall we want to take all the young fish and transfer them to another pond to themselves, and let them remain so until you are ready to put them in market. But in order to keep them from increasing you want a few cannibals (but smaller fish) in the same pond with them to eat up their spawn, and for this I presume the pike is the best, but the trout will answer. We want to keep each year's hatching in separate ponds, until the first is emptied, using the same process. Then we can empty and refill a pond each year, and to assure good success we should draw the water off once each year and remove all the young, if any, and all enemies to the fish, of which I will speak shortly.

LEVI DAVIS.

Forestville, Sonoma Co., Cal.

PAINTING ON SILK.—Some years ago an artist of Florence employed a method of painting on silk and other fine fabrics in such a way that the surfaces of the colors were not damaged when folded or rubbed. His paintings, even when subjected to tests far more severe than such crumpling as ordinary wear would produce, are said to retain their appearance unchanged, the colors remaining as bright and the surface as smooth as when first laid on by the brush. The method is now no longer the complete secret it was, as the medium is at present manufactured for amateurs, though protected by patent. An example, consisting of groups of flowers painted on blue satin by this Adolphi process, shown by Mr. Emil Dunki, has been subjected to hard rubbing, without there being any appearance of injury to the painting. Some Italian artists have tried the medium for oil-painting on canvas.—*Land and Water.*

GETTING RID OF STUMPS.—In the early autumn or winter bore a hole one or two inches in diameter, according to the diameter of the stump, and about 18 inches deep. Put in it one or two ozs. of saltpetre, fill the hole with water and plug it close. In the ensuing spring take out the plug and ignite it. The stump will smoulder away, without blazing, to the extremity of the roots, leaving none but the ashes.

METEOROLOGICAL.

How to Predict Frosts.

A pamphlet giving directions how to foretell frost has been prepared by Lieutenant James Allen, of the Signal Service, under the direction of General W. B. Hazen, chief signal officer of the United States army, and published by authority of the Secretary of War. The information it gives is of great value to horticulturists and others who live at places not reached by the bulletins of the service giving warning against frosts. From the pamphlet referred to are taken the following extracts on the

Hygrometry of the Atmosphere:

At all temperatures, even the lowest, moisture exists in the atmosphere in an invisible state; the air is never absolutely dry. The intervals between the particles of air are partly filled with the vapor that is constantly rising from the earth. This capacity of the air for moisture has a limit, and when this is reached the air is said to be saturated. This vapor is not sustained in the air like water in a sponge, nor does it float in the air like small particles of dust, but it penetrates between the particles of the permanent gases which compose the atmosphere, and sustains itself precisely as they do. A rise of temperature increases the capacity of the air for moisture. On the other hand a fall of temperature diminishes the capacity. But the capacity of the air for moisture increases more rapidly than the temperature.

Thus, air can contain at 30° the 160th part of its own weight, at 59° the 80th part, and at 86° the 40th part, the law being that for every increase of 27° the capacity is doubled.

The Amount of Vapor in the Air

May be measured with great accuracy by noting the temperature at which moisture begins to be condensed on a cold vessel. The moisture thus deposited is called dew, and the temperature at which this deposition begins is called the dew point. The dew point, then, may always be determined by cooling a metallic vessel until dew begins to appear upon its surface, and noting, by a thermometer, the temperature of the vessel. Thus, a thermometer is placed in a polished metal cup, and small pieces of ice are dropped in until moisture appears on the surface of the cup. At the instant this occurs the thermometer is read. The temperature indicated is the dew point. In this experiment, however, the results are approximate, and, as it requires considerable time, various contrivances have been proposed to facilitate it, but one of the best methods is that of

The Dry and Wet Bulb Hygrometer.

This hygrometer consists of two mercurial thermometers, which, being placed side by side, would indicate the same temperature. The dry bulb is a common thermometer, intended to show the temperature of the air. The wet bulb is also a common thermometer, but having its bulb covered with a piece of thin muslin, from which passes a few threads of darning-cotton or narrow strip of muslin into a small vessel containing rain water. Water rises by capillary attraction from the vessel and thus keeps the muslin constantly wet. When the air is dry, evaporation from the muslin proceeds rapidly, and, on account of the heat lost in this way, the wet bulb indicates a lower temperature than the dry bulb; when the air is damp, evaporation is slower, and the difference between the two thermometers becomes less, and where the air is completely saturated, evaporation ceases, and the two thermometers indicate the same temperature.

Necessary Precautions.

To keep this instrument in working order, one or two things require special attention. The thermometers must be alike, for if one is filled with mercury and the other with spirit, or if they contain different quantities of the same fluid, the readings will be vitiated. All starch or foreign matter should be washed out of the thin muslin covering and the cotton wicking. Rain or distilled water, absolutely pure, should be used. The muslin ought to be changed frequently, and should never be touched with the finger, otherwise it will get slightly greased and capillary attraction will be interfered with. The bulbs of the thermometer should project one and a half or two inches below the scales. The thermometers should be a little apart from each other, and the vessel containing the water as far as possible from the dry bulb. The thermometers should face the north, and should always be in the shade. They should be at least a foot from the wall of any building and about ten feet from the ground, and exposed to the air where the circulation is unobstructed. They should be protected against the heat reflected by neighboring objects, such as buildings or a sandy soil, and should be sheltered from the rain. If the dry bulb should become moistened by rain the bulb should be carefully dried about five minutes before making the observation, since drops of water, by evaporation, would lower the temperature of the mercury in the bulb. All instruments should be of known reliability and their accuracy determined by comparison with standards before being used. Accurate instruments will be procured by the Signal Office for observers at cost price; they will be compared with standards at the office and correction cards will be furnished free.

Cost of a Hygrometer.

A complete hygrometer costs \$7. A minimum thermometer is a very useful auxiliary to the above instrument. It costs \$5. To facilitate the taking of observations, Lieut. Allen gives in his pamphlet a table showing the dew point at the various temperatures, as indicated by the dry bulb, ranging from 30° to 80°, with the difference in 13 readings, between the wet and dry bulbs. There are 15 columns of figures. The left-hand column is the different temperatures of the air, as read from the dry bulb, ranging from 30° to 80°. The top row of figures gives the difference between 14 readings of the wet and dry bulbs, ranging from 0 to 13. The dew point is determined by the following rule: Subtract the reading of the wet bulb from that of the dry bulb; find the temperature of the dry bulb in the left-hand column of the table, then in the line opposite that figure, and in the column under the figure at the top of the table indicating the difference between the readings of the wet and dry bulbs will be found the dew point. The table (which, for want of space, cannot be reproduced here) simplifies the operation very much.

The Ascertainment of the Dew Point

Is of great practical importance, particularly to horticulturists, since it shows the point near which the descent of the temperature of the air during the night will be arrested. For when the air has been cooled down by radiation to this point, dew is deposited and latent heat is given out. The amount of heat thus set free being great, the temperature of the surrounding air is immediately raised. The same process continues to be repeated, and thus the temperature of the air, in contact with plants and other radiating surfaces, may be considered as gently oscillating about the dew point. For, if it rises higher, the loss of heat by radiation speedily lowers it. Thus the dew point determines the minimum temperature of the surface of leaves on the ground during the night. The minimum temperature in the instrument-shelter would be higher than this. This suggests an important practical use of the hygrometer. If the dew point be ascertained by it, the approach of low temperatures or of frost may be foreseen and provided against. Thus, suppose on a fine clear day, towards evening, that the dry bulb is 50° and the wet bulb 40°, the dew point at the time is therefore 22° F. Frost on the ground may then be predicted with certainty, and no time ought to be lost in protecting such tender plants as may be exposed in the open air. If, on the other hand, with a sky quite as clear, the dry bulb is 50° and the wet bulb 47°, the dew point being thus 43°, no frost need be feared.

Assuming the sky to remain perfectly clear of haze or clouds, the raising or depressing of the dew point during the night (usually with a change of wind) are the only circumstances that can happen to interfere with the predictions founded on the hygrometer. Frequently the presence of a haze at high altitudes during the night prevents the radiation of heat from the earth, and thereby the frost which otherwise would have occurred.

Hoar-Frost.

Hoar-frost is formed under the same circumstances as dew, with the exception of a lower temperature. When the temperature of the surface of plants falls below 32° the moisture of air is condensed upon them in the solid state, and forms a layer of snow crystals like spongy ice. Hoar-frost therefore is not frozen dew, but the moisture of the air is deposited in the solid form, without having passed through the liquid condition. Hoar-frost, like dew, is deposited chiefly upon those bodies which radiate heat, such as plants and the leaves of vegetables, and the deposit is made principally on those parts which are turned toward the sky. Since plants sometimes become cooled by radiation from 12° to 15° below the temperature of the surrounding air, a frost may occur, although a thermometer a few feet above the ground, in an instrument-shelter may not sink to 32°. During a clear and still night, when a thermometer six feet above the ground sinks to 36° a heavy frost may be expected; a slight frost may occur when the same thermometer sinks only to 47°. Whatever prevents the radiation of heat serves also to check the formation of hoar-frost. During the cold nights of spring, plants which are sheltered by trees are less liable to be injured by frost than those which are fully exposed, and a thin covering of cloth or straw will generally afford entire protection. A garden may frequently be saved from injury by kindling a small smudge fire, which will envelop the plants in a cloud of smoke. Fogs and clouds also protect vegetation from the effects of frost.

Precautions in Reading Thermometers.

To read a thermometer accurately requires some little care.

First—The eye must be exactly at the level of the reading, if the thermometer is vertical; and in all cases must be so situated that a line drawn from the eye to the top of the column would be perpendicular to the column. If the graduation is not on the tubes, and the eye is above the top of the column, however little, the reading will be too low, and vice versa. This is a point frequently neglected by careless observers.

Second—The thermometer must be read quickly, and the face and head must not be very near it; otherwise it will be affected by the warmth radiated from the body.

TIN in Liverpool sells just now at from £101 to £108 per ton for Straits and Australia.

Compound Oxygen in Catarrh.

The following letter, which came unsolicited, shows how promptly Compound Oxygen acts in a very troublesome disease, which, if not arrested, too often assumes a distressing and loathsome character. Not only in the early stages of this disease, but after it has become deeply seated and offensive, has it been found to yield to the action of this new and remarkable remedy:

CADY & WOLWORTH'S BUSINESS COLLEGE AND
PHONOGRAPHIC INSTITUTE,
UNION SQUARE, NEW YORK, Oct. 25, 1881.

DRS. STARKBY & PALEY:—Sirs: I have now been using your Compound Oxygen—home treatment—about six weeks, for a troublesome and very disagreeable catarrh, which was fastened on me by sleeping for years in a cold room, with my feet out of one window and my head out of another.

Now for the results. In two weeks I appreciated a slight change, and in four weeks my head became as clear as anybody's, my breathing became freer, and general health much improved, although not specially bad before. The difficulty in the throat—post nasal do you call it?—is not fully corrected, but it is so much better that I am more agreeable to myself, and much less disagreeable to others than I was before using the oxygen.

I am delighted more than I can tell you with your remedy, and give this testimonial voluntarily, which you are at liberty to sell for waste paper or make such other use of as you choose. I know there are many teachers who, like me, suffer from catarrh, and who, like me, have refused for a long time to acknowledge it, who would be greatly benefited by the use of Compound Oxygen.

Yours, very respectfully,
C. E. CADY.

Our treatise on Compound Oxygen, its nature, action and results, with reports of cases and full information sent free. DRs. STARKBY & PALEY, 1109 and 1111 Girard street, Philadelphia, Pa.

All orders for the Compound Oxygen Home Treatment directed to H. E. Matthews, 606 Montgomery street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

ADVERTISEMENT.**The Farmers' Ticket.**

The following is the Farmers' Anti-Monopoly Ticket for State Board of Equalization and Railroad Commissioners, nominated by the Farmers' Convention, which assembled at Stockton on the 7th of October, 1882:

FOR A BOARD OF EQUALIZATION.

Second District—L. C. MOREHOUSE.
Third District—C. WILCOXSON.
Fourth District—CHARLES DANA.

FOR STATE CONTROLLER, EX-OFFICIO MEMBER STATE BOARD OF EQUALIZATION—J. P. DUNN, of San Francisco.

FOR RAILROAD COMMISSIONERS.

First District—CHARLES F. REED.
Second District—JOHN T. DOYLE.
Third District—W. W. FOOPE.

It is the intention of the State Executive Committee to have the Republican and Democratic State and County tickets printed with the changes above indicated; but the time to do this work is so short and some of the counties so distant that it will be impossible to supply them all with tickets, so that many of the friends of the movement will have to depend on scratching the regular Republican and Democratic tickets.

R. J. HARRISON, Secretary.
THOMAS MCCONNELL, Chairman.

Strongly Recommended.

A. S. Chamberlin, who has kept the "Old Bull's Head Stables," in New York City, for over 40 years, speaking of the one-half and three-quarter blood Percheron-Norman horses, said: "They are the finest-looking and most attractive; have better action, are quicker stepping, have better feet and stand their work better than the Clydes, and bring a better price on the market. I would advise the farmers and breeders who are breeding horses to sell on the New York market for draft purposes, to breed from the French horses in preference to all others."—Chicago Tribune. The greatest importing and breeding establishment in the world is that of M. W. Dunham, at Wayne, Ill., who has imported and bred nearly 1,000 Percheron-Normans, and now has some 400 on hand.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Extra Type for Sale.

We offer Scotch brevier type (same as used on this paper) for sale in any quantity from 100 lbs. to 1,000 lbs., for 25 cents per lb., if ordered soon. Also, several hundred pounds of nonpareil at favorable rates. The type is in good condition and is of a very durable character.

DEWEY & CO.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

BY TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

The Best Hotel.

The best hotel in Stockton is the Yosemite. Mr. James Gavin, the proprietor, has long maintained the leading house in that city. On all extra occasions the Yosemite is made headquarters, as on the occasion of the late Farmers' Convention.

WAKELEE'S

PATENT

AND

Squirrel



Gopher

EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

WAKELEE & CO., Chemists,

Occidental Hotel, S. F.

H. C. SHAW PLOW WORKS.**THE H. C. SHAW STOCKTON GANG PLOWS.**

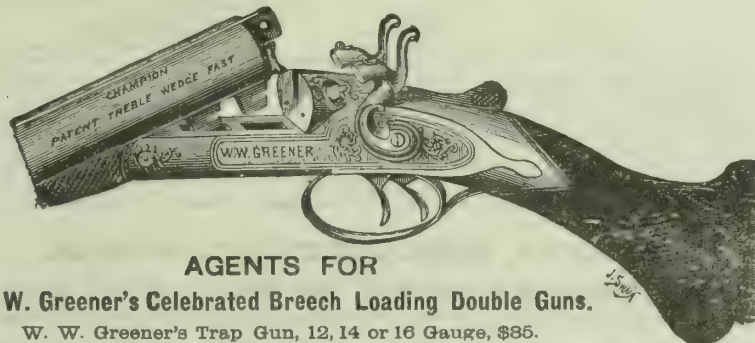
4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco

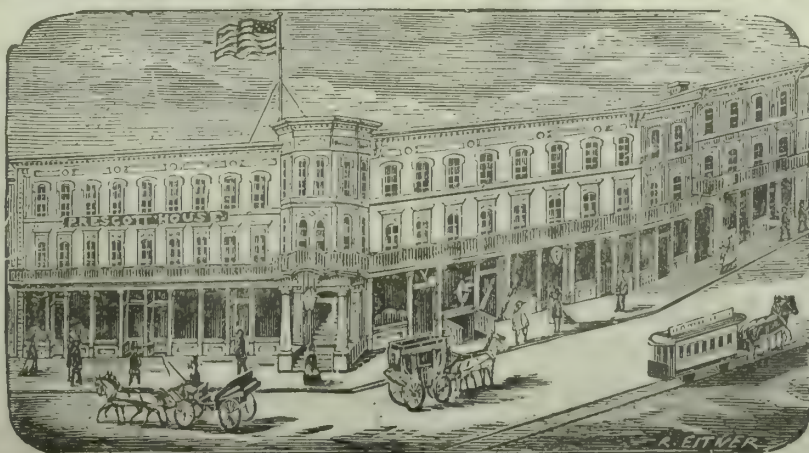


AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$35.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

PRESCOTT HOUSE.

S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

Illustrated Catalogue. Photograph and Lecture, 10c. Automatic Cabinet. Play any Tune.

MAGIC LANTERNS AND VIEWS ORGANS ONLY \$5.

Magic Lanterns and Slides WANTED. Musical Wonder Catalogue FREE. HARBACH ORGANINA CO., 809 FILBERT STREET, PHILADELPHIA, PA.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. R'y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

Attention, Housekeepers!!

The immense stock of

Furniture, Carpets, Crockery and Household Goods of

A. EASTON,

Will be offered at cost from OCTOBER 1st until JANUARY 1st. Bargains for all.

El Dorado Street, One Door South of Main, STOCKTON, CAL.

BOONE & MILLER,**Attorneys & Counsellors-at-Law,**

Rooms 7, 8 and 9

No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, DR. J. McLEISH, No. 215 West Fourth Street, Cincinnati, O.

COPP'S

AMERICAN SETTLER'S GUIDE,
A Popular Exposition of our Public Land System.

Send to the office of this paper and get a copy of this popular book.

PRICE, 25 cents, postpaid.

LADIES Why pay such enormous prices for Sewing Machines when you can buy as good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. **H. P. ANDREW,** Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. P. Call. Address L. P. McCarty, 509 Taylor St. Price, \$4.

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO

Consignments of GRAIN, WOOL, DAIRY PRODUCE,
Dried Fruit, Live Stock, Etc., solicited, and liberal ad-
vances made on the same.

Careful and prompt attention paid to orders for the
purchasing of Grain and Wool Sacks, Wagons, Agricul-
tural Implements, Provisions, Merchandise and Supplies
of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR
SALE OR CONSIGNMENT. Insurance effected and liberal ad-
vances made at lowest rates. Farmers may rely on
their grain being closely and carefully weighed, and on
having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

References.—Traders' National Bank, N. Y.; Ell-
wanger & Barry, Rochester, N. Y.; C. W. Reed; Sacra-
mento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders. P. O. Box 1940.

JAS. P. HULME,

Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce,
Also, Grains, Wool, Hides, Beans, Potatoes, Cheese, Eggs,
Butter and Honey.

Brick Stores: No. 402 Davis Street, and
120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON

PACIFIC
Business College,
320 POST ST.
SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$70.

Paid in Installments, \$75.

Send for circulars.

THE NEW PATENT
California Refrigerator.

Will keep meat and food at an equal temperature without
ice. All sizes made to order. Address,

HOBBY & ELLSWORTH,

7 J Street, - - SACRAMENTO, CAL.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

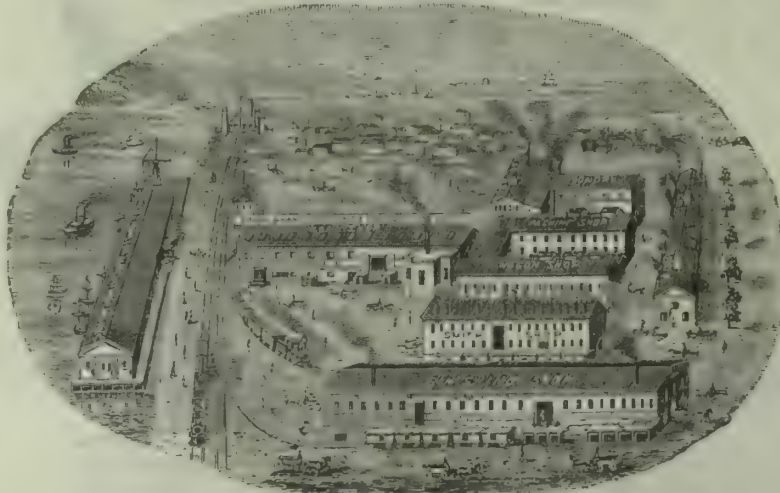
AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Har-
rows, Cultivators, Seed Sowers, Hay Presses, Haying and Har-
vesting Machinery, Headers, Iron Farm and Freight
Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain
Cleaners, Barley Crushers, Eureka Ditching and Grad-
ing Plows, Sweepstake Quartz Mills, Etc.



The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres.
The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square
ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth
Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and
parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving
time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus
making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence
from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing
not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron
Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon.
We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of
which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a
clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hun-
dred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.	Hill's Sweepstake Road and Breaking Plow.	Gillis' Improved Horse Power Cultivators.
" Improved Granger Gang.	" Side Hill Gang.	Gen. Seed Sowers.
" Im'd Single Sod and Tule Plow.	" Double Deep Tiller.	Hill's Improved Headers.
" Single Plows.	Fresno Ditching and Grading Plow.	Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or
near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying
Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON,
agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the in-
terior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and con-
sumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of
California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best
implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast,
both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science
can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send
Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.



Endorsed by the Grange and all others who have
used it

**INFALLIBLE SQUIRREL and GOPHER
EXTERMINATOR.**

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

PACIFIC COAST LAND BUREAU.

President, Wendell Easton, Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank
Secretary, F. B. Wilde. 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every
branch of farming can be made prosperous, from stock raising or dairying down to fruit culture. The coast of San
Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, un-
surpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of
pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to,
and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale. The prices vary from \$2 to \$20 an acre. Some choice lands higher. We will sell on terms of one fourth
cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands
at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$8.50 an acre; 840 acres fine grazing
land, 7 miles from San Luis Obispo, \$6 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and as regards soil, climate,
water and timber, this section is not excelled on the Pacific Coast.
Send for Catalogue.

UNIVERSAL**FAVORITES.**

MINSTREL SONGS, OLD AND NEW.

Here, at last, we have nearly all the world-famous,
universally admired, sung and whistled melodies, in one
book. 100 popular Ballads and Plantation Songs, with
piano accompaniment. This number includes "Old Folks
at Home," "Old Kentucky Home," "Zip Coon," "Nelly
Bly," "Camptown Races," "Golden Slippers," "Lily
Dale," "Twinkling Stars," "By the Bright Light," and
there are more than 90 others.

\$2 plain. \$2.50 cloth. \$3 gilt.

How to PRACTICE, by A. M. Pupin, is a capital little
guide book for teachers and scholars, and such as every
practical teacher will like to have. Mailed for 50 cents.

The Musical Favorite.

This and the
MINSTREL
SONGS are the latest additions to Ditson's "Home Musical
Library," have more than 200 pages each, full sheet
music size, are handsomely bound, and give a great deal
of music for a moderate price.

This MUSICAL FAVORITE contains about 50 pieces of an
average length of 3 to 4 pages each, of medium difficulty,
and by the most popular composers, as Waldeufel,
Gottschalk, Blake, Wilson, Schumann, Aubert, Lamotte,
etc., in all 33 composers.

\$2 plain. \$2.50 cloth. \$3 gilt.

OLIVER DITSON & CO., Boston.

CHAS. E. DITSON & CO., 643 Broadway, New York

CLUB-FOOT SHOE.



AUTENRIETH'S CELEBRATED

APPARATUS FOR

Curvature of the Spine, Wry-Neck, An-
chylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose
Veins. Supporters and bandages of every description.
Also, inventor of the Celebrated Autenrieth's Club-Foot
Shoe. Send for circulars. W. M. AUTENRIETH,
71 West Sixth Street, Cincinnati, Ohio.



This cut represents a No. 1 CALF SKIN SHOE, made to
GALLET or LACE, all sizes, which we are manufacturing
with a view to meeting the wants of a large class of people
who must have the best shoe for the least money. It is guar-
anteed as to STYLE, FINISH and QUALITY, and will
compare favorably with any \$5 shoe in the market. In or-
der to introduce our goods, we will send FREE to any ad-
dress for the low sum of \$3.85 a pair, thereby saving to the
consumer the large profit of the jobber and retailer. Try
ONE PAIR AND WE GUARANTEE TO SUEE.
F. H. WILSON, 232 West Baltimore St., Baltimore, Md.

Poultry and Stock Book

A new man-
ual and re-
ference book
on all sub-
jects con-
nected with successful Poultry and Stock raising on the
Pacific Coast. A New Edition, over 100 pages, profusely
illustrated, with handsome, life-like illustrations of the
different varieties of poultry and live stock. Price by
mail, 60 cents. Address PACIFIC RURAL PRESS Of-
fice, San Francisco. January, 1882.

THE DAVIS GUN.

The best Shooting Guns for the price. Fine Stub Twist
Barrels. Pistol Grip, Patent Fore-end Rebounding Ham-
mers. Choke Bored like the Famous Parker
Gun. Every breech-loader has a record of its shooting
12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for
Circular and mention this paper. E. T. ALLEN, Sole
Agent, Importer of Fire-arms and Sporting Goods, 416 Mar-
ket Street, San Francisco, Cal.



ASTHMA. The greatest
proof of the genuine merit of
an article can be found in the
amount of patronage it re-
ceives, and the thousands of
persons respecting Dr.
Dalla's Cure, prove
very truly that it is
presented to be
reliable on Asth-
ma. Never contains a
drop of opium, and
is the only one in the United
States, or every Domin-
ion. Treatise sent
free, on application.
Cincinnati, Ohio.

Send for free, ad-
dress

Scale Insects on Deciduous and Ornamental Trees.

(CONTINUED FROM PAGE 343).

nent difficulty in the way of eradicating the scale I believe to be the practice so prevalent of growing other small crops in the orchard between the trees.

It cannot be too strongly impressed upon the mind of every owner of an orchard that he must personally watch his orchard and exercise such constant supervision that no infested tree shall escape observation, and, when found, the proper remedy at once be applied. In the orchard referred to where chance trees have been found infested, no other course would have saved me from the overwhelming spread of the scale.

The experiments of 1881 and the subsequent use of lye in instances mentioned, indicate the remedy. This should always be used when the tree is dormant, and when the foliage has disappeared from the trees. In our climate that time is the winter, and at any time before the trees put forth their buds.

Applying the Lye.

The strength of lye should be one lb. to one gallon water where trees are infested with scale. Where it is only desired to cleanse the tree from moss one lb. to three or four gallons of water is sufficient. The best method of applying the concentrated lye is by dissolving in boiling water, and throwing it upon the trees with a force pump through 40 or 50 ft. of one and one-half inch rubber hose, to which is attached a nozzle, having for its opening a simple straight slit, very narrow in width, and one-sixteenth to one-eighth of an inch long. The best spray tip yet devised is that made at San Jose, called the Merigot Spray Nozzle. The pumps most used for this purpose are the Gould pump and the Merigot pump. The latter is made at San Jose, and is cheaper than the Gould pump. Great care should be taken to cover the tree entirely with the solution of lye, as upon its thorough application depends its success.

One of the greatest difficulties in the use of strong materials is from the spray falling upon the person of the operator and burning and injuring the skin. In order to overcome this obstacle, I have devised a simple "extension nozzle" of slight cost which is very light and which may be made of any length desired, say from four to 15 ft., or even longer. By the use of this extension it is perfectly easy to reach and spray any orchard tree without danger and discomfort. The cost of materials and apparatus may be given as follows:

The Gould pump costs about \$16 without accessories. The Merigot pump \$12. The suction hose and the long hose will cost according to quality used, from 15 cents to 25 cents per foot.

The Merigot spray tip, if purchased alone, \$1.50. If bought with pump, the pump and spray \$13. The bamboo extension with globe valve seven ft. long \$2.75. All excess in length over seven ft. 25 cents per foot. The concentrated lye, of the American Lye Co. in one-lb cans by the case of 48 lbs., \$3.50 per case. English caustic soda in 600 pound drums, \$33 to \$35 per drum. The whale oil soap and sulphur mixture called the "Codlin Moth Wash" is manufactured in San Francisco and the price can be obtained by inquiring of Messrs. Allyne & White.

In conclusion I will give the analysis made by Prof. Hilgard, of the State University, of a sample can of American Lye Co. concentrated lye. The can sent I took from a lot I had been using, and is supposed to be a fair sample of the manufacture. The analysis is as follows:

Caustic potash	8.3
Caustic soda and carbonate of soda	91.7
	100.0

With this I submit my report, expressing my firm conviction that ere long we shall be freed from the ravages of one of the most dreaded pests known to horticulturists.

Walnuts and Filberts.

EDS. PRESS:—From my own experience I can testify that the *Præparuriens* Walnut can be successfully grafted upon large stocks. Two years ago last spring I obtained some scions from Mr. Gillett, and grafted them into a large seedling English walnut. I took special pains to make a perfect fit, cutting the grafts with a "shoulder." I waxed them over with my favorite composition, which will not run in the sun, and kept all suckers rubbed off. But one in three lived, and started very late, but made a splendid growth. I cut off the whole top of the tree. The union is perfect, and the top has now a circumference of 25 feet, and promises to bear fruit next year. I have grafted chestnuts in the same way with even better success.

I gave some study to the *præparuriens* walnut and other trees when in Europe last spring, and made arrangements with large and reliable French nurseries to import a quantity of the true "*præparuriens*." It yet remains to be seen in what condition I shall receive them. I find the nut-growers of Kent, England, are beginning to find the greater value of this walnut. They are also discarding many hitherto highly recommended filberts, and use now for profit only the "Kentish," a very prolific variety, which requires scarcely any pruning, and bears exceedingly early. It will not, like the walnut, reproduce itself from seed, but is propagated entirely by layering and grafting. Of this nut also I expect shortly to receive a number of plants.—LEONARD COATES, Napa, Oct. 27, 1882.

Los Angeles District Fair.

EDITORS PRESS:—Los Angeles has just closed another annual fair, which in various senses was a success. The management made their utmost exertions to have all exhibitors and visitors feel safe and happy, whether in the pavilion or on the stock grounds. Up to the closing on Saturday night, 10 o'clock, no accidents or any disturbing elements had in the least marred the varied enjoyments of the occasion. At the close a unanimous vote of thanks was tendered to R. H. Hewitt, Secretary of the Board of Managers, for his valuable and untiring exertions that so largely contributed to the success of the fair.

Mr. Hewitt responded and modestly declined the full amount of praise so tendered, and offered an appropriate resolution, sharing praises liberally with the full Board of Managers, who had nobly put everyone his shoulder to the wheel, and never yielded to any discouragements. These closing resolutions made a slight interruption to a nice little side show that the ladies were conducting to suit themselves, all the proceeds to be devoted to a religious charity of the Episcopal church. They were showing up universal suffrage, not limited by race, color, sex or age; each and all could vote, early and late; scratch their ticket or vote straight. Instead of tedious registrations, the payment of 25 cents would allow them to see Stoneman or Estee figures on the blackboard raised one higher.

There was no bar to even stuffing the ballot-box, as long as every vote had a U. S. Mint stamp of a "quarter dol." on it. A strategy was, no doubt, formed by leaders in each party to vote heavy at the last, and this flanking movement was a success on the Democratic side, giving 957 for Stoneman, and 880 for Estee, as polls closed abruptly on time. This victory carries with it a prize crib quilt as a present to General Stoneman, and gives the ladies' fund \$459.25. This was all conducted in a very quiet and decorous style, and no one's political corns in any way impressed to his discomfort.

The great day of the Pavilion was Friday, when some new inspiration brought young and old there and made them forget the displays of speed and horse culture programme that were being carried out at the park grounds. Titus, Rose, Grieco and Machado might show their best stock and fastest, but first they must do honor to the grand exhibit of the future, yes, the coming men and women of this State. This particular programme called

The Baby Show

Was beautiful and pleasing, about 30 babies being present with their most pleasing smiles and artless and aimless movements. The committee for this department were no doubt carefully selected for their thorough academic attainments, and from the fact of their minds being free from bias, or any large conceit that they knew all about babies. Names of Judging Committee are: Misses Hortense, Sacristie, Belle M. Ward and Mollie Hobbs; and gents—Samuel E. Dewey, Marcus Jones and Henry O. Melveney. After the most careful analysis made by each one, comparing notes and views, with a slight silent hum of "Baby Mine," they settled the first premium (baby carriage) on Bertie Lewis, of Downie City.

2d prize (baby blankets) to Charlie Mahan, Los Angeles.

Third prize (silver set) to Walter W. O'mstead, of Los Angeles.

Fourth prize (silver cup) Charlie Daniels, of Florence.

Fifth prize (pair of slippers) to Baby Umsted, Los Angeles.

This closed the exhibit, with 24 charming babes to be prized by their parents as the judges had no more to bestow.

The Fruit Display.

Small, but in quality good and very hard to equal anywhere. Some very large apples, quinces, pears and peaches and some choice representatives of all the fruits of the season. Los Angeles City and suburbs was but slightly exhibited in fruits and vegetables, while Santa Ana, Tustin city, Westminster, Anaheim, Pasadena, Riverside, Santa Barbara and various outside points sent in contributions.

Ventura county contributed some very choice cheese from Mr. Lewell's dairy at Santa Paula, where a rich cream cheese is moulded in shape and size much like a common brick and is very popular in the retail market.

Live Stock.

J. D. Patterson of Ventura showed fine draught stallions.

San Bernardino county, by Mr. J. F. Sterling, a splendid line of Jersey stock of different ages, getting a fine share of premiums. Also premiums on his short horn Durhams.

It would take too much space to detail the honors conferred on the various individuals, and some of the high distinctions gained by their respective ancestors. Mr. Sterling is a lover of the nobler grades of choice animals, and from these specimens I would say a successful rearer.

Wm. Niles occupies several yards with choice Jerseys and three Holsteins much admired, the cows very large. He also shows choice hogs, sheep, goats, chickens in varieties, ducks and turkeys, etc.

Berretto Bros. make a large showing of Jerseys that capture a healthy share of first and second premiums, and Downie City is honored as their postoffice address.

C. P. Jillison makes good display of fowls, as also does C. H. Richardson and J. T. Brown. Most of these fowl exhibits were stock of high merits and recorded pedigrees. The various grades of horses and colts took a long time to pass their examinations to get some the first premium and others the second or red ribbon, and others scarcely inferior only favorable mention.

Speed.

The races were considered a successful part of the fair week, and filled what some thought the live feature of the whole programme.

The rearers of fast stock brought on their flyers and competed for the honors, drawing immense throngs. The "15-mile Ladies' Saddle Race" was an exciting scene, though only two riders were mounted. A third one, a farm girl, was quite anxious to ride but could not obtain stock for the required changes. She seemed entirely satisfied that she could ride any stock that would be offered.

Her face slightly bronzed by the direct rays of the sun, and the quiet manner of the girl would impress one that she was no novice in farm work and stock handling. The prize, \$275 was contested for by Mrs. Blackford, of the Centinela rancho, and Miss Ada McCoy, of Los Angeles. The interest was raised to a high pitch in the vast throng. The starting, after some unwillingness on the part of the horses, was made, and the first mile was simply a pleasure ride, side by side, sociable, but soon the excitement to win was well up, and the rapid dismountings and mountings and dashing speed made the scene one of increasing interest. But suddenly, at the end of the 11th mile, Miss McCoy halted before reaching the judge's stand, and fell into an attendant's arms in a swoon, while her competitor was clipping on ahead on her 12th mile, and could now at her leisure finish the task of four more miles to win the stake. Many could appreciate the dangers of this feat of endurance, and would not recommend it as safe for all to try.

A Long Ride.

The great climax of excitement for the multitude that thronged the speed grounds was the 50 mile running race, where there were only two entries, or more correctly "starters," Juan Lopez riding for A. Machado, and Charles Anderson riding for Cy. Lyon. This readily enlisted all the Spanish zeal on the side of Machado, and Lyon took largely of the American zeal in his horses and rider, Charlie.

This seemed more a man contest than horse speed. The starting was exciting, and the first mile made in about two minutes, reported less. Each mile required the change of horses which was done with great skill and rapidity, the rider often mounting entirely behind the saddle and the horse off at full speed before he would gain the saddle. They kept close together each in turn leading off, and as the miles counted up the excitement became more intense and general. Thirteen miles were made in 30 minutes, 18 miles in 40 minutes, 25 miles in 55 minutes. On starting off on 41st mile Charlie's horse dashed through the fence and before he could recross the fence had lost several rods of distance. This he had made up, and was bidding fair to win, when at the beginning of the 49th mile attendants snatched the blanket from the horse's head too soon, and instead of his mounting the saddle, the horse squatted backward under him, and let him land clear over him in the dust; but as quick as thought he was in reach of saddle, and mounted the restless horse while he was dashing off in wild haste after the fleeing Lopez, now several rods ahead, and though he mended the gap some, he could not quite close it, leaving just a few feet ahead in favor of Lopez, the winner (great applause). The judges timing at the stand gave 11½ minutes, the time, used in riding 50 miles, dismounting and mounting every mile, ten different animals used by each rider. There were many who claimed that this was the climax of all the coursing they had ever witnessed in the full and continued interest, and great earnestness of interest as it neared the end of the race. There was no words of contention. The language everywhere seemed very civil and decent, the joys of the natives beyond measure full.

Throughout the week there were daily trotting and running races for the District purses that brought out the various grades and ages of what is considered fast stock, and sometimes termed "flyers." The liberal premiums of the District, \$500 to \$200, called in a large showing of this class of stock and made the speed programme contribute largely to the funds needed to conduct the show and pay the prizes. At another time we will endeavor to give some of the results of these contests in speed. The stock display shows plainly a great advancement is now going on to greatly improve our horse stock. The same is equally true of cattle and all our domestic animals and fowls. The public are being educated to appreciate the difference between good and best. A good animal and good fruit will do very well for home use; but the best is preferable for home use, and commands a paying price and a ready sale in any market, when good is unsaleable.

Cotton Experiments.

J. W. Potts, an old resident, showed large stalks of cotton in full bearing now the third season; from the same stalks a full crop of bolls. He purposes to give that cotton a chance, as it has come to stay with him, and promises the RURAL a report of its extra doings as it further progresses. The same exhibits 21 stalks of corn that are awarded a diploma. Mr. Jessup, of Alameda, shows his excellent skill and

good taste in his presentation of 12 boxes, each 25 lbs., of evaporated fruits that were much admired, and showed the first premium, blue ribbon attached.

Elwood Cooper gave a fine sample lot of his genuine olive oil, butter and other products of his place.

Jas. Bettner, Riverside, placed on table 14 salway peaches weighing 10lbs., 10½ ozs.; the largest one 15½ ozs.—big enough to speak for themselves. House & Toney also showed fine samples of fruits.

R. H. Gilman, Supt. S. C. S. Tropic Co., had very heavy clusters of green oranges, lemons, and box of Jap. persimmons.

W. A. Patterson, of Westminster, showed evaporated fruits.

J. W. Wolfskill, an elegantly arranged display of one full table and several full boxes of lemons, showing his neatness in packing.

G. R. Hinde, North Anaheim, took high honors on dried peaches, apples, and six varieties pears.

Mr. A. R. McQuilling, Pasadena, gives fine samples apples, pears and quinces, large and perfect.

Pasadena Company's existence made known by its tasty display of cans and glass jars.

Snow & Adams, of Tustin, took premiums on quinces one size smaller than pumpkins. Their bananas looked good enough to eat. They had a varied display. Their corn would remind you of the donkey, the ears were so large.

Mrs. W. J. Brown, of Los Angeles, made a pleasing pyramidal display of glassware filled with various preserved fruits. It was greatly admired, so white and transparent, and properly awarded.

The pyramid of jellies, by Mrs. R. R. Haines, alongside it, was also honored with blue.

Bread Making

Those "worthless California girls" showed their defamers that they can carry off the premiums for bread cakes and all kinds of good cooking, even before they enter their teens, viz: Miss Stella Haines, of 12 years, carries off second prize for domestic brown bread; second best Graham bread; best domestic wheat bread; best light rolls. Miss Sarah Parkhurst, Miss J. Bassett, Mrs. J. P. Early, Mrs. J. W. Brown, Mrs. Sarah Harris, and others, took premiums in this department.

Needle work, and drawing, and paintings, had a fine display of ladies' skill and successes. It seems a folly to try to do justice to the contributors of interesting exhibits here, for one can only mention a few of many, and they so briefly as to do no justice to the exhibit. I would here acknowledge the very courteous treatment received from all the managers and their many deputies, and would congratulate them on a very successful management and happy closing of their annual fair.

B. W. CROWELL.

Los Angeles, Oct. 21, 1882.

Thanksgiving.

A Proclamation by the President of the United States.

In conformity with custom, the annual observance of which is justly held in honor by this people, I, Chester A. Arthur, President of the United States, do hereby set apart Thursday, the 30th day of November next, as a day of public Thanksgiving—for the blessings demanding our gratitude are numerous and varied—for the peace and amity which subsist between this Republic and all the nations of the world; for freedom from internal discord and violence; for the increasing friendship between the different sections of the land; for Liberty, Justice and Constitutional Government; for the devotion of the people to our free institutions, and their cheerful obedience to mild laws; for the constantly increasing strength of the Republic while extending its privileges to their fellow-men who come to us; for improved means of internal communication, and increased facilities of intercourse with other nations; for the general prevailing health of the year; for the prosperity of all our industries; for the liberal return for the mechanic's toil; for affording a market for the abundant harvests of the husbandmen; for the preservation of the national faith and credit; for a wise and generous provision to effect the intellectual and moral education of our youth; for the influence upon conscience of a restraining and transforming religion, and for the joys of home. For these and many other blessings we should give thanks.

Wherefore, I do recommend that the day above designated be observed throughout the country as a day of national thanksgiving and prayer, and that the people, ceasing from their daily labor, and meeting in accordance with their several forms of worship, draw near to the throne of Almighty God, and offer to Him praise and gratitude for the manifold good which He has vouchsafed to us, and praying that His blessings and mercies may continue.

And I do further recommend that the day thus appointed may be made a special occasion for the deeds of kindness and charity to the suffering and needy, so that all that dwell within the land may rejoice and be glad in this season of national thanksgiving.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the City of Washington this 25th day of October, in the year of our Lord, 1882, and the 107th of the Independence of the United States.

CHESTER A. ARTHUR.

By the President, FRED'K. T. FREELINGHUYSEN,

Secretary of State.

OVER 180,000 Howe Scales sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

Lands for Sale and to Let.

Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The California Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange and Mart," Santa Cruz, Cal.

Stock Range.

Parties wishing to purchase good stock raising lands, unaffected by severe drouths, will do well to address the undersigned. The lands can be purchased cheap, in lots from 100 to 2,000 acres. It is partly low table and rolling land, partly clear and level. Good for vine and fruit raising. Will raise vegetables and all kinds of grain. Crops certain every year. Near town and a \$10,000 public school house. Price, \$3 to \$5 per acre. Good local market for fruit, vegetables, grain, poultry and dairy produce. Address the proprietor,

EDWARD FRISBIE,
Anderson, Shasta Co., Cal.

Educational.

STOCKTON
BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Examined and graded at \$10 per month. Send for Circulars containing full particulars. Address
P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address
E. C. Atkinson, Sec'y, Cal.

DO Not Fail to send for our FALL Price-List for 1882. Free to any address upon application. Contains descriptions of everything required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address

MONTGOMERY WARD & CO.,
227 and 229 Wabash Avenue, Chicago, Ill.

DEWEY & CO'S
SCIENTIFIC PRESS
PATENT AGENCY
No. 252 Market St. (Elevator, 12 Front), S. F.

THE MASSILLON PONY MILL
STRICTLY PORTABLE.

Supplies a long felt want. 100 Sold in Ninety Days.

Every corner of a Farm Empire located in moderately timbered country can find profitable employment the year round in the portable use of these Mills.

Every farmer, timbered land is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent.

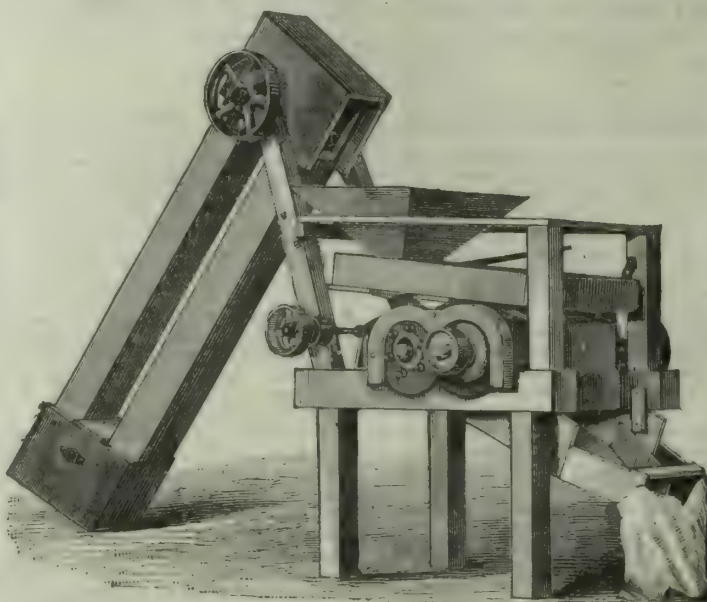
RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO.,
Agents for the Pacific Coast.

"THE PIONEER BARLEY CRUSHER,"

Using the Benoit Corrugated Rollers.

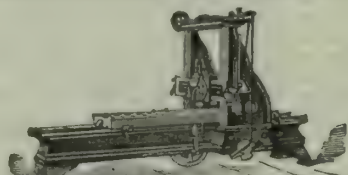
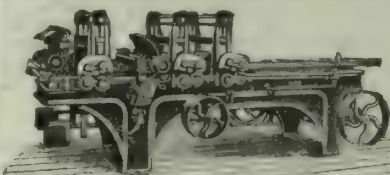
STILL AT THE HEAD!



Has again Received Premium at State Fair.

This Mill has been in use on this Coast for three years. It has twice drawn the premium at the State Fair, and has met with general favor, there now being over 60 of them in use in California. It is the most economical and durable feed mill in use. I am the sole manufacturer of the corrugated roller mill.

M. L. MERY, Chico Iron Works, Chico, Cal.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

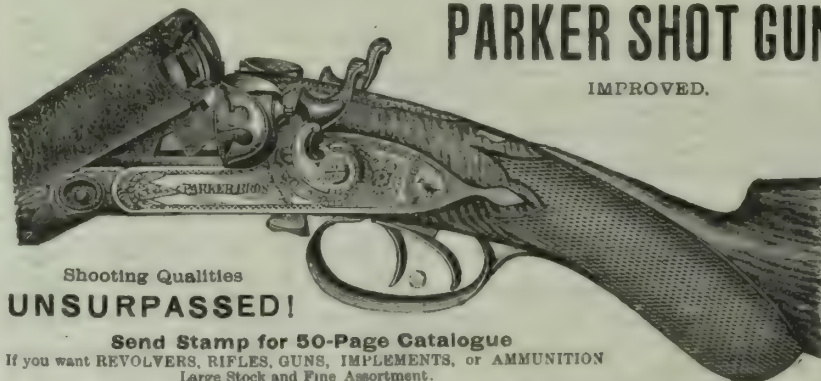
Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

PARKER SHOT GUN.

IMPROVED.



Shooting Qualities
UNSURPASSED!

Send Stamp for 50-Page Catalogue
If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION
Large Stock and Fine Assortment.

Send for Circular and Prices, and mention this paper.

E. T. ALLEN, Agent for the Pacific Coast.

NO. 416 MARKET STREET. SAN FRANCISCO, CAL.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

590 California St. SAN FRANCISCO.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento
ALL KINDS OF

Fruit and Packing Boxes Made to Order,
AND IN SHOOKS.

Communications Promptly Attended to.

COOKE & SONS, Successors to Oakes & Gregory.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens' Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

CUT THIS OUT!

Country hotel and boarding house keepers and farmers can save 25 per cent. by purchasing their Groceries from CLUFF BROS., 40 and 42 Second Street and 9 and 11 Montgomery Avenue. Make out a list of all the Groceries and Provisions you may want and forward it to us; we will put prices to same and mail it back for your approval. All goods guaranteed and shipped on boats or cars free of charge.

ADDRESS

CLUFF BROS.,

Wholesale Grocers.

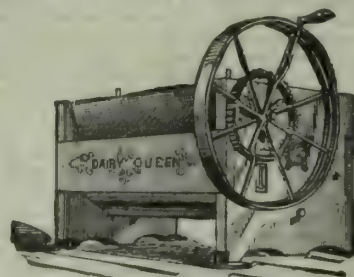
40 and 42 Second Street.

San Francisco.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880
RECEIVED TWO DIPLOMAS



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSION METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN, Jr.,

Or Jas. L. Haley, Janesville, Wisconsin, Cal.,
Benicia Agricultural Works, Benicia, Cal.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 2 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the TWOMBLY Knitting Machine Co., 163 Tremont Street, Boston, Mass.

D. C. MOORE, M. D.,

MRS. E. D. MOORE, M. D.,

OF THE
Trall Hygienic Medical and Surgical Sanitarium
Have returned from a tour in the States and resumed Chronic case and general family practice, including obstructions, at 1625 Market St. 3rd Floor, Consumption, Bright's Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion and all Chronic and desperate cases a specialty.

YOUR NAME
On 50 large size CARDS. Remember, Sentiment, Hand Request, Ac. No 2 alike, 10c, 14 pks. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine Gilt Bevel Edge Cards, turned corner, 10c.

Your Name in this lettering Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cardstock wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

REISTER'S
PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,
Chico, Butte County, CALIFORNIA

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT HOUSEHOLD SEWING MACHINE.
GEN'L AGENCY, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.



Queen OF THE South FARM MILLS

For Stock Feed or Meal for Family use.
10,000 IN USE.
Write for Pamphlet.
Simpson & Gault Mfg Co.
Successors to STEUBS MILL CO.
CINCINNATI, O.

YOSEMITE HOUSE.

MAIN ST., STOCKTON, CAL. FIRST-CLASS HOUSE

JAMES CAVIN, Proprietor.

This House is the Leading Hotel of the City, containing all the modern improvements. General Ticket Office for the Big Trees, Yosemite Valley, Bodie, and General Stage Office for all the Southern Mountain Towns. The Yosemite Coach will convey guests from the boats and all trains, free of charge.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

PETER SAXE & SON, Lick House, S. F. Importers and Breeders for past eleven years. Berkshires, "Jerseys," "Short Horns," and all varieties of Sheep, and their grades.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Hurd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for sale.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Essex and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Cucks for sale.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

Moore's Prepared

The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

Silos, Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.
RANSOME, 402 Montgomery St., S. F. Send for circular.TOWER'S CELEBRATED
OIL CLOTHING.

Water-Proof and Non-Combustible.

Mount Vernon Co.'s Duck.

All Widths and Weights.

Russell Manufacturing Co.'s Solid Cotton Belting, Black and White.

E. DETRICK & CO., Sole Agents,

5 to 9 California, and 108 to 112 Market Streets, San Francisco

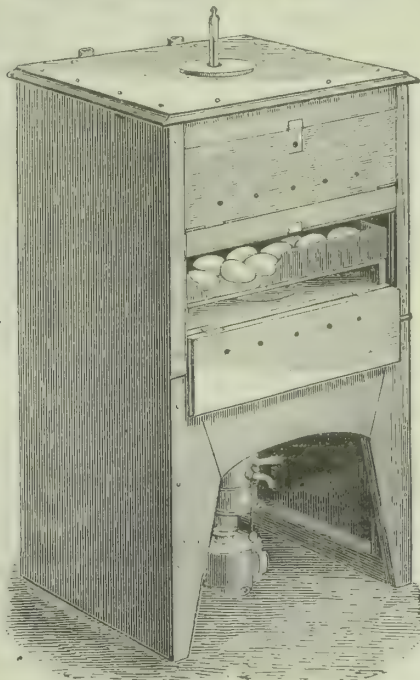
BAGS, TENTS, HOSE, TWINES.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & SON

GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65
No. 3, " 180 " " 45

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

LANGSHANS.



My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported Eggs for hatching.

MRS. J. RAYNOR,

1416 Folsom St., S. F.

LITTLE'S SHEEP DIP.



Price Reduced

TO \$1.25 PER GALLON.
Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



Calvert's Carbolic
SHEEP WASH.
\$3 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON S. F., Sole Agent for Pacific Coast

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. L. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address
J. A. POPPE, Sonoma, Cal

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

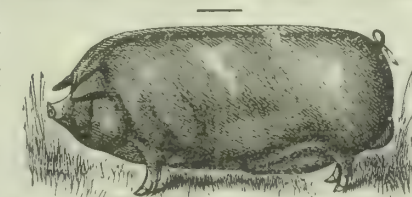
The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address

G. G. WICKSON, 319 Market St., S. F.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal.

Breeder of pure bred Poland China pigs of the Black Beauty, Black Bess, Bamark, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino
SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST

remedy known. Reliable testi-

monials at our office.

For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento

Street, San Francisco.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

Dewey & Co. { 252 } Patent Agt's

{ Market St. }

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNNAN.....Stanislaus Co
URLAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

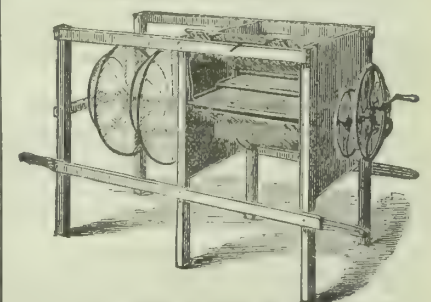
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE BEST. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

11 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

MECHANICS' FAIR, 1882.

Best Truck.....Silver Medal.
Best Hose Cart.....Silver Medal.
4-Spring Wagon, With Top.....Silver Medal.
Best Milk Wagon.....Silver Medal

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - SAN FRANCISCO.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINOLAIR, Supt.

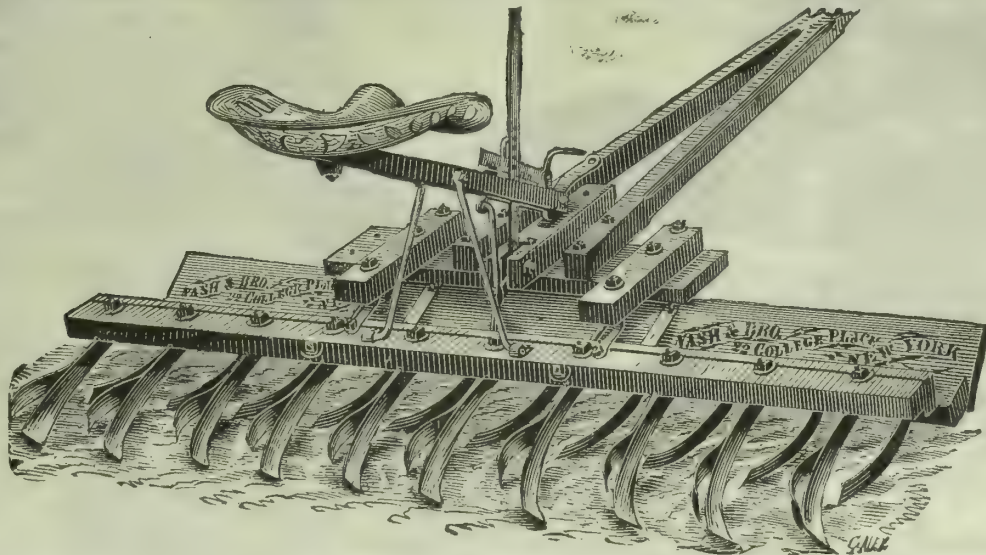
CALIFORNIA DRY DOCK CO. - - Proprietors

Office—318 California Street, Room 3.

"ACME" PULVERIZING HARROW,

Clod Crusher and Leveler.

FOR—
THE ORCHARD,
Vineyard,
NURSERY,
 —AND—
Grain Field.



SEND
 FOR—
Pamphlet
 Giving Testimonials
 from the
PACIFIC COAST
 Agents Wanted
 IN UNOCCUPIED TERRITORY.

The "ACME" subjects the soil to the action of a **Crusher and Leveler**, and at the same time to the **Cutting, Lifting, Turning** process of double rows of **STEEL COULTERS**, the peculiar shape and arrangement of which give immense cutting power. The entire absence of **Spikes or Spring Teeth** avoids pulling up rubbish. It is especially adapted to inverted sod and hard clay, where other Harrows utterly fail, and it also works perfectly on light soil.

The FOLLOWING EXTRACTS FROM TESTIMONIALS are fair samples of the hundreds published in our pamphlet, and the fact that these testimonials come from forty-two different States and Territories serves to show the wide-spread popularity of the "ACME."

"It has no equal. I have put in 150 acres of Grain with it with two horses. My grain is looking well, and I think that it performs all the work that is claimed for it."
 "Last season I had 10 single Cultivators at work. This year have done all the same work in over 100 acres of orchard with one 'ACME' Pulverizer, keeping both heavy and light soil clean and in excellent condition. Have not used a one-horse Cultivator this season among the trees."

"We have had no winter freezes, and to use a common expression, the soil, from continued and heavy rains, had 'run together' with surface hard and crusted. I ran the 'Acme' over it twice, and sowed clover in as well prepared seed bed as I ever saw in a garden."

"Having used two 'Acme' Harrows in the preparation of over 300 acres of RICE LAND, I can say that they have given me more satisfaction than any other Harrow I ever used. I was enabled this season to do away with the chopping altogether, thus saving from \$2 to \$5 50 per acre, and to cover the whole crop on both new and old land with a brush drawn by one mule, at a cost of 15 cents to the acre."

"To cover grain with, I never saw anything better."

"I used the 'Acme' backsetting a piece of tough *Prairie Sod*, which I was going to let lie this summer to rot. The sods were smoothed down, leaving a good seed bed."

"Used in a black bottom ground, that very few plows will scour in, but the Coulters kept clean and bright."

"For Tobacco Ground there is no implement better."

"It is the best implement to cultivate *Orange Groves and Fruit Orchards* that has ever been introduced here in California."

Highly Commended by this Paper.

Pamphlet Mailed Free.

NASH & BROTHERS, Sole Manufacturers,

22 College Place,

NEW YORK CITY.

Sold in California by G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose; John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Low, Salt Lake City.

U.S.★ WINDMILL.

First Premium at the State
Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out.

It does its work with less loss of power from friction than any other mill.

It is easily regulated to do as little or as much work as may be required of it.

It is self-governing, and very sensitive to the least change in the wind.

It will run with less wind than any other mill of the same size, doing the same amount of work.

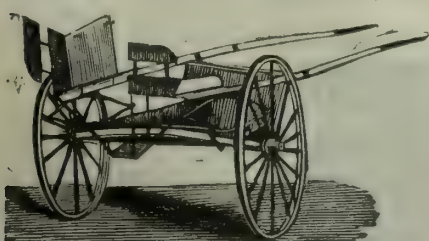
It is simpler and more compact in construction than any other first-class mill.

It is the most durable windmill known.

It is offered at as low a price as any other first-class mill.

D. G. PAUL, General Agent,
Livermore, Cal.

**H. PRINDLE,
ENTERPRISE CARRIAGE SHOP,**
No. 287 St. John St. - SAN JOSE, CAL.



(Patented September 14, 1880.)

Carriage making, blacksmithing and horse shoeing, repairing and new work promptly and cheaply executed. Manufacturer and Exclusive Owner in Santa Clara Co., of PUTNAM'S PATENT CART. For cheapness, convenience and durability, this vehicle cannot be surpassed. The improvements upon the accompanying cut admit access to the seat from the rear. Sole agent for Santa Clara Co., for J. A. Billy's Gig.

J. P. SWEENEY & CO., Seedsman,

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities:

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.

SPERRY & CO.,

MILLERS,

Stockton,

Manufacturers of

New Process

Roller Flour.



San Francisco

Office,

22 California St.

HARNESS, SADDLES,

LEATHER & SADDLERY Goods.

WHOLESALE AND RETAIL

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc.

W. DAVIS, 410 Market Street.

WILD GRAPE SEED.

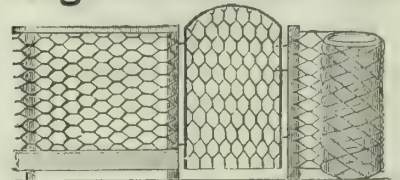
I have a small quantity of Wild Grape Seed for sale, and can furnish Wild Grape Roots for grafting. Seed is worth \$8 per pound, and the Roots \$20 per thousand. Send to JAMES M. HUTCHINS, Kelseyville, Lake Co., Cal. Terms cash in advance

JERSEY BULL FOR SALE.

A thoroughbred. Year and half old. Ready for service. Good color. Well broke to lead. Took a prize at San Mateo and Santa Clara Agricultural Fair this year. Enquire of

J. T. HOYT, San Mateo, Cal.

Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will turn dogs, pigs, sheep, and poultry, as well as the most vicious stock, without injury to either fence or stock. It is used by the farmer, gardener, stock raiser and railroads, and is very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint (or galvanized) it will last a lifetime. It is Superior to Boards or Barbed Wire in every respect. We ask for it a fair trial, knowing it will wear itself into favor. The Sedgwick Gates, made of wrought-iron pipe and steel wire, defy all competition in neatness, strength and durability. We also make the best and cheapest All Iron Automatic or Self-Opening Gate, also Cheapest and Neatest All Iron Fence. For Prices and Particulars ask Hardware Dealers or address the Manufacturers,

SEDGWICK BROS.,
Richmond, Ind.

Mention this paper.

The Pacific Rural Press.

(Established in San Francisco in 1870.)

This is the leading farming journal on the western half of the continent, and second to none in America. It is well printed and illustrated weekly. Contains an unusual amount of fresh, original farm, household and family circle literature. Careful attention is paid to giving full and reliable weekly market reports. The following are among its ably conducted departments: Editorials on agricultural and other timely and important subjects of live interest to farmers and their families; agricultural, and other useful and ornamental illustrations; correspondence from various quarters of our new and rich developing fields of agriculture on the Pacific coast, embracing new hints and ideas from progressive men and women in all branches of rural industry; Horticulture; Floriculture; The Garden; The Home Circle; The Grange; Young Folks; Domestic Economy; Good Health; Entomological; Sheep and Wool; The Dairy; The Stock Yard; Poultry Yard; The Swine Yard; The Apiary; The Vineyard; Queries and Replies; New Inventions (and illustrations of new and improved machinery); Agricultural Notes; Items of General News, etc. Its columns are studiously filled with choice, interesting, fresh and useful reading, devoid of questionable literature for old or young and fancifully alluring clap-trap advertisements. Send for sample copies.

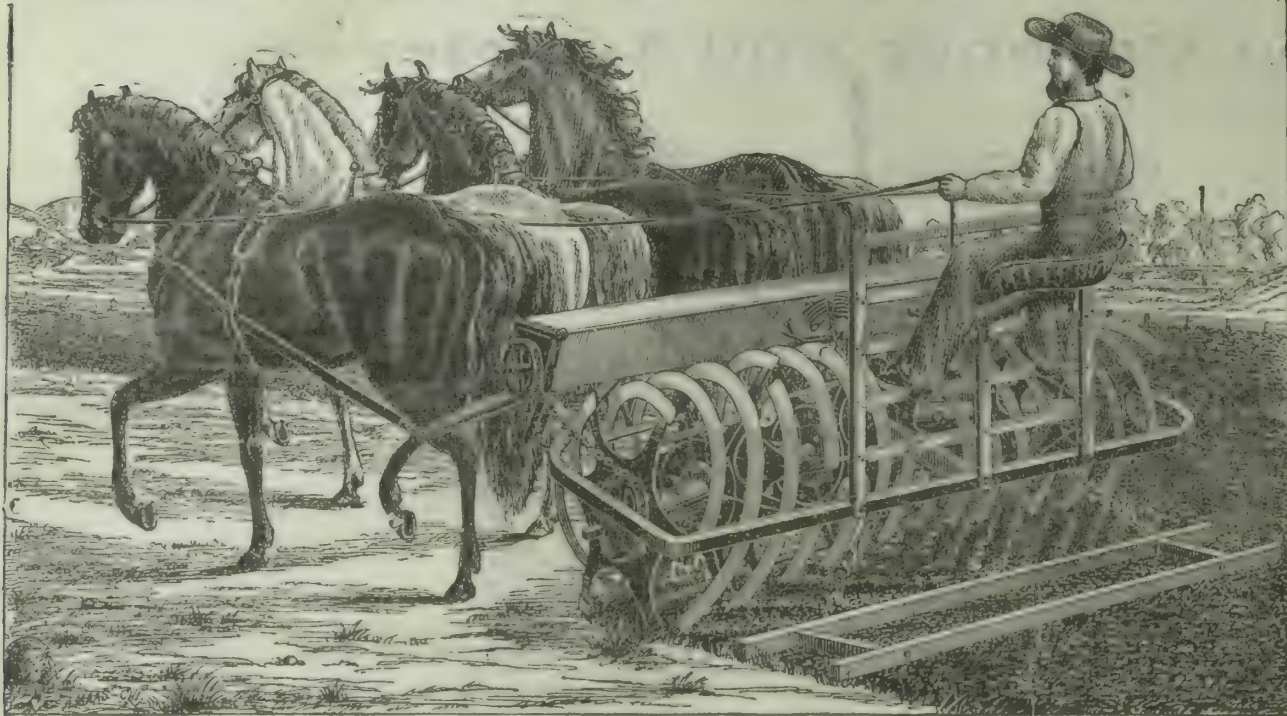
Subscriptions, in advance, \$3 a year. Agents wanted, on liberal pay. DEWEY & Co., Publishers.
No. 252 Market St., S. F., Cal.

**Business Offices and Sunny
Rooms to Let.**

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them

DEWEY & CO.

CHICAGO SCREW PULVERIZER.



Unequalled for working Tule, Salt Marsh and Salt Grass Lands; also for cross-plowing Summer Fallow, putting in Summer Fallow and Volunteering. Weight, 1,600 pounds; capacity, fifteen acres per day by the use of six animals. This machine is not only a Pulverizing Harrow, but is a PLOW for any purpose except that of a Breaking Plow. Price reduced. Fully guaranteed and sold on its merits. Send for circulars containing Letters from 150 leading Farmers. Address,

H. P. NICHOLS, Stockton, Cal.

McLEOD'S XXX Squirrel Poison,



Reasons of its Superiority:

1. Squirrels will eat it any time in the Year.
2. It does not Lose its Strength by Exposure to the Air.
3. It is Cheaper than the Farmer can manufacture it.

Address,
A. J. McLEOD,
Livermore, Alameda Co., CALIFORNIA.

DEWEY & CO.

SCIENTIFIC PRESS

AMERICAN AND FOREIGN

PATENT AGENCY,



NEW OFFICES, 1892:

252 Market Street, Elevator 12 Front,
SAN FRANCISCO.

Branch Offices in all Foreign Countries.

CIRCULARS OF INFORMATION FOR INVENTORS SENT FREE ON APPLICATION

GEO. H. STRONG. W. B. EWER. A. T. DEWEY

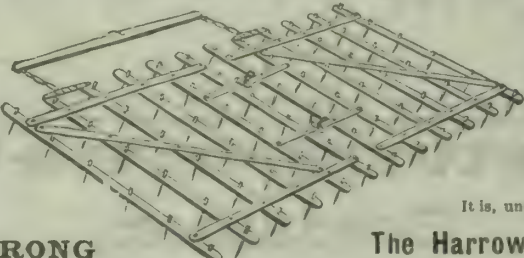
Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates.

BYRON JACKSON,

Successor to
JACKSON & TRUMAN,
Manufacturers of

Agricultural Machinery, Windmills, Harrows, Etc.

THE
V-Shaped
SOLID STEEL
TOOTH HARROW
CHEAP!



Will Last Longer
AND
Do Better Work
Than any other
Wooden Harrow.

It is, undoubtedly,

The Harrow of the Age

STRONG

I believe the above to be the best wooden frame Harrow made. The teeth are made of solid steel, V-shaped, which form is found to give greater strength, last longer and cut better than any other shape. The frame is strong and well braced, and they will do the work.
I am also making the IRON HARROW, which was introduced last year with such good results. Send me your orders for Harrows and I will guarantee satisfaction.

AWARDED

FIRST

PREMIUM

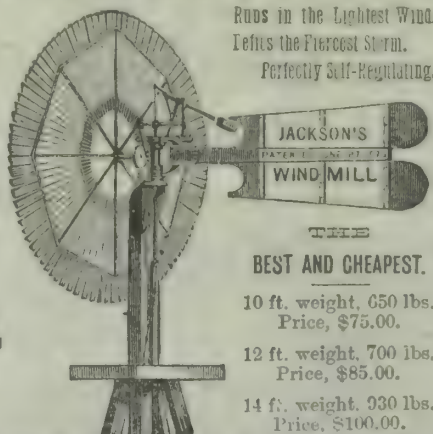
At the

STOCKTON FAIR,

1882.

Address,

625 to 631 Sixth St.,
149 to 169 Bluxome St.,



Runs in the Lightest Wind.
Defies the Fiercest Storm.
Perfectly Self-Regulating.

JACKSON'S

WINDMILLS

Always give Satisfaction. Never Blow Down.

STRONG,

DURABLE,

CHEAP.

BEST AND CHEAPEST.

10 ft. weight, 650 lbs.

Price, \$75.00.

12 ft. weight, 700 lbs.

Price, \$85.00.

14 ft. weight, 930 lbs.

Price, \$100.00.

BYRON JACKSON,

SAN FRANCISCO, CAL.

S. P. BAILEY.

O. E. BADGLEY.

JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - - - Stockton, Cal.,

IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,

Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Belle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.

We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow.

In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.



A Rapid and Permanent cure of

DYSPEPSIA, INDIGESTION,

Or Rising of Food After Eating,

LIVER COMPLAINT,

And all difficulties arising from a disordered or diseased Stomach. An immediate relief for CRAMPS, COLIC, CHOLERA MORBUS, FLUX, or looseness of the Bowels. A mild and safe invigorant for Delicate Females. An excellent Appetizer and Renovator of the Digestive organs; also checks CHILLS and FEVER.

N. B.—Correspondence solicited from Wholesale Druggists and Liquor Dealers. Agents wanted for Pacific States.

WILLIAMS & CO.,

Sole Proprietors and Manufacturers,

295 Cutter Street. CINCINNATI, OHIO.

Arrears of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1882.

Pensions for all soldiers disabled in line and discharge of duty, either by accident or otherwise.

Widows of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty. Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges. Honorable Discharges procured; all so duplicates. Send for blanks.

Increase of Pension. Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps,

STODDART & CO.,

Washington, D. C.

Box 623.

MRS. C. V. TURNER,

Inventor and Manufacturer of the



EXCELSIOR

Perfect Fitting

CORSET,

(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice the above Corset. Rules for self-measurement sent on application, and a Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St., SAN JOSE, CAL.

All parties are cautioned against making or causing to be made the above Corset without my License Stamp, under full penalty of the law.

A NEW BOOK.

A Treatise on the Horse and his Diseases.

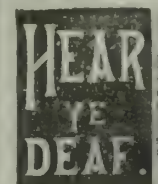
By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the lesser effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year.

It is printed on fine paper and has nearly 100 pages, 7 1/2 inches. Price only 25 cents, or 5 for \$1, on receipt of which we will send by mail to any address.

DEWEY & CO.,
252 Market St., S. F.



Garmore's Ear Drum.

As invented and worn by him perfectly restoring that organ. Fully described in this volume. Thousands of men, women and children, who were deaf, are now hearing. Are not obnoxious, and require no special treatment. Beware of cheap imitations. CAUTION: This is the only successful artificial Ear Drum manufactured.

JOHN GARMORE,
15th & Race Sts., Cincinnati, O.

PACIFIC RURAL PRESS.

A first-class 20-page Illustrated Agricultural Weekly, filled with fresh valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDS

Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
607 Sansome Street, S. F.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD

For sale at low prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES.

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at \$1.00 each. Send for Catalogue and prices to

C. W. REED & CO.,
Sacramento, Cal.

HOLLAND BULBS

ROSES AND
PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO.
SEEDSMEN,
Rochester, N.Y. & Chicago, Ill.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.

Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

FRUIT TREES FOR SALE

Bellevue Nursery.

25,000 Pear Trees, mostly Bartlett; 20,000 Apricot; 15,000 Apple. Also Peach, Plum, Prune, Nectarine, English Walnut and Orange Trees. The above Trees have made a good growth, and are free from disease or any scale or other parasites. For further particulars address P. O. Box 304, Los Angeles, Cal. MILTON THOMAS.

JAMES HANNAY'S NURSERIES.

East San Jose, Cal.

For sale, a large and general assortment of healthy well grown Fruit Trees, comprising Apple, Pear, Peach, Plum, Prune, Apricot, Cherry, etc., of all the leading varieties now mostly in demand. Address,

JAMES HANNAY, San Jose, Cal.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Suesquehana, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also.

TREES IN THE DORMANT BUD.

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

THE NURSERY OF

C. M. SILVA & SON

Is the Pacific Coast

HEADQUARTERS FOR THE "HANSELL"

(New Extra Early Red) Raspberry, James Vick, Manchester and Finch's Prolific,

And other Valuable New Strawberries, and all other good small fruits, new and old. A large stock of fine

PLUM AND PRUNE TREES.

First Quality of Everything, Free from Scale.

Will issue New Illustrated Catalogue of Small Fruits about November 15th. Send for it. Address,

C. M. SILVA & SON,

Newcastle,

CALIFORNIA.

W. R. STRONG & CO..

WHOLESALE SEED MERCHANTS.

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc., can be obtained at our establishment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Dealers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,

Sacramento, Cal.

ORANGE HILL NURSERIES,

Penryn, Placer Co., Cal.

W. R. STRONG & CO., Proprietors,

Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Price & catalogue on application. Address,

W. R. STRONG & CO.,

Sacramento, Cal.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

WAREHOUSES:

115, 117 & 119 Kinzie St.

104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,
CHICAGO, ILL.

JOHN ELLIS,

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. - - STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

SANTA CLARA NURSERIES,

San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurel (U.S.).....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Repluol p's orate.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Monterey Cypress.....	2 to 3 "
Balsam Fir.....	2 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of

Miscellaneous Fruit Trees, Small Fruits,
Ornamental Shade Trees, Evergreens,
Roses, Bulbs, Greenhouse Plants,
Etc., etc.

RICHARD D. FOX,

San Jose, Cal.

THOS. MEHERIN, Agent,

516 Battery Street, San Francisco.

FOR SALE.

Moor Park Apricot & French Prune Trees.

One year's growth in the graft, thrifty, and of good size.

Free from pests and will be dug by hand. Address

STODDARD & SANDERS,
Saratoga, Santa Clara Co., Cal.

TREES AND SEEDS TRUE TO NAME

APPLES.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. PEACHES.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. PLUMS.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. PRUNES.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. ALMONDS.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. NECTARINES.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. PEARs.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. WALNUTS.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. CHERRY.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. BERRY.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. RASPBERRY.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. STRAWBERRY.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. CLOVER.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. ALFALFA.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. GRASS.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. SEEDS.—A. N., 15 to 20; Adirondack, Barlett, Lawrence, Pearmain, etc. W. A. SANDERS, BARNES, FRANKS & CO., Cal.

Napa Valley Nurseries.

FRUIT TREES, GRAPE CUTTINGS, \$3.50 per 1,000. Rooted Vines, Etc., and other stock. Unirrigated and healthy. For particulars and prices, address, LEONARD COATES, Napa City, Cal.

HORTON & KENNEDY'S
FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)

LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency, LINTHORTH, RICE

& CO., 323 & 325 Market St., S. F.

Orange Culture in California.

With Appendix on Grape Culture.

An Important Work.

This book is written by Thos. A. Garey, of Los Angeles, after many years of practical experience and observation in orange culture. The subject is an interesting as well as important one, containing information which all reading Californians should possess, whether engaged in orange or grape culture or not.

There are few writers in America who could have contributed more richly or abundantly on this subject than has the author.

The book is issued in good style and print, and convenient form. It contains 225 pages, 12mo.

Printed and Sold at the Office of the "Pacific Rural Press," San Francisco.

Mailed (postpaid), in stiff cloth binding, for \$1.25; in flexible cloth, \$1. Agents wanted for this and other books.

PRINTERS, AUTHORS, INVENTORS,

PATENTEES, BUILDERS, MANUFACTURERS,

MACHINISTS, MERCHANTS, and

other trades-people can have satisfactory Engravings and Electrotype made

at moderate prices by the S. F. ENGRAVING CO., No. 405 Kearny St.

Send photographs, sketches, drawings,

models or samples for estimates. Map

and Woodcut Engravings enlarged or

reduced by the aid of photography, at

less than one-half the cost of the originals

and in short time. Photo-relief,

Zincograph and other improved methods employed.

TO YOUNG MEN who wish to learn Steam Engineering, send your name with 10c. in stamps, to F. KIPPY, Engineer, Bridgeport, Conn.

IMPROVED EUREKA GANG PLOW, WITH LAND GAUGE.

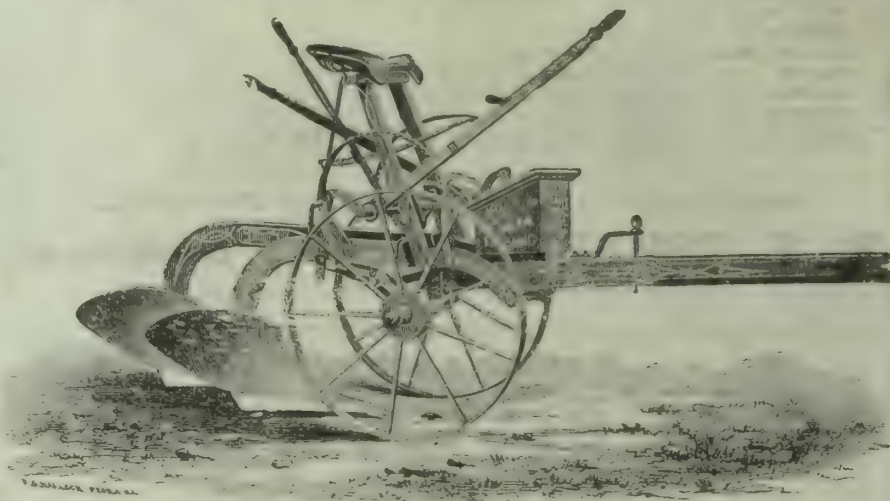
FIRST PREMIUM

At the State Fairs of 1877, 1878, 1879, 1880, 1881 and 1882, and numerous County Fairs.

This implement has received more State and County Fair Premiums, has been successful in more plowing contests, and has met with a more extensive sale, than any Gang Plow ever invented.

It has been the plow against which all dealers and manufacturers interested in the sale of other Gangs have waged their fiercest war, and the one by which inventors have measured their efforts, well knowing that if they could make a more satisfactory implement than the Eureka, they could justly claim to have the best.

The efforts in this direction, both by Eastern and California Inventors, have been strenuous and unremitting, and possibly might have been crowned with success, but for certain stumbling blocks in the shape of broad patents, covering all essential points, whose validity they have compelled us to establish in the courts.



No. 7c.

THE FAVORITE.

Among these is the Land Gauge Attachment that enables the driver to give the plow more or less land while in motion, the device for changing the plane of the wheels, and the detachable hubs of the wheels, which can be easily and cheaply renewed when worn out.

The Mold Boards are extra heavy, and of double thickness in front where the wear comes, and are so hard that a file will not scratch them. The Shares are of cast-steel, tough and strong, and can be drawn, sharpened and welded by any man capable of welding wrought iron. Care must be taken to work them at a low red heat, rather lower than that required for common cast steel, and, in tempering them, they should be allowed to lie in the water until entirely cold. Temper them at a dark heat.

The landside is a strip of steel that can be cheaply replaced when worn out.

N. B.—In sending for Extra Shares be careful to state whether S. P. No. 2 or 3 is wanted. S. P. No. 2 is 10-inch, and S. P. No. 3 is 12-inch.

We also furnish the Eureka Gang with "DIAMOND" BOTTOMS. Particular attention is called to these Bottoms, which have several features that are new and valuable. The Landside is provided, near its forward end, with a peculiarly formed dove-tail lock that assists greatly in retaining the share in its place. The lock, however, is not depended on to wholly hold the Share, but bolts also are used in the ordinary manner. The Bottom of the Landside (the part that always wears out first) is a detachable steel bar that can be replaced, when worn, for a trifle, and the Landside is again as good as new. This method of construction ensures a light and yet a very strong plow, and one that will last much longer than an ordinary bottom. They are called "Diamond Bottoms" because the figures designating the various parts and sizes are placed in a sunk diamond-shaped panel (<>). In ordering, please be careful to state that you want plows or parts marked "Diamond 1," or "Diamond 2," or "3," etc. We have other plows marked by the figures 1, 2 and 3, etc., and, if the customer does not expressly say DIAMOND in his order, the wrong article may be sent.

SLIP-SHARE BOTTOMS are preferred by many, as the Share employs but one bolt, that is easily got at, in addition to the lug slot, to fasten it on, and is the only Slip-share that has proven to be wholly satisfactory. Its use enables the construction of very strong and yet light Bottoms, which are very firmly attached to the iron beam. These bottoms have patent iron center mold boards that are chemically hardened, and the Shares are either our own hand make or else the best cast-steel.

CAUTION.—All of our Gangs are made under patents covering the Lifting Lever and the Crank Axle. Judgment in the courts has been obtained against one infringer, and others will be prosecuted in due season. We do not know of a two-wheeled Gang in the State that does not infringe our rights. We therefore warn all parties against making, selling or using Gangs infringing patents. The Eureka is also made with a Hillside Attachment, by means of which the axle can be set obliquely across the beams with a lever, thus making the wheels lead up the hill to counteract any tendency the plow may have to slide down hill. The Eureka will continue in the future to be kept up to the high standard of excellence that has characterized it in the past, and the farming community can rest assured that any invention of real merit or utility that may be made on Gang Plows will be secured for it.

Price, Complete with Land Gauge, \$110.

IMPROVED GEM BELT SEED SOWER.

Advantages

OF THE

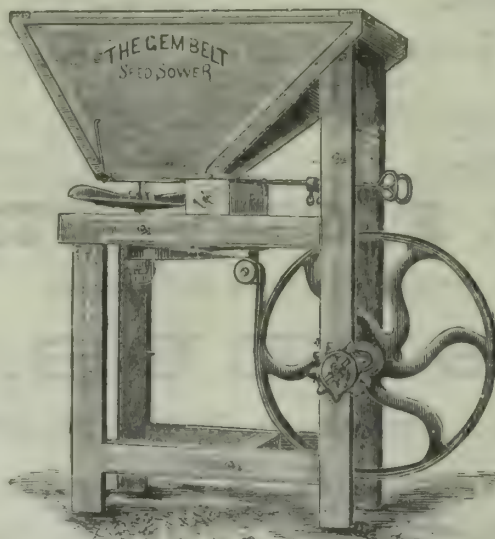
GEM BELT:

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the Wagon; therefore one may be closed when sowing by a fence, ditch or land that is not to be sown.

The Distributor of the GEM whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.

The Gem does not Throw the Seed up into the Air,

To be blown about by the wind, but throws it sharply to the right or left.



The Reasons Why

THE DISTRIBUTOR OF THE

GEM BELT SOWER

Is run by a quarter turn belt, as shown in the engraving, instead of gearing:

The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast running parts, and the evenness with which it sows the grain.

The Gem Sows Blue-Stoned Grain Perfectly.

THE GEM

Sows about Sixty Feet Wide.

DIRECTIONS FOR USING THE GEM SEED SOWER:

Bolt the cast iron rim wheel on the inside of the hind wheel of an ordinary-sized wagon; put the chain on the rim wheel and over the small chain pulley on the Sower, and then bolt the machine to the bottom of the wagon, the disk facing outward; fill the Hopper with grain, and all is ready.

You will notice there are Two Slides covering two openings; if you open the right hand one (facing the hind end of the wagon), the grain will be sown on the left side and behind the wagon, and vice versa. No grain need be wasted at any time by being thrown where not wanted. Grain should be clean and free from straws, etc.

It is impossible to give directions as to how much the opening should be opened to sow a certain quantity per acre. This depends on the weight and cleanliness of the seed and the speed of the team. If the machine is attached to a wheel smaller than 4 ft., 6 in., or 5 ft., and the team walks fast, it will sow too thin behind. We find many attach the machine to Header Wagons; this is objectionable, as they pull hard over plowed ground, and to sow even the horses are compelled to walk slower.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 lbs. \$25 00 | No 3 Gem, to run with all gears, weight 165 lbs. \$35 00
No. 2 Gem, to run with belt gear, weight 154 lbs. 30 00 | No. 3 only made to order.

The GEM SEED SOWER can only be obtained from us, as we are the Sole Manufacturers.

San Francisco,

BAKER & HAMILTON.

Sacramento.



TWENTY-PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, NOVEMBER 11, 1882.

Number 20

The Hansell—The Earliest Raspberry.

We give on this page a picture of the Hansell raspberry, a promising variety which was first noticed some eight years ago, growing among weeds and grass by the side of a barn in Burlington county, New Jersey, a spot so unfavorable for a raspberry that any variety except one of great inherent vigor would have perished. By chance it escaped being dug up in clearing the ground, and after a time a branch attained the bearing age. The first few berries, in their half buried position, were so fine as to attract the attention of the owner of the property, the late J. S. Hansell, a practical and successful fruit grower. On being transferred to the field it proved so signally fine and profitable that Mr. Hansell set about increasing and planting it as rapidly as practicable, until at the time of his death (1881) he had ten acres in bearing. The Hansell is therefore not an untried novelty, sent out without testing, for it has been fruited on an extended scale and subjected to all kinds of hardships, and examined carefully by those of the widest experience with raspberries, and the unanimous verdict has been that it is not only the earliest of all raspberries of any kind and color whatever, but possesses all other qualities desirable in a raspberry to a remarkable degree as well. It ripens fully 10 days in advance of the "Brandywine," growing beside it with the same treatment. It invariably ripens its entire crop in a short space of time (about three weeks), and is out of the way when Cuthbert is at its height.

The Hansell is described as follows: Fruit, medium to large, averaging larger than Brandywine, and nearly as large as Cuthbert; color, of the brightest crimson, being as bright as Brandywine, and brighter than any other we can name; flesh, very firm, equaling in this respect that best of all shipping red raspberries, the Brandywine; quality, best, being notably rich and refreshing; canes vigorous and productive, and entire y hardy, having never been injured by the heat of summer or the cold of winter.

While entirely different in form, and totally distinct in cane, the Hansell bears more resemblance in its high quality, consistency of flesh and bright color, to the once popular Hudson River Antwerp, than any other raspberry of which we have any knowledge.

We are indebted for the engraving of this new fruit to C. M. Silva & Son, of Newcastle, Cal. They sincerely believe we have the long-wished-for boon, a good, reliable, very early, red raspberry, and assert what has, in purport, already been declared by numerous disinterested horticulturists, that the Hansell is the most desirable and valuable raspberry in existence.

LIVE STOCK PRICES IN ENGLAND.—English breeders of the kind of stock now in fancy demand are enjoying a wealth of prices. We read in an exchange that the Pollard Angus sales of the last few weeks have been realizing averages approaching \$500 a head for all ages, and including individual prices of \$1,000 and \$1,500. And now we hear of similar prices for Welsh stock—\$1,000 and \$1,500 for individuals. The Jersey cattle, too, are leaving the country in unusual numbers for extraordinary prices, and other farming stock are sharing in this rise of prices. The Berkshire breed of pigs has been commanding extraordinary prices, and when transatlantic telegrams ordering purchases arrive, ending with "Price no hindrance," it is not surprising to find that prices rise. Evidently the activity in live stock in this country and the abundant money which enables fanciers to buy what they want at any price, is giving the English breeders an era of full purses.

A BARGE loaded with 5,000 sacks of wheat was sunk at Princeton, Colusa county, Sunday night.

The San Jose Convention.

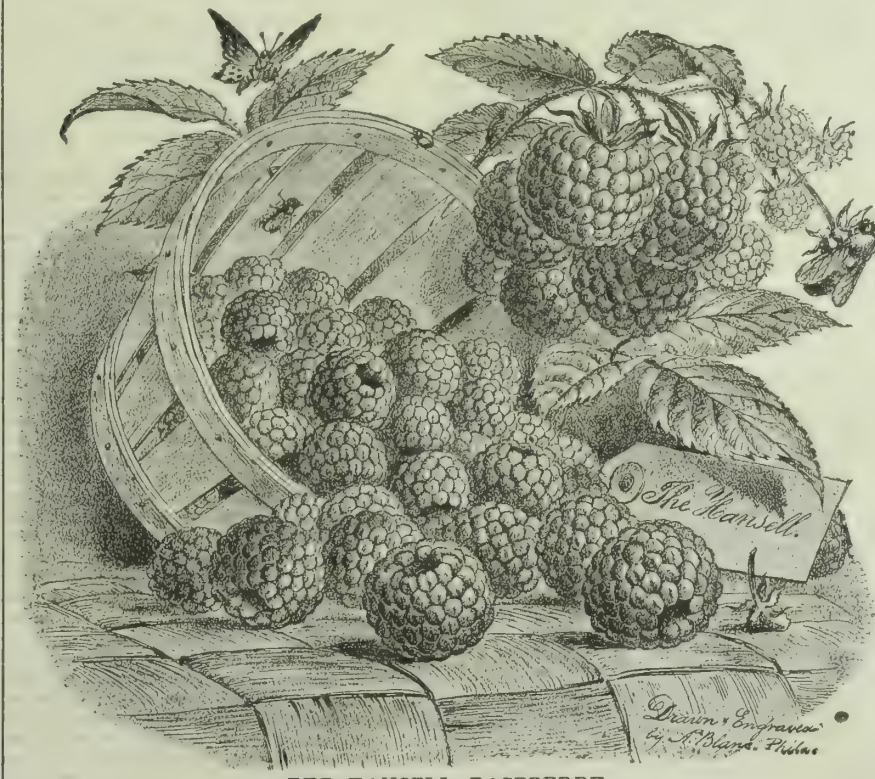
On Tuesday of next week the Fruit Growers' Convention will assemble in San Jose, and two or three days will be devoted to a general consideration of the fruit industry, its problems and promises, its troubles and its rewards. The meetings are held under the auspices of the State Board of Horticultural Commissioners, and the accommodations for the meetings are furnished by the Santa Clara Valley Horticultural Society, so that, so far as shelter and facilities for meetings and exhibitions go, the fruit growing public is the guest of the San Jose society.

In general plan the convention will probably belike the convention held last year at Sacra-

We hear that many fruit growers in different parts of the State are intending to go to San Jose. Let them come and see the glories of the Santa Clara valley district, the orchards, the insects and the way in which they are fought and conquered. It will be a fine opportunity for pleasant and profitable observation and interchange of ideas and experiences. We trust there will be a large gathering.

Japan Clover.

Some months ago we gave a picture of the so-called Japanese clover (*Respedeza striata*), and suggested that it was worth trying in this State. There was some inquiry for the seed, and we hope some reader of the RURAL made a trial of the plant. If so, it is time now to give us some information about it. We have just read of the behavior of the plant in North



THE HANSELL RASPBERRY.

mento, the proceedings of which were published in the RURAL, and in pamphlet form, and were read with interest by many. It will be the design of those in charge of the convention to make the discussions cover all parts of the fruit business, if possible. The leading theme will, of course, be the absorbing topic of insect depredations and their remedy and measures calculated to protect the orchards from an extension or introduction of the pests. This will involve the whole subject of legal remedies for insect ruin, and we understand that the meetings will be addressed by those who have made the horticultural rules and their legal standing a careful study.

Other subjects no doubt will be the different fruits, their cultivation, varieties, etc., and we understand that prominent and practical growers will speak on these subjects. In short all possible arrangements have been made to secure a presentation of many important, interesting matters, and upon all of them there will be opportunity for frank statement of views pro and con. Thus may the truth be solved, and popular sentiment declared. We trust that many of the newly elected Senators and Representatives will be able to attend the convention, for they can learn more of the wishes of the fruit growers in this way than they can ever gain by individual inquiry.

Carolina, which shows it to be all the more promising, and if it has not yet been tried it should be done. J. W. Walker, of Franklin county, North Carolina, says: "This plant was first discovered here in 1866; it was on the roadside, occupying a space not exceeding 10 feet square. It was surrounded on all sides by broomsedge and old field pines. In 1870 it, being very prolific, had spread over hundreds of acres, and the broomsedge had entirely disappeared. It forms a good sod and rapidly improves land, and when plowed under it imparts the same chemical properties to the soil that red clover and pea vines do, and is as easily destroyed by the plow as the red clover is. When once sown on land it is there for all coming time, as it never runs out. Its seeds are almost infinitesimal in appearance, and it yields them abundantly, and cattle grazing on it soon scatter the seed everywhere. It will grow on any kind of soil, on the clay, in gullies where nothing else would grow; and I have seen it three feet high among old fields, pines and the original forest. It quickly eradicates broomsedge from our worn out and turned out lands, and gives a carpet of nutritious verdure instead. Cattle are inordinately fond of it, preferring it to anything else. It stands drouths wonderfully, and cannot be destroyed by grazing."

What to do with Oleomargarine.

We print upon another page some important Eastern information concerning oleomargarine and its uses, and the effect upon the market for the genuine of having the imitation material on sale. It will be seen that evidence is advanced which refutes the specious claims of the apologists for the fraud, who are causing their articles to be published in the daily papers. These items of Eastern evidence may be taken as supporting the positions taken in our article last week.

The question now arises: "What can our dairymen do to protect their interests which are assailed?" The dairymen must act together if they are to exert any influence. They ought to organize in their own neighborhoods, and then send delegates to a general State meeting. This State meeting should discuss the subject with all the light attainable, and then should resolve to do certain things. First, perhaps, to appoint a competent legal committee to draft a law, to be presented at the next session of the Legislature, to prevent the sale of oleomargarine without plain statement of its character; second, to appoint a committee competent to draw up popular descriptions of the product which is being sold as butter, its materials, methods, etc., etc., so that all may know what they are invited to eat; third, to appoint a committee to ascertain from the public press of the State whether they will uphold the legitimate product and the legitimate producers or whether they will aid the counterfeiter by praise of his mixtures and condemnation of the genuine. Every journal which gives forth an uncertain sound on the subject should be proclaimed so that the agricultural interest may treat it becomingly. These and many other things should be done by the combined dairy interest, and money contributed by all to carry them forward. If the people are once thoroughly aroused on the subject there is a prospect that the ill effects of oleomargarine selling may be avoided. If the makers are to be allowed to slip along unchecked in their greasy paths the great middle trade in butter will be ruined and the profits of the fancy makes much reduced, because of course all butter which is elevated to escape oleomargarine comes into competition with what is now fancy, and all will be cheapened. What do the dairymen propose to do in this matter?

There have been sporadic efforts at organization to oppose oleomargarine. Del Norte organized some months ago, and reported to us a strong club ready to work against fraudulent products. Bodega did likewise. We have heard nothing of these organizations of late, but have no doubt they will be found awake and ready to take part in any general movement which may be set in motion by the dairymen. Santa Cruz dairymen are meeting as we write, in the Court House at Santa Cruz, and we trust they may sound a clear note which will rally the legitimate producers in all districts. This is the only way in which anything can be accomplished.

The dairy interests of California cover a vast amount of capital, and employ a small army of men. The industry must not be imperiled by a single company of mixers who, from their proximity to the slaughter houses of the metropolis, are enabled to grind out almost unlimited amounts of grease butter. Let all the dairy districts hold meetings and elect their best men as delegates to a central meeting, which can adopt wise measures to set forth this fraud in its proper light, and then secure enactments to prevent the tallow compound from appearing in the markets, except as it bears clear marks of its origin and components.

GENERAL CROOK held a final conference with the Apaches and gave them to understand what is expected of them in the future, and what they must expect if they misbehave.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

That "Unlimited" Apricot Jam Market.

EDITORS PRESS:—"George Elliot is universally admitted to have been the most subtle delineator of British middle class character that our age has seen. Do any of your readers call to mind Tom Tulliver?" Tom had a trick of absconding from home some days, not even putting in an appearance at dinner time. Maggie, Tom's sister, seemed instinctively to know when Tom contemplated playing truant. One morning the signs point toward absenteeism.

"Mustn't run away to-day, Tom."

"Why not, Maggie?"

"Oh, apricot roll-up!" briefly sums up Maggie, knowing that the attractive power of apricot roll-up pudding is unsurpassable to the British schoolboy.

But much as I should like to agree with Mr. Coates that the apricot jam market is "practically unlimited, I do think the voracity of every British schoolboy is not entirely boundless. I've "bin thar" myself, and know something about it. Allowed that "no satis to the jams" (Hood's joke, not mine), is the schoolboy's paradise; allowed, if you will, that the California apricot out-apricots the apricots of every other clime, there yet remain one or two considerations before we run our farms entirely to those injurious trees.

I was just thinking of sending the RURAL a budget about jams and fruit confections before I read Mr. Coates' letter. I was taken slightly with the apricot mania myself. It looked so pretty in print. Let me see, something thusly: 100 trees per acre, each tree 400 lbs. of fruit at 5 cents—\$2,000. Why, "Tom Tiddler's ground" could not beat that, where they pick up "silver and gold."

But I got inoculated by planting out just half a hundred, and then wrote to know more as to the unlimited market and the remuneration it offers. The figures I now give your readers are from Crosse & Blackwell's London price list for April, 1882. C. & B.'s is the great distributing house for all such goods:

"California apricots in syrup, 38s. per case of four dozen two pounds and a half tins.

Last week's RURAL quotes same goods 14s. 6d., or \$3 50 per dozen; roughly, 58s. for four dozen, in San Francisco. I hardly see how the English market gives us much encouragement there. Next comes "apricot and peach marmalade" (jam we call it):

Apricot marmalades, covered glass jars, 7s. 6d. per dozen, white glass jars, 10s. per dozen; camp kettles, 12s. per dozen; peach marmalades, glass jars, 3s. 6d. per dozen.

These are, I presume, one-pound packages, varying in price, as the vessel filled is prettier. Now, I was through the "Golden Gate" and "San Jose" canneries at San Jose lately, and learned that each pound of boiled pulp takes three-quarters of a pound of sugar. Last week's RURAL PRESS quotes sugar 12½ cents per pound—say that one pound and a quarter of apricots make the one pound pulp, and say apricots cost four cents. Then

1 lb. sugar, at 12½c per pound..... 25c
1 1/4 lbs. apricots, at 4c per pound..... 50c
1 3/4 lbs. apricots, at 4c per pound..... 75c

For one pound and three-quarters jam, or 8 3/4 lbs. cents per pound for material alone, or say, in British sterling, 4½d. Add the cost of fuel, labor, wear and tear of plant, tins, cases, labels, freight to ship in San Francisco, freight to Liverpool, harbor dues, cartage, storage, commission, and how much will be left when the jam is sold in London in "covered glass jars" at 7s. 6d. per dozen pounds, or 7½d. per pound.

Last week's RURAL quotes "jams and jellies" \$3 75 per dozen (two pounds, I believe), in San Francisco. English market not very advantageous yet:

Next we have

Poncon's Lisbon Fruits.

Apricots in syrup, 12s. per dozen apricots in syrup per case of 100 tins, 96s.; apricots in juice, 9s. per dozen; apricots in juice per case of 100 tins, 72s.; apricot marmalade, in glasses, 10s. per dozen; peaches in syrup, 12s. per dozen; peaches in juice, 8s. per dozen.

So the English market does not appreciate the Californian apricot so highly as that of Portugal. Then

Crystallized Fruits.

Apricots crystallized and glacé, 1s. 3d. per pound; Peach crystallized and glacé, 1s. 3d. per pound.

Mr. Barbour, of the San Jose Packing Company, told me they had experienced a little in crystallized fruits, but had abandoned the business at present; the amount of stannic chloride or some other villainous compound, which the sugar monopoly deals out to us mixed up in our sugar having rendered the attempt abortive.

Lastly:

"Bottled fruits," answering to our pie fruits—Rhubarb, 6s. per dozen; strawberries, 6s. per dozen; plums, 6s. per dozen; cranberries, 7s. per dozen; apples, 7s. per dozen; damsons, 7s. per dozen; red currants, cherries, cherries and currants, gooseberries, 8s. per dozen; black currants, 8s. per dozen; Morella cherries, raspberries, 10s. per dozen.

These are in wide-mouthed glass bottles, corked and bladdered.

At the San Jose Packing Company's factory I saw samples of extra choice fruits in glass bottles with tin capsule, looking exceedingly nice; but, if you please, \$8 per dozen at the cannery, and pints, I think, at that.

The RURAL quotes pie fruits \$2.25 per dozen; so I once more look in vain to the English market for remunerative prices.

My English correspondent calmly tells me, if I could make apricot jam at about six cents per pound, there would be an easy market. I think I'll wait till the anti monopolyists bust up Spreckles & Co.!

Mr. Coates would oblige your readers by sending the RURAL a recipe for that sugarless prune jams he mentions. I think I've tasted something similar, known as "German jam." "Damson cheese" is perhaps of the same nature, but hardly sugarless. In sugarless jams we may yet make fortunes regardless of Mr. Spreckles.

EDWARD BERNICK.

Carmel Valley, Monterey, Nov. 24, 1882.

FORESTRY.

Forest Trees of California.

The Great Sugar Pine.

(Pinus Lambertiana.)

Beneath the forest's skirt I rest—
Whence branching pines rise dark and high,
And bear the trophies of the west
Around the tormented fangs of night."—Bryant.

One of the most magnificent pines the world ever saw is the Great Sugar Pine of California! From 150 to 300 ft. high, 10 to 15 ft. in diameter, the body remarkably elegant and even of surface; for the fine water-line rarely serve to smooth and soften the neutral-tint bark of this tallest priestly pine; and what a wonderful column! perfectly cylindrical, clean of branch or knot for hundreds of feet—usually two-thirds of the total height—as it stands conspicuously in the midst of the forest, denized among other wildwoods, yet exalted above them; and high up over all his kindred pines, in some remote degree, like the lofty palm tree of the tropics. Among the trees, a mountaineer of the most decided and commanding character, his top in sylvan glory and radiating its open but exceedingly long arms, widely spread afar towards the horizon, oft as one vast long bow at ease, upwardly curving, exhilarant and free; and yet they are neither naked nor lank in the best types, but side-plumed and grandly fringed by relatively short, lateral, and successively diminishing branches and branchlets to their main extremity's end, whence pend from one to three, or even five, very long cones tasseling their tips, from one to one and one-half feet long and three to five inches in diameter, suspended by stems four to five inches long; color of cone light cinnamon-brown or ripe-yellowish; thin scales loosely overlapped, oblong fan-form, without prickles, etc.; seeds oval, a little compressed, lines long, wings widest below the middle, obtuse; cotyledons, 13 to 15.

These long horizontal limbs may depend somewhat, more or less in old age, like the bow still on its back, not altogether unstrung, but they are never massed nor at all crowded, but always open so as to allow the wind—of the prominent storm-exposed head—free passage through, or, in extreme cases, only bending them leeward almost double, like a true Damascus blade—hilt to point. This remarkable length of limb, so tolerant of the tempest and vigor of recoil with returning calm; or, in other words, toughened strength with elasticity, is quite characteristic.

The wild red man of the wood is quick to perceive and apt to apply this and similar knowledge to the science of his own use, for no sooner does the harvest of the coveted pinon arrive, than ape-like, he climbs and clambers out astride the branch, and, teetering to the required away, when, with a short timely jerk, the heavy cones are snapped off. The great use of the seed as Indian food we omit.

The rich dark plumes of vigorous blue-green foliage very much resemble the beautiful white pine of the East (*P. strobus*), especially when young—at length all further resemblance of form ceases. The needle-like leaf-straws are rather short, and somewhat twisted in age, from three to five inches long, very finely toothed on their edges, five in each tiny bootie, which is at length shed off like the white pine; these little bundles, in most cone-bearers, are more manifestly inserted in spiral order around the ultimate twigs.

The timber is not quite so soft, light and white as the white pine itself, but closely resembles it, and is alike in use and value, and, in some respects, superior, as it combines greater strength with elasticity.

Where the surface is burned the oozing sap concretes into a white manna-like sugar, sometimes nearly as crystalline and pure as refined loaf sugar, very sweet, with scarcely an appreciable pine-resin flavor; hence the common name sugar pine. If this could be obtained in quantity, its laxative and balsamic properties, apart from the palatable and nutritive, would highly commend itself to the attention of the medical profession. For obvious reasons, we cannot here, in all freedom, urge upon the public or the landscape artist the full claims of this expressive tree. To the bald scientific or the mere lucroloving plod, any aesthetic estimation of arboreal nature whatever might be deemed too poetic, imaginative, discursive, fanciful, or what not; briefly, irrelevant to the subject in hand. And

* From "The Forest Trees of California," by A. Kellogg, M. D. Published by the State Mining Bureau, State Printing Office, Sacramento.

what if we own no property in that royal realm, why should we be indifferent? And even our aversion may be suppressed. Is it not one of those occasions for tolerance and charity, and all the renowned and universal virtues among men? With due deference, therefore, to these varied tastes, always to be anticipated, we frankly confess our great surprise that even some few are found disparaging this noble pine on account of its open-hearted port, nor in our fascinated simplicity did it ever occur that the lack of leafage was a defect in this unique type of trees, being in no way amenable to any gross, massive or tumuloid standard of judgment. Set it down, then, to our fault, that we have no preconceived, abstract, and arbitrary notion of propriety for all the trees; that we do not even bow down and worship the almighty *Sciæmora*! Perchance the peculiar charms of this tree in our eye may, to some extent, be borrowed from the striking contrast with other associated trees, for it is rarely in forests of its own, being mostly interspersed in all the Alpine, and some of the sub-alpine regions of the coast. To our taste, the great sugar pine hath the far-extended oratorical gesture and open magnanimous spread from the breast and top of a tall and representative, or corresponding type of some sacred benediction of "good will towards men," for trees always display in their bearings types of human attributes.

On the tablelands of middle Yuba a fair sample of a grove may be seen; indeed, almost anywhere in the common belt of about 6,300 to 7,000 ft. altitude, always excepting that peculiar medium coast-tempered belt that connects the Coast Range mountains and Sierras, above and around the head of Sacramento valley, where a few come down lower, in groups rather than groves, or very much more sparsely, where, also, they develop but few cones, comparatively, even in favorable fruitful seasons, and most of these, say two or more, become abortive, and it is well if even one of the number matures; besides, it should be noted the cones are smaller, yet always characteristic. Found more or less in all parts of the State, namely, on the Sierras from 3,000 to 8,000 ft. of both slopes, and a few in the highest points of the Coast ranges from Santa Lucia mountains to Humboldt county, and so on northward to the Columbia river.

Between the two forks of the Stanislaus river may be seen a tree 3,000 ft. high, and about 15 or 16 ft. in diameter.

Western Weymouth Mountain Pine.

(Pinus Monticola.)

"Seemed an osprey,
Hovering above his prey—and you tall pines,
Their tops half mantled in a snowy veil."

The far western mountain pine of the Pacific bears the strongest resemblance to the great sugar pine, of which it seems almost like a smaller variety of the same species (hence designated little sugar pine). The general contour and expression of the tree is scarce at all like the white pine (*P. strobus*) of the eastern Atlantic; true, it has the common cone characters of the thin scaled *strobus* section, and five-clustered needles as in Lambert's sugar pine also, but the port and form, as indicated, is as distinct as it well can be for one of the same subdivision of pines. Before the tree has attained to its true matured and distinctive type, it has the common closer form of many other species, but at length, when of age, and aloft from 75 to 100, or sometimes 175 ft. high, and from two to five feet in diameter, in full bearing, its long horizontal branches well poised and nicely plumed with little laterals and closed around with faintly softened sea-green leaves, two and one half to three inches short; and then there is the selfsame free spread of the great sugar pine, only peculiar to these two species; the five-leaved clusters of needles are set close together in short fugacious boots, points sharp and edges keen, margins finely but remotely toothed, two sides channeled; the short but exceedingly slender foliage thrills very sensitively and delicately, the softer celestial echoes from off the blissful shores, to lull and soothe the sense to peace. Let other pines chaunt louder and glossier songs from their sylvan choirs where old *Eolus* dwells; these are of the higher angels who are wont to whisper their love notes low and still, as from the far away isles of the blest, soft as morning zephyrs gently roll the grain-clad dells. The form and size of the cones that cluster and tassel the tips of the branches are quite like those of the white pine (sometimes called the soft California white pine)—oftener a little longer; herein the resemblance is nearly perfect, being alike on short stems, cylindrical, four to eight inches long, one to two thick and stiffly curved; scales smooth, thin, loose, abrupt and mucro-pointed, but not prickly; seeds small, one fourth of an inch long or so, mottled or spattered with brown; wings from two to three times as long, widest near the middle, diagonally pointed, translucent-creamy, and more or less striped with brown; cotyledons, six to nine.

Contemplating these conifers, distant from their alpine eyrie, we behold the great sugar pine stretching his wide wing-branches against the sky, like a vast sylvan condor soaring aloft high up over all contiguous trees; so, also, is seen this lesser mountain pine as a sylvan osprey sailing serenely o'er the mountains—tree-hawk of the hills, circumspecting the groves!

The soft pine of the Pacific is found sparsely distributed over the Sierra Nevada mountains, at from four to eight or nine thousand feet altitude; timber similar to the white pine, but neither quite so white or soft, and the texture somewhat tougher.

HORTICULTURE.

Nectarine on Almonds—Dormant Buds.

EDITORS PRESS:—In a recent number of your excellent paper I notice an extract from the *Press and Horticulturist* of Riverside in reference to the yield and sale of nectarines from almond stock. A more detailed statement may be of interest to some of your numerous readers. One or two slight errors occurred in the article of the Riverside paper, as copied, which it might be well to correct. The price paid at the cannery was .02½, and not .03 per lb; the size, ½ instead of ¼ lb. The yield was correctly stated. Thirty trees were grafted to the nectarine, and about 100 to different varieties of peach, one year ago last February. The yield the present season was very satisfactory. I regard the grafting or budding of the peach or nectarine on almond stock as a perfect success.

My almonds had been bearing a number of years, but had not been very remunerative.

It is my purpose to further graft nectarine on almond stock the coming winter. I prefer nectarine because I believe that to be the coming and most profitable fruit for our section. All the conditions of soil and climate at Leugonia seem to be especially adapted to its successful cultivation. The Hardwick variety is a constant and heavy bearer, commencing to bear one year from the bud, and a vigorous grower. The price for canning, or as a dried fruit, is double that of the peach. Like the apricot, it does not require peeling, and it takes much less green fruit than the peach to make a pound of dry. I have become so far impressed with its superiority over any other deciduous fruit that I have several thousand in dormant bud for future use and sale. My sons and myself have at present 60 acres under cultivation, and mainly in fruit, and are preparing to place 3,000 more trees in orchard the coming winter, and shall put out largely of the nectarine.

Our Success with Dormant Buds.

In the past justifies us in putting out that class of trees largely in the future. One year ago last February we set out in orchards nearly 3,000 dormant buds, with a loss of about 5%. At this writing, these trees—apricot, peach and nectarine—measure from 8 to 12 inches in circumference and from 10 to 12 feet high. We have gathered a fair yield of fruit the present season. The sample of White Heath clings I send you by express are from these trees. One plan is to transplant from the nursery about the middle of February, or when the sap commences to flow freely, and to notice carefully if the buds are alive and in good condition, and put out those only. Within two or three days after being placed in the orchard the tree should be out about three inches above the bud.

The secret of success in fruit culture lies in doing the right thing at the right time, and doing it well. The same results, however, cannot always be attained under diverse conditions of soil and climate. The warm, rich soil of Leugonia gives a quick growth, and brings trees rapidly forward to maturity.

Size of Fruit.

I wish here to correct what I regard as a false theory with reference to the difference in size of budded fruit. A late number of the RURAL contained the inquiry: "Which is the largest peach—the Foster or late Crawford?" which was replied to by Mr. Jessup, of Hayward. I was a little surprised at the answer of so intelligent and experienced a horticulturist. My reply would be that it depends entirely upon how they are treated; everything being equal, there is very little difference in the size of all budded peaches. By judicious culture and careful thriving, either kind can be made to average from one-half to three-fourths of a pound apiece. If not so treated, every kind will be small.

Growth of Leugonia.

Several hundred acres are being put under cultivation in this settlement by a company from Brockton, Mass., and a company has been organized, with a paid up capital stock of \$200,000, under the name of the "Leugonia Fruit Raising, Canning and Shipping Co." The settlement proper is two by four miles, and many very fine locations, with water, can be had at present for from \$100 to \$125 per acre. No better investment in first class fruit land can be made in Southern California. The first Congregational church of Leugonia is nearly completed, costing about \$3,000. We are connected by telephone with other business centers. We also have a postoffice, recently established, a store and Good Templars' hall. Anyone desiring to make a beautiful, healthy home, with good society and pleasant surroundings, can find those conditions fulfilled in Leugonia.

I am pleased to say that the tone of the RURAL PRESS is pure and elevated, and should find a lodgment in many more homes in Southern California.

D. A. SHAW.

Leugonia, Nov. 1, 1882.
[The Heath cling peaches sent were very fine, large and well nourished, showing that they must have come from vigorous trees.—Eds. PRESS.]

THE FIELD.

Hop Picking in Puyallup.

The hop industry continues to be the exciting theme, and information is eagerly sought by the uninitiated. To minister to this demand we collate the following from the Tacoma Ledger, published in Washington Territory.

Hop picking in Puyallup valley has about reached its conclusion for this year, and the result is estimated at about 1,000,000 lbs. of dried hops. The yield exceeds the expectations of the growers. It is thought to be 100,000 lbs. in excess of the estimate made several months ago. This is from 600 acres, and the average is therefore 1,666 pounds per acre. Not a few yards run over a ton to the acre, while in some fields there are patches that grew 2,400 and 2,500 lbs. to the acre. Mr. L. F. Thompson realized from one acre the large amount of 2,700 lbs. The present market price is 55 cents, but some of the product has been sold at much lower figures, and yet it is supposed that if the market is sustained until the entire crop is disposed of, the average price realized will not fall short of 45 cents per lb. This would indicate a gross income of \$450,000, and deducting from this the cost of production, which, at 9 cents per lb. would amount to \$90,000, the hop growers of Puyallup valley will have left a net profit of \$360,000, which is a large sum of money to divide as profits among 55 growers. There has been not a little excitement up the valley, and the large yield and prevailing high prices have attracted a goodly number of visitors to the picking on week days, and also to the congregation of Indians in Puyallup on Sunday. A field of ripe hops is well worth seeing. A field from which the crop has been gathered is a scene of desolation. The vines of the untouched field have climbed to the tops of the cedar poles, nearly three times as high as your head, and they stand in straight rows equidistant a few feet. The dense foliage conceals the pole and swells the bulk of the plank to the diameter of a large barrel. The hops do not appear in clusters, as has been described in other places, but are well distributed in a mass all over the vine, which bears blossoms for nearly its entire length from the ground to the top of the pole. In picking, the first thing to do is to bring the hops within easy reach of the picker. Where Indian women and children are picking—and this is the case in all the yards—there are helpers in attendance who, first severing the vine with a knife, lift the pole clear out of its hole, and with the vine still on it is placed so that the lower end rests on the ground and the upper in the fork of a forked stake from three to four feet high. The vine is cut about three feet from the bottom, and the lower portion unwound from the pole and left on the ground, and some care is exercised to prevent the sap from bleeding into the hill, because the sap is said to be injurious, having a tendency to weaken the hill or the roots. The vine being thus brought within easy reach of the pickers, the work of gathering the hops begins. At this work are Indians of both sexes and of all ages old enough to perform the labor. The helpers are stronger than the rest, and are provided in the proportion of about one helper to 20 pickers. They are paid by the day, and a part of their labor is to handle the large cedar boxes into which the hops are thrown, and in which they are conveyed to the dry house or kiln. These boxes are of such a form that their sides converge toward the bottom, and they are therefore longer and broader at the top than at the bottom. The inside measurement at the top is five feet ten inches in length, by two feet ten inches in width; the measurement at the bottom is four feet four inches in length by one foot four inches in width. They have four corner posts made of fir, two by two inches. The sides are made chiefly of cedar boards, one half inch thick. They consist first of a strip at the bottom of one by four inches fir, next cedar ten inches wide, then another strip of fir eight feet long projecting far enough at either end for handles with which to carry the box, then another strip of cedar ten inches wide, so that the depth of the box is 28 inches measured on the slope. Two handles project at each end, and two persons are required to carry the box, taking hold as in the case of a wheelbarrow. Each box holds when filled 100 pounds of uncured hops, which when cured are reduced to the average weight of 25 pounds. The contents of a hop box would therefore measure 41,149 cubic inches or 19½ bushels struck measure. For economy and convenience in dealing with the laborers employed, the grovers have adopted this as a standard. This season they increased the pay of pickers from 75 cents to \$1 per box. Some pick directly into the boxes, but most of them prefer to pick first into baskets or blankets laid on the ground, by which there is some gain to the pickers, because in the first case, that of throwing the hops directly from the vines into the box, they settle and pack more closely, requiring a greater quantity of hops to make a full measure. It requires an expert picker to fill two boxes in a day. In Meeker & Co.'s yard one old Indian woman recently made \$3 in a single day. In some fields the average per hand is 1½ boxes a day. Expert pickers average from one and one-half to two boxes, according to the condition of the hops. Where the foliage is light, that is, not

too abundant, they can pick rapidly, but where heavy, time is lost for the reason that the leaves of the foliage must be excluded, and hence progress cannot be made so rapidly. Where a box has many green leaves mixed with the hops it is called dirty. Some of the more careless, wishing to complete a box as night approaches, throw in small branches of the vine with leaves and hops, but close watch is sought to be kept against this offense. Each yard has a foreman, whose duty it is to keep an eye on the work and see that it is well done. The foreman is generally a young Indian of more intelligence and trustworthiness than the rest; but in some cases white men are employed in that capacity. A part of his duty is to receive the hops from the pickers and pay them. When an Indian has filled his box he sings out the foreman's name, who attends, and finding the hops clean and the box quite full, he pays for it with a cardboard check on which is printed the sum \$1, and bearing the signature or initials of the hop grower. Checks of smaller denominations are provided, such as 25 cents, 50 cents and 75 cents, used in paying for fractions of boxes when work ceases at night. These checks are cashed upon presentation to the owner of the field, more frequently on Saturday night. The foreman keeps a memorandum of the checks paid out by him. Upon receiving a box he calls assistance and carries it to the roadside or temporary thoroughfare through the field, along which the wagon passes, collecting its load to be hauled to the kiln.

The wagon used is of an ordinary kind, coupled long, with a rack on which the boxes are placed crosswise. In some cases the rack has a close floor with a strip on either outer edge to prevent the boxes from sliding off by the lateral motion of the wagon. On one of these wagons eight and sometimes more boxes are placed and hauled to the kiln. Through the Puyallup hop fields fully 2,500 Indians are scattered. They camp in parties in the open air, pitching their tents on the ground allotted convenient to their work.

THE DAIRY.

Oleomargarine Products.

Bogus Butter.

Under this heading the New York Tribune devotes a leading article to show that the entire butter-making industry of the United States is becoming tainted with the system of adulteration, and that spurious butters are everywhere sold as genuine produce. The article reads as follows: We do not raise now the question as to the effect on health of oleomargarine. That would depend on the material used and the methods of manufacture; and to a great extent on the mental and physical organization, or the ignorance or faith of the consumer. Our present purpose is to emphasize the fact that the article, whether named oleomargarine or whether not, and whether built up on a basis of hog-cholera lard, or refined soap-grease or decent suet—is everywhere under false pretence. The trade is disguised and hidden; it covers up its tracks; it moves in the night time; it breaks the law every day. For example: There is a point in a certain populous city at which one might stand, and without stirring a step, throw stones into the windows of not less than five small shops where the stuff is sold for butter. Go into these places, search for any sign, peer about on tub or package for some plain brand such as a State statute requires, and you will not find it; and should you venture to intimate suspicion, you stand a good chance of being summarily ejected. And this is a sample case of thousands.

So oleomargarine worms its way. And it is polluting even the dairy fountains. A conscientious correspondent, who has looked into the matter very carefully, told our readers awhile ago that the stuff is slyly shipped to creameries and worked in with the legitimate product of the faithful cow. There are indifferent honest farmers making butter on their own premises who are not above buying this bogus article at 25 cents a pound for the purpose of "extending" their goods to be sold at 30 cents. If not, why the advertisements in papers that penetrate the rural districts offering "oleomargarine in small quantities?" It is this temptation to deceit, it is the treachery of the whole manufacture and trade, that we object to, and not the compound itself. If it will take its proper place in the open market, and stand or fall on its merits, nobody would deny it a fair field. If in a straightforward way it can compete, however sharply with cow butter, nobody could reasonably object. But since it comes as a rat that gnaws in the dark, as a sneak-thief, as a law-breaker, as a piratical craft, that with fair surface showing sails the commercial seas, it ought to have a quietus in the shape of a killing tax, such as is now proposed in Congress, since no other means have been found effective.

In answer to the specious pretext that it only comes as a second or third-rate butter, and does not really affect prices of first-quality goods, and therefore must have the beneficent effect of lifting the general dairy to a higher level, we note that about the time Professor Arnold was speaking for his clients before the Ways and Means Committee in Washington, a leading commission merchant of this city was sending a cheque to one of his consignees of choice butter, with the explanation that the sharp decline—sixpence per pound within a week—was "on account of the arrival of a large

quantity of lard-butter from the West." This coincidence, suggestive and curious, militates against the showy argument referred to, which has been from the first the leading stock-in-trade of advocates and others selfishly interested in oleomargarine. And their number is legion, and increasing day by day. The statistics are too much under ground for even census experts, but one writer estimates a manufacture and sale in this city alone that "threatens to extinguish the dairy industry of the Empire State." However that may be, it is certain that the encroachment is aggressive, and it seems to be powerful enough to have beguiled lately to its defence one hitherto in high favor as an apostle of honest dairying.

Lard Cheese.

The following article on this subject, from the pen of Mr. X. A. Willard, is taken from the columns of the Rural New Yorker: Several years ago a patent was taken out for an improvement in skimmed cheese. It consisted mainly in adding to skimmed milk a certain proportion of fat, which was thoroughly mingled through the milk, and the mass then set with rennet, so that the coagulation was perfected in from 8 to 10 minutes. The object sought was to supply the cheese with enough fat to make it mellow and palatable, and by substituting a cheaper fat than that removed from the milk in butter to so improve the skimmed milk that it could be turned into a fair merchantable product. To do this successfully the fat must be properly emulsified in the liquid, and the coagulation perfected so as to hold the fat distributed through the curds in minute particles, similar to the condition in which the butter is held in curds when whole milk is coagulated and converted into cheese. The original idea was to set milk at the creamery and take off the cream, turning it into a first-class butter, and then by going into the market and purchasing a low grade of butter at a low price, and purifying it to substitute this fat in part for the original butter removed from the milk, and thus get a good product and a fair profit out of both the butter and cheese made from the same milk. It was soon found, however, that oleomargarine oil or fat could be used in the same way as the purified butter oil, and with less trouble and expense. When this article began to be used freely at certain factories for the improvement of skimmed milk, I visited some of the establishments, and as a convenient way of designating the product, named it "Oleomargarine Cheese." By this name the product became widely known, though the inventor or originator of the idea had intended to call it an "improved skimmed cheese."

Now, although a very fair article of this kind of cheese was made at some of the creameries, there was always more or less difficulty in emulsifying the fat with the skimmed milk, and it has never been conveniently and properly done until quite recently. This trouble is now overcome by the invention of what may be called the "Cooley Lard-cream Centrifuge," a machine for making "artificial cream" from skimmed milk and fats. The invention may be briefly described as a small metal cylinder having thousands of points cut upon its surface in spiral courses. It is inclosed in a shell, and arranged so as to make from 2,500 to 3,000 revolutions per minute. The skimmed milk and melted fat enter this machine together at the bottom, and under this rapid revolution the fat is cut into minute granules, which are surrounded or encased with a pellicle of skimmed milk, presenting the same general appearance and characteristics as the butter globule in milk—thereby forming a very perfect emulsion. The artificial cream thus obtained is immediately added to the mass of skimmed milk in the vat, where it is stirred so as to be evenly incorporated through the mass, and the whole is then set with rennet and quickly coagulated. The process for making the cheese, after coagulation, is perfect, is very similar to that for making the ordinary whole-milk cheese of the factories. Either lard or oleomargarine can be used to supply the fat, and under careful management and proper manufacture, a cheese is produced which in texture and taste is not readily distinguished from cheese made from whole milk. I do not mean to say that this improved skim cheese is equal to the finer descriptions of whole-milk cheese, but I have seen specimens that were mellow, palatable, and to all appearances not inferior to much of the second grade cheese of whole-milk factories.

What is to be the result of this discovery is a question now of deep interest to dairymen and the trade. On the one hand, it is said the improved skimmed cheese utilizes to the best advantage the skimmed milk, and will furnish consumers with a palatable article of food at a low price. Its manufacture takes from the trade a certain quantity of poor skimmed cheese, and, therefore, benefits the trade by decreasing the production of tough "white oak skims," while at the same time consumption is promoted by having a palatable article furnished at low price. On the other hand, it is contended that as the profits from milk turned into butter, and lard cheese are much more than can be realized from it when made into whole-milk cheese, many of the whole-milk factories will be turned into creameries and go to making lard cheese; that the manufacture of lard cheese will create distrust abroad as to the make of all American cheese, and thus damage our export trade; that lard cheese should be properly branded and sold under its own name, and not palmed off on consumers as genuine whole-milk goods.

I may remark in conclusion that I do not believe in deceiving consumers as to the character of food offered in the open market. If lard or oleomargarine cheese is palatable, wholesome and nutritious, let it be sold under its own name, and without any deception as to its manufacture. If it has good qualities that recommend it, let it honestly and honorably enter the field of competition with other varieties and thus win its laurels.

FLORICULTURE.

The Flowers at the Santa Cruz Fair.

[Report of MARTHA WILSON, Superintendent of the Floral Committee of Santa Cruz County Fair, and requested for publication in the PACIFIC RURAL PRESS by the meeting of Executive Committee and Superintendents of Departments, held Oct. 28, 1882.]

On the right hand as you enter the fruit-room is an ivy-wreathed arch, with the inscription over it, in letters of evergreen and immortelles, "Floral Hall;" and I stand entranced with delight and wonder at the bewildering vision of floral beauty spread out before my eyes.

First we came to the tables of Mr. Doeltz, covered with rare palms, dracenas (*Ficus Australis*), coffee trees, variegated oleanders, mandarin palms, calceos, bouvardias, begonias, and many other choice plants; also a perfect gem of an aquarium, constructed by Mr. Doeltz. The stand is of manzanita, with the moss and tiny ferns growing on it, surmounted by the aquarium, set in a conglomerate of shells and pebbles, with spaces for aquatic plants. The design is most unique, and would be an ornament to parlor or garden.

Next are the tables of Mr. Thompson, filled with a wealth of green and hot-house plants. Amongst them were *Stephanotis*, *Campsidium*, *Crotons*, *Melaleucas*, *Justicias*, *Eleocharis*, rare palms, *Peperomias*, *Eulalias*, *Aspleniums*, *Aralias*, roses, and a host of rare plants, together with a collection of exquisite pansies. The front of Mr. Thompson's tables were covered with wood moss, starred with flowers in beautiful designs.

And now we come to the tables of the Ladies' Floral Committee. I have seen floral displays in the largest cities of the Old World and the New, but never have mine eyes beheld any display that would equal this in the great variety, beauty and boundless profusion of the flowers, all of them grown in the outdoor gardens of Santa Cruz, and arranged with the most exquisite taste in hundreds of beautiful designs. There were pyramids, stars, crosses, butterflies, hummingbirds; there were white doves resting on flowery sprays that branched over fountains of flowers, and harps in scarlet and white, with the golden strings wreathed in smilax. All these were composed of beautiful flowers, arranged with the most artistic skill as to color and blending. Then there were baskets of rare and beautiful roses, interspersed with fern and smilax and choice foliage plants, and that queen of California's wild flowers, the *Romneya*; and these were veiled, but not hidden, with the little fairy *Zysaphilla*; and all these flower baskets and beautiful designs were sitting on beds of soft, green wood moss, bordered around with flowers and white redwood in Grecian bric-a-brac and Arabesque designs of exquisite beauty.

Behind these tables were rustic brackets, wreathed in verdure, supporting rare plants belonging to the Ladies' Committee. Amongst them were calceos, banrardias, begonias, farfugiums and cactus. Over the tables were luxuriant hanging baskets of lycopodium and rare ferns. Then there were many choice plants from our citizens; noticeable amongst these was a fine specimen of the *amaryllis refulgens*, from Judge Logan, and from Mrs. Wilkin, of the Germania Hotel, a rare plant of the lily family, with foliage resembling the feathers of the grouse, and some of Mr. Matthews' rare pelargonium and magnolias.

At the further end of this Floral Hall, which is some 75 feet in length, is the fernery, composed entirely of our Santa Cruz wild flowers. This fernery was designed by Mrs. A. M. Smith, and executed, under her directions, by her father, Mr. E. B. Cahoon. It is one of the most perfect representations of nature that I ever saw. There are the mossy overhanging rocks, the old logs and gnarled roots covered with their native moss and ferns, and the clear, cool cave-like spring, with the pearly drops trickling down from the crags overhead. The ferns are there from the tallest to the little fairy ones, growing on the logs and springing from the crevices in the rocks, adorning them with a mild beauty that is indescribable. On one of the logs lies a young alligator brought from the Nile, and the little children exclaim: "Don't you see him move? I saw him wink just then." As I turn to retrace my steps through this Eden of beauty, this forest of the sweet bye-and-bye, I wonder who are the artists that have produced such exquisite results, and am answered, the Ladies' Floral Committee, consisting of Mrs. C. B. Younger, Mrs. Delamater, Mrs. Cahoon, Mrs. A. M. Smith and Miss Mamie Perkins, and assisted by a number of the ladies and sweet young girls of Santa Cruz, who volunteered their services.

[Mrs. Wilson, although assuming no credit to herself for the wonderful Floral Hall, which she comes as near describing as any one can in words, really deserves no little credit for the energy which she infused into this admirable committee, and which made such a pleasing and captivating feature of the fair.—REPORTER.]

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Annual Meeting of the State Grange of California.

[Continued from Last Week.]

Roll Call of Granges.

ANTELOPE GRANGE: P. Petersen, W. M., reported some progress in the work of the Order in his locality during the past year, with encouragement for the future.

ALHAMBRA GRANGE: J. Strentzel, W. M., said that he considered it superfluous to say more than he had already said in his written report, previously read. There were five Granges in the county, one of which was dormant, the other four in good working order. The members of the Order in the county formerly established a co-operative association, which had been of much benefit to farmers, in the matter of furnishing bags and storage, and reducing rates of interest. Alhambra Grange is at present prosperous, in good working order, and materially increasing its membership. Our Grange proposes to have a "Harvest Feast" on the 4th of December—the birthday of the Order—to which we cordially invite all Patrons in good standing to be present.

CERES GRANGE: H. W. Brause, Master, reported that his Grange, at the present time, contained 41 members; increase this year, six. Have an organ of our own and a splendid choir. Our members attend regularly, and are much interested in the work. We take 20 copies of the California Patron on a club list. Some of the papers are distributed among farmers, not members, with the view of interesting them in our work. We have 10 new members on the way to the Master's station, and our prospects for the future are good.

ELMIRA GRANGE: J. A. Clark, Master, said that his Grange was organized in 1873. At one time we had 70 or 80 members. There were several Granges in the county; that of Vacaville, formerly the largest, declined and finally consolidated with Elmira Grange. Our meetings are fairly attended, nevertheless a few members have to carry the movement forward; and even if we have no additional aid, we propose to keep up the Grange as long as we live. We have been carrying too many dead members, and been too lenient in the collection of our dues. We meet twice a month, and have a committee of entertainment, whose duty it is to report something of interest for consideration or diversion. We have found by experience that the best thing in the world to keep up the interest of the Grange is the prompt attendance of the officers, which greatly influences the presence of members.

ELLIOTT GRANGE: J. Wiltze, W. M., said: One year ago our Grange was at a low ebb; but since that time an interest has sprung up which has added many new members to our fold, and increased our number to 46. We are located 15 miles northeast of Lodi, and shall, at all times, be pleased to greet and entertain Patrons from a distance.

FLORIN GRANGE: L. H. Fassett, W. M., said: This Grange was situated nine miles southwest of Sacramento. Florin Grange is at present very prosperous. We have a hall of our own, 30 by 70 ft., two stories high. In the Symbolic Farm Hall we can comfortably seat 100 persons. The lower story is rented for a store at \$150 per annum. Our present membership is about 80, 31 new members having been initiated during the past year. For nearly two years we have had under consideration a beneficiary association to be connected with the Order. This subject has occupied much of our time, and before the meeting of the next State Grange we hope to have something of the kind in operation.

GEORGIANA GRANGE: H. F. Smith, W. M., said that Georgiana Grange was organized in 1874. Have been its Master four or five years. At one time the Grange was very prosperous; but on account of the high-water floods, which broke our levees, two or three years since, thereby ruining our farms, consequently causing many of our best citizens to leave Brennan Island, on which we are situated, our Grange has languished, and a proposition to surrender our charter was brought forward, but it would not go. There being five members left, we worked up an interest, and not long since raised a club of eight or nine members. The Grange is at present in a very healthy condition, and I am proud of our Grange, fighting as it has, to success through difficulties and embarrassments apparently unsurmountable.

HEALDSBURG GRANGE: W. T. Allen, W. M., said this Grange was situated 16 miles from Santa Rosa. Formerly it was in a very prosperous condition; recently it has been nearly at a standstill, but now renewed interest is being revived. Many are talking of coming in as soon as the busy season is over. The prospect is encouraging, and we are hopeful for the future.

NATIONAL RANCH GRANGE: W. C. Kimball, W. M., reported progress; said that his Grange had a small but well-selected library, and had been instrumental in bringing forward two or three county fairs, which had proved eminently

successful. In this way the Grange had exercised great influence for good in the surrounding country.

[We believe this completes the list with the Granges before noted. The reporters for the Rural and Patron were both absent for a short time at the commencement of the afternoon session, and if any omissions have occurred we would like to have the Masters send in their reports, also corrections, if any important errors have occurred.]

A Beautiful Agricultural Wreath.

[Written for the Press by MRS. W. D. ASHLEY.]

"The weeds that oft we cast away,
Their simple beauty scorning,
Might form a wreath of purest ray
And prove the best adorning."

Mrs. McIntosh, Secretary of Woodbridge Grange, utilized nature's useful, humble grains, seeds and burrs, with the aid of wax and a little coloring, by forming them into an elegant wreath, curving around a tiny basket, holding very natural looking cherries; strawberries, with the hay-seed clinging to them as it used to cling to them in the meadows, in the long ago of our childhood; grapes, rich with purple bloom; grapes, clear and white; blackberries, made of asparagus seed; raspberries, made of wax with onion seed.

This tasteful wreath, inclosed in a satin-lined frame, two and a half feet wide by two in height, was lent to add to the decorations of the hall during the session of the State Grange, where many admired the beauty of its arrangement and the skill displayed in the work of this very appropriate agricultural garland.

Patiently, for three years, gathering in the East as well as here, grains, curious and delicate seeds and burrs, nuts, kernels of nuts, large rose seeds, covered with wax to form glistening cherries, small ones to form currants; heating the wax, and forming them into a bud, flower or berry, while waiting for the men to come to dinner, the flat-irons to heat, or between the large work, in the odd moments; thereby breaking the monotony of coarse, necessary toil, and fostering and elevating the love of the beautiful and true. Different shades of corn form buds and flowers; beech nuts, little wild blossoms; chestnuts, with their burrs, walnuts, almonds; all nuts, apple seeds, rice and best seeds, form pericarp flower and leaf. Laid the open side up, wheat makes rose petals. Curving pods of plants form the tulip's urn. Pure lily of wax, with stamens and pistil of seeds, bends beside tiger lily spotted with onion seed. Large squash seeds for dahlias, watermelon seeds the calyx and petals of flowers, pumpkin seeds white roses and buds, muskmelon and cucumbers asters and chrysanthemums; scarlet beans flame in and out as blossoms of a twining vine. Peeled pumpkin seeds make hop blossoms. Spotted beans, peas—nearly all of nature's handiwork of seeds in field or garden, by wood or stream, from the largest to the smallest of all seed. Tobacco seeds are worked into this, one or two at a time, in odd moments, fastening the whole in place with wax; keeping as near nature's unerring work for a guide as possible.

Sister McIntosh does the housework for a large farm, with only the aid of her young daughter and her mother-in-law, who makes a home with them. Cheerfully pushing the hard duties along, "With a heart for any fate," and hand-gathering up the common, little things nature scatters about us, and fashioning them into things of beauty, to be a joy in her home and to the stranger that enters the gate.

Perhaps some of us who have grown sad-eyed and sorrowful walking in the same rut for years, might take the humble things around us and form them into tasteful home adornments, adding variety to the dull routine. Less quack medicine would be indulged in (for we would walk in the open air), less blues and less repining.

Stockton, Cal.

The Cultivation and Encouragement of a Love of the Beautiful in Nature.

[Prepared for the California State Grange by Sister W. L. Overhiser.]

Let us open the gate called the "Beautiful," and enter the Temple of Nature. Even a hasty survey of the wonders of this temple shows us beauty everywhere above, around us and beneath our feet. Each day and night brings beauty to our vision. We see a joyous beauty in the morning, when the rising sun wakens man to praise and to labor; we see it at midday, and when the declining sun throws lights and shadows on hillside and valley. And beautiful are the sunset clouds, which poet's verse has never yet truly sung nor painter's brush imitated. Beauty still lingers "When Twilight with her gray sandals treads out the last sparks of light." And how beautiful is Night!

"When Heaven's ebon vault,
Studied with stars, unutterably bright,
Through which the moon's uncircled grandeur rolls,
Seems like a canopy which Love has spread
To curtain her sleeping world."

The changing seasons each in its turn bring to our view the beautiful objects of Nature. Beautiful are the flowers and blossoms of Spring, the blushing fruit and golden grain of Summer.

"And now comes Autumn, artist bold and free,
Exceeding rich in brightest tints that be,
And with a skill that tells of power divine
Paints a vast landscape wonderfully fine.
Over the chestnut cloth of gold he throws,
Turns the ash purple, cheeks with scarlet glows
The lonely sumac, that erstwhile was seen
Clad in dull foliage of a sombre green;
Where daisies bloomed, gives golden-rod instead,
Stains every oak leaf with the darkest red,
Sets all the woodbine's waving sprays on fire,
And leaves them flaming from the cedar's spire."

Beautiful, also, are the snowflakes and frost-work of Winter. All are beautiful in their time. There is beauty in the dewdrop dancing in the morning sunlight, rivaling in brightness the rarest gems; beauty in the murmuring brook, in the rushing river, and the ever restless waves of the ocean. There is beauty in the smallest grass blade, in the lovely flowers, the delicately painted sea-shell, and in the snow-crowned mountain. Why was this, our earthly home, made so beautiful? The all-wise Creator, when he fashioned this temple in which man lives, not only gave to him faculties by which he could behold and study the works of nature, but implanted also in his soul an innate love of its beauties. Encourage, then, this love of nature in your children, and if the cares and struggles of life have banished it from your heart, call it back. Nowhere in the wide world, than in the sunset land, are there more beautiful formations of the mountains; nowhere are there more magnificent or loftier forest trees; and yet man, in his greed for gold, has brought even the forces of nature to aid him in tearing down these, throwing them into the river, and causing destruction and ruin to fair fields, beautiful gardens and homes of his brother-man. The woodman, and the farmer even, have applied the axe of destruction to the forest trees, on the mountains and on the plains, destroying the beauty of the landscape, and leaving the animals, who should be cared for by man, without that protection from the summer sun which was provided for them by nature. An inordinate love of gold is debasing. The love of nature is elevating. Mothers, teach your children to avoid the former and encourage them in the latter. Let the study of nature enter into your plans of education. Surround your homes, as much as possible, with the bright and beautiful objects of nature, so that, by constant intercourse with them, your children will learn to adorn their lives by those traits of character which they will see symbolized in nature's works. They will learn to catch the sunbeams of cheerfulness, to love harmony and order, to be charitable, hopeful, faithful, industrious and economical. The study of nature's works will also lead the thoughts of your children "through nature up to nature's God."

Harvest Feast at North Butte Grange.

Sometime since, Yuba City Grange accepted an invitation to attend a harvest feast which was to be celebrated by their sister Grange of North Butte, October 28th. * * * The Grange was presided over by Worthy Master Patridge. Degrees were conferred on a class of six brothers and sisters, at the conclusion of which all were invited to partake of the Harvest Feast which was spread upon two tables extending the length of the spacious hall. Right here our power of description fails, and we beg the pardon of the matrons of North Butte Grange. We can only say that the tables fairly groaned under the load of good things upon them. Here were delicacies as well as substantial. Roast turkey, chicken, and boiled ham, tea and coffee, cake and pie of innumerable variety. Nothing was lacking to tease the appetite of the most delicate or robust. After-prayer by the Chaplain the onslaught began, but the large crowd surrendered, as completely satisfied, leaving large quantities untouched. The tables being cleared, the Worthy Master declared in order the "Good of the Order." Visiting members were called on for remarks, and the invitation was responded to by Bro. Ostrom, of Wheatland Grange, and Brothers and Sisters Walton, Frisbie and Ohleyer, and Bro. S. R. Chandler, of Yuba City Grange. Remarks were also made by Bros. Spilman, Clark and others of North Butte Grange. These exercises being over, the Grange closed in due form, and many prepared to leave for their homes. Certain ominous signs, however, indicated that the programme was not entirely completed. A voice cried out, "Take your partners for a quadrille," and all at once we found ourselves in the midst of gay dancers and "tripping the light fantastic." This practice was kept up until the setting sun admonished all 'twas time to go home, and thus the festivities closed for the time.—Sutter County Farmer.

A FIRM that dates back to the last century—
Flint & Steel.

LABOR AND MATERIAL.—A Cincinnati paper tells (perhaps) a big story of a walnut tree. In 1864 an Indiana man, as the story runs, bought the tree for \$1, and he subsequently sold it for \$65. The buyer sold it to a Cincinnati lumber dealer for \$700; the Cincinnati dealer sold it to a New Yorker for \$2,200, and he cut it up into veneering, which he sold for \$10,000.

TO CLEAN MARBLE.—Mix one-quarter of a pound of soft-soap with the same of pounded whiting, one ounce of soda and a piece of stone blue the size of a walnut; boil these together for 15 minutes, and then, while hot, rub it over the marble with a piece of flannel, and leave it on for 24 hours; then wash it off with clean water, and polish the marble with a piece of coarse flannel, or what is better, a piece of an old felt hat,

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

RAIN AND WORK.—Oakland Times, Oct. 3: As will be seen by the record of rainfall for the past 10 years, the fall of the present year, 5.35 inches, has been unequalled, the nearest to it being in the year 1876, when 4.60 inches fell to the same date. The effect of the early rains this year has been the rapid growth of grain and feed throughout the State. In many places land has already been seeded, and there is a vigorous growth of fully four inches. Everywhere the farmers are hard at work preparing the land for grain, and it is probable that several hundred more acres will be cultivated in this county this season than ever before. Some of the farmers are apprehensive of frosts, but yet think the crops will be too far advanced to sustain much injury.

BUTTE.

WHEAT SALE.—Record, Nov. 4: D. M. Reavis sold his crop of wheat this morning at \$30 per ton on the bank of the river at Chico Landing. The transaction amounted to \$75,000. A good season's work.

ORANGES.—J. R. Ketchum, Esq., of Bidwell Bar, has forwarded us four oranges as a sample of the crop of his tree for the present year. They are the largest and finest looking oranges we have seen of native growth in California, and their flavor equals the product of any country in the world. He plucked from the tree, on the 25th inst., 200 of equal size with those forwarded to this office. He has taken from the tree for the crop of 1881, 2,025. These oranges are 18 months from the blossom. The tree is an extraordinarily fine one, and, besides the huge crop of 1881, is bearing full of oranges of various sizes, of the crop of 1882. Such production seems unequalled. The tree stands exposed on the north side of the mountain, and always contains from 1,000 to 2,000 oranges. If there is anything in the location, Mr. Ketchum should try an orange grove on that mountain side.

COLUSA.

RESOWING WHEAT.—Red Bluff Cause: We learn that the wheat sowed on the summer fallow land around Willows and other places in that county has rotted, and the land is being resowed. It seems that there was not rain enough in that section of the country to sprout the grain, and as a result it rotted. This condition of things will necessarily involve a heavy loss to the farmers who have been thus unfortunate.

FRESNO.

SWEET POTATOES.—Republican: E. L. Ayers, of Temperance colony, exhibited at this office this week a single sweet potato vine, upon which are grown, in a compact cluster, an even dozen of fine large potatoes. They average a little over a pound each in weight, and each one is perfectly smooth and as sound as a new silver dollar. This variety is much better flavored than those which grow larger in size.

LOS ANGELES.

STOCK SALE.—Los Angeles Times, Nov. 4: The auction sale of thoroughbred Jersey and shorthorn cattle yesterday was very well attended, and the prices for thoroughbred stock quite reasonable. The stock was the property of Mr. J. F. Sterling, of San Bernardino, and the prices realized are appended. Rodgers 1st, the fine bull, was withdrawn from sale, and is now subject to private sale. Rodgers 2d, a two-year-old Jersey, brought \$130; A. H. Dunlap was the purchaser. Rodgers 3d, a yearling Jersey, sold for \$85; Mr. Lattin being the successful bidder. The Jersey cow, Rose Howard 3d, was purchased by Mr. Whitey for \$105. Mr. Lattin bought Rose Howard 4th, a yearling Jersey, for \$110. The shorthorn bull, Oxford Duke 2d, two years old, was bought by H. T. Venable for \$150. Mr. Venable also purchased Hildegard 3d, the handsome two-year-old Durham cow, for \$150, and Hildegard 5th, a yearling, for \$60. Hildegard 4th brought \$75; A. H. Dunlap purchaser. The promising six-months-old calf Hildegard 6th, was bought by N. F. Tyler for \$50.

GRAPE YIELDS.—Express: We have already noticed some large yields of grapes, and now comes Mr. Thaxter, of Florence, who will get between two and three tons per acre from his Muscat vines, two-year old cuttings. He has got as high as 15½ lbs. off a single vine.

INYO.

FATAL CATTLE DISEASE.—Independent: G. W. Watson and F. G. Powers, residing between Big Pine and Bishop Creek, have each recently lost a number of valuable young cattle through a strange and peculiarly fatal disease. It seems that its ravages are exclusively confined to calves, and is, perhaps, the same that is destroying hundreds of young stock in Oregon, where it is known as the "cattle diphtheria," though it is not supposed to be contagious. A peculiarity about it is that a calf will be attacked and fall dead in less than half an hour from the time when it appeared to be in perfect health in all respects. After the attack is manifest no blood will flow from cutting the tail or other ordinary bleeding operations. Post-mortem examinations show a highly congested or mortified condition of the organs near the heart, especially the lungs. The attack is invariably fatal.

NAPA.

PINE STATION NOTES.—St. Helena Star, Nov. 3: Our crop has been very large, and has

generally got into the cellars in good condition, though some old vines, very heavily loaded, suffered from the rain, and some grapes are low in sugar. Growers are jubilant over a bountiful harvest. The second crop is about ready, and a few days good weather will end the grape harvest for this year. Preparations have already commenced for setting out more young vineyards, and the time is not far distant when not a foot of vacant land will be found in our midst. Already the trees on the hillsides are yielding to the ax, and the wood is being hauled to the railroad track for shipment. Cuttings are also being engaged for the coming spring, thus making a third crop to the vineyard men, as the cuttings rate from \$3 to \$10 per 1000. David Rutherford is putting in iron pipe for draining. It comes in lengths about 20 ft. long and one foot in diameter, and will make an excellent drain.

EARLY CULTIVATING.—Rutherford *Cor.*: The wet weather is not benefiting the second crop of grapes, but is giving the weeds a fresh start, so they nearly obscure the young vines. Capt. Niebaum is running a cultivator through his young vineyards.

NEVADA.
THE CATTLE BUSINESS.—According to the *Silver State*, the cattle shipping business is running pretty lively just now. Thursday two special trains of 24 cars each loaded with 866 head of cattle were shipped from Winnemucca by Hock Mason to Carson, from which place they will be driven to his ranches in Mason valley to be kept during the winter. Tuesday a train of 22 cars was loaded with beef cattle for San Francisco, eight cars of which belonged to Mr. Mason, six cars to Mr. Godchaux and eight to Mr. Burger.

PLUMAS.
POTATOES.—*National*, Oct. 30: The potato crop in the American valley is larger than usual this year. One farmer tells us that his crop alone will be about 200,000 lbs.

SANTA CLARA.

GILROY PEARS.—*Advocate*, Nov. 4: Porter Bros., of Chicago, bought through Mr. Wilson, in 1880, about 600 boxes; in 1881, over 700, and in 1882, within the past few weeks, 800 boxes. Porter Bros. have also purchased, through George Wentz and W. Wall, about 300 boxes, and other parties have shipped about 300 more. From 300 to 400 boxes of Bartlett pears have also been shipped to San Francisco and San Jose canneries, making the total surplus crop for home and Eastern markets nearly 2000 boxes. From the foregoing it will be seen that the pear crop is increasing annually. All these pears were grown in Gilroy, San Felipe and San Juan—places which appear to be specially adapted to their cultivation. Mr. Wilson, to whom we are indebted for these facts, says the pear will flourish whether the water is near or far from the surface. On wet land the apple tree dies in a few years, or becomes worthless. On dry land it lives longer, but the fruit is small and tasteless, and we may add, worthless. But the pear tree will bear good fruit, under the same conditions, and its market price will average three times more than the apple. In his opinion, if the price and demand in the future should be equal to the present, the pear is the most profitable fruit to raise in Gilroy and vicinity. Of the winter varieties the Winter Nelis and the Eastern Beurre take the lead. The Bartlett and Beurre Hardy are the leading fall pears. Mr. Wilson further says: "In my humble opinion, the Gilroy fruit is as good as any, if not the best in California; but," he adds, "many orchards are worthless, because of the starvation disease. Trees require food as well as animals, therefore wash and manure them well, and your return will be a hundred fold."

SANTA CRUZ.

THE FRUIT AT THE FAIR.—*Editors Press*: In his report of our fair, Olinier takes up nearly all his space in telling about such things as might be expected at any fair, and says nothing about our unequalled display of fruit, which is in reality all there was about the fair that made it of any special interest above other fairs. Now let me tell you something about this fruit at the Santa Cruz fair. We had a display of apples and pears not equalled at the State fair, the Mechanics' fair, nor at the San Jose fair, and the grapes were not behind, considering the unfavorable season; but I want to call your attention to the fact that the fruit at the fair was grown in different parts of the county, from the bay to the mountain tops, and demonstrated the fact that we can grow a great variety of choice fruit in all parts of the county, including grapes and berries; and what is of special note is, that our fruit is clean—free from insects, bright and solid. The fruit on exhibition was not grown with any special care for the fair, but taken from the orchards as it was grown for market, and yet the display was a marvel to our own fruit growers, and a "stunner" to visitors from abroad. Now, in conclusion, let me tell you readers that such fruit as we had at the fair is grown here every year, without irrigation or special attention, and with such care as fruit should have in order to bring it up to its best, we could make this exhibit look insignificant; and there are thousands of acres of land lying idle that can be had cheap that would grow just such fruit, and we have excellent facilities for getting to market, and our fruit gets ready sale at good prices.—M. P. OWEN, Santa Cruz.

SAN LUIS OBISPO.

EDITORS PRESS.—The inch fall of rain on the 3d was very opportune for grass feed pre-

viously started by the rains. Farmers had commenced plowing before it, as a considerable breadth of land in this county is black rich sand or friable soil, easily worked even after removal of grain crops. A fine tract of land close to the Newsom hot springs is offered for sale. It is of a sandy nature, good for beans, or almost any kind of crop can be easily irrigated. It will be sold for the low price of \$33 per acre, although more has been offered. Mr. Newsom wished to select the buyer, even at a momentary loss. He also offers a good mill site also at a merenominant to anyone wanting such close to the springs, railroad depot and good shipping at Pismo wharf point. A widow lady purchased a nice 10 acre home here at \$15 per acre and has been offered a large bonus since for same place if she would sell. All kinds of products do well, even apples, pears and peaches do well side by side. On the east of the Coast range grapes do well; even here in San Luis Obispo City the old Mission was celebrated for its grapes though only 10 miles from the Pacific Ocean. The county presents a fine opening for settlers with some capital, say from \$500 upward.—M. J. O. B.

SOLANO.

BLUESTONING WHEAT.—*Dixon Tribune*: Many farmers still say that it is of no use to bluestone wheat, as it does not prevent smut. This idea is erroneous and dangerous. The true cause is because all the grains are not touched by the present process. William Cook, of our town, has discovered a process by which every grain may be touched by the bluestone water. It is simply thus: Having a cask of water in which bluestone is well dissolved, with a faucet; then have a wooden trough made, in which place an auger-worm, like that belonging to threshers; then with hand-power turn the auger, and as the wheat flows in the trough, the bluestone water will meet it from the faucets and every kernel of grain is touched. The whole process is simple, and recommends itself to the attention of farmers.

SONOMA.

THE PELL ORCHARD.—*Cor. Petaluma Courier*: Ten miles from Petaluma, in Sonoma county, over a well macadamized road, I came upon the Pell orchard, owned by Cadwell Bros., and one of the most lovely spots I ever saw. This orchard is extensively known throughout California for its splendid Newton and Spitzenburg apples. In the center of a triangular tract is a neat cottage and a beautiful little grove of native oaks. This tract is surrounded by fruit trees of many varieties. Near the dwelling house is a good barn, tenant house and three fruit houses. These fruit houses will hold 9,000 boxes. A large quantity of fruit was stored in these houses, besides hundreds of boxes piled under the shade of trees. When I visited this orchard last week, about 9,000 boxes of apples had already been gathered, and still about 1,000 boxes of the fruit remained on the trees ready to pick. Yellow Newtown and Spitzenburg constituted the greater part of the crop. Baldwin, Greening and Smith's cider completed the list of varieties. These large piles of apples presented a sight; a sight that no other country but California can boast of. Upon inquiry I found that 500 boxes of Gravenstein apples, of the early crop, had been sold early in the season. They had also sold the fruit from 200 plum trees, 400 cherry trees and a few pear trees. The trees throughout the orchard looked as free from moss and old bark and as fresh, bright and clear as though they had been scrubbed with a brush. There was no scale or other pest that I could discover. This was due in a great measure, I understood, to a free use of concentrated lye. They used it in the proportion of one pound of lye to the gallon of water, sprayed on the trees with a force pump. I was informed that they can keep their fruit in good condition until the middle of April. To accomplish this, they have the floors of their fruit houses made of common boards, not matched. The sides of the fruit houses are lined with wheat straw, packed close and about four inches in thickness, and also a layer of straw on top of the fruit. Casting my eyes over the long bins of apples, 80 ft. long and 30 ft. wide, the apples so beautiful, even in size and so fragrant, I inquired how much they expected to realize for their crop of about 10,000 boxes in San Francisco, and was informed that they expected them to average about \$1 per box. These gentlemen ship all their fruit now in free boxes, and so keep clear of the moth and other pests so often propagated by the old box return system. They say they have tested it and found this new way of shipping on the whole more profitable and less annoying.

SUTTER.

FARMING NOTES.—*Farmer*, Nov. 3: The early rain this fall has been damaging to un-housed grain banked along the rivers for shipment. Too much wheat has gone to the rivers for shipment, considering the carrying force employed in such transportation. The glut on Feather river and the amount drawn to the Sacramento, indicate clearly the truth of our previous assertions that the crop of 1882 excels any crop ever grown in the county, except that of 1880, and we now believe it equals that. While the early rains did much damage, it also did much good. It set the plows in motion. We do not remember a season when there was so much plowing done in October as this. Summer fallow is being sown, and much of it is already coming up. But, as heretofore remarked, the amount of summer fallow this year is short of the average, and unless the season shall prove an extraordinary good one the crop will be light,

Egyptian corn is being harvested, but the continued damp weather is quite a hindrance to progress. As the land is to be sown to wheat, considerable labor and good weather is needed to take care of the crop and rid the land of stalks. Less straw has been stacked than for many years, owing to the early rains, but these rains brought on feed which will doubtless be good all winter, and thus compensate for the loss of the straw. Hogs are being sold quite freely now, and are bringing six and a half cents light weight per pound. The product will not be up to the average. For a number of years hogs were sold so low as to yield no profit to the farmers, and their production has been neglected by many of our prominent farmers, and now that prices are good the supply is short.

TULARE.

RAISINS.—*Visalia Delta*, Nov. 3: Among those making the very best of raisins this fall in the Mussel Slough country is Mr. Peter Sczaghini, whose place is half a mile north of Grangeville. From about two and a half acres of White Muscat vines he sold this year about six and a half tons of table grapes from this vineyard at one cent and a half per pound, or amounting to \$200. He has also cured 200 boxes of excellent raisins, 20 lbs. to the box, and if the weather continues clear and dry for a few weeks he will put up 20 or 30 more such boxes. These sell readily at from \$2 to \$2.50 per box, or say \$500 more. This shows a yield in money value of \$700, or an average of nearly \$300 per acre.

Notes of Stockton.

[By J. C. H.]

The City of Stockton, as one of the great distributing centres and manufacturing cities of California, presents an animated appearance. Large warehouses and open lots are covered and filled with all kinds of agricultural machinery, and the whirr and buzz of industry is heard in every direction, while the farmer and ranchman are loading up his machinery and tools, extending into his back-action wagon and "schooner." Among the principal houses which are supplying the implements and supplies in Stockton, extending all over this State and to Mexico, Nevada, Oregon and Washington Territory, may be mentioned H. C. Shaw, Grangers' Union, Matteson & Williamson, Bailey, Badgley & Co., W. A. Dorr, J. H. Condit & Co., Sperring & Co., John Caine, H. P. Nichols, C. E. Williams & Co., H. H. Moore & Son, G. Lissenden, Fred Ruhl; each in their respective lines standing at the head as enterprising and responsible firms. An immense area of grain is being put out, many individuals sowing blocks of 1,000 acres each. There are now nine hardware firms in Stockton, a large number of manufactories, and preparations are being made to erect additional ones. The Commercial Hotel—known as the "Farmers' Headquarters"—Main street, Stockton, kept by the genial proprietors, A. and J. Hahn, is one of the best hotels in this State. Rates are quite reasonable, and accommodations first-class. A free coach runs to all railroad and steamboat stations.

NOT SO LARGE.—In the concluding portion of Dr. Chapin's report on the scale insects in last week's *RURAL* there was mention of "one and one-half inch hose" to use in the application of washes to the trees. The proper size is *one-half inch*.

BULBS.—We have received a copy of an interesting essay on the cultivation on Dutch bulbs, issued by the Plant Seed Company of St. Louis, which gives instructions about growing the plants, where conditions like those of the eastern States prevail. We also note with interest the publication of an address on "Lilies and other bulbs and how to grow them," an address by Thomas Meehan before the State Horticultural Society of Pennsylvania, which contains many good points.

SEEDS, TREES AND PLANTS.—We have received a copy of W. R. Strong & Co.'s (Sacramento) catalogue for 1883. It has a new engraved cover, which is, in the main, very praiseworthy, but the artist has a queer idea of fruit trees. His apple trees look like palme. But this does not interfere with the excellence and variety of the stock offered by Messrs. Strong & Co. We advise all planters to apply for a copy of the new catalogue.

The report of Lieutenant Healy, Commander of the revenue cutter Corwin, has been received. He gives an account of his cruise in the Arctic, and recommends that a line of soundings be made along the coast from Point Barrow to the Mackenzie river. He says that the Corwin has steamed within a short distance of Point Barrow, and found clear water as far as he could see. He ventures the opinion that if he had only been prepared, and had any object in making the attempt, that he could have taken the vessel directly through to New York.

PLEASURES OF HOTEL LIFE.—"Here's a fly in my soup, waiter." "Yes, sir; very sorry, sir; but you can throw away the fly and eat the soup, can't you?" "Of course I can; you didn't expect me to throw away the soup and eat the fly, did you?"

News in Brief.

An earthquake in Wyoming on Tuesday. Moody, the Evangelist, is ill at Cambridge, England.

THIRTY-FIVE registered distilleries in Los Angeles county.

The material for the electric towers has reached Los Angeles.

DURING October 69 deep-water sail vessels arrived at San Francisco.

The King of Corea has concluded a treaty of commerce with England.

The London *Lancet* has taken up the warfare against cigarette smoking.

The Author's Carnival for the San Francisco charities netted over \$20,000.

NAVIGATION is closed at St. Petersburg, the river Neva being blocked with ice.

The charges of misconduct in the affairs of the Carson Mint were not sustained.

THERE are 500 men in England whose incomes range above \$2,000,000 a year each.

DESTRUCTIVE gales and inundations continue throughout England.

A STRIKE of coal miners on the Monongahela river, in Pennsylvania, is in progress.

GREAT distress exists in County Clare, Ireland, owing to the failure of the potato crop.

The Prince of Wales has consented to act as Chairman of the Longfellow Memorial Committee.

It has been decided in Kentucky that horse-racing is not a game of chance in the sense of the Gaming Act.

The strike among the Montreal ship laborers has ended. The men returned to work at the old wages.

The steamer Dymphra, of the Danish Arctic exploring expedition, has been wrecked on the Siberian coast.

The Supreme Court of Connecticut has decided that women are eligible to membership in the bar of that State.

By the fall of the floor of the Town Hall at Rochester, N. H., Saturday night, 200 persons were precipitated into the cellar.

PRESIDENT ARTHUR declines to interfere in the case of Black Bear, sentenced to be hanged at Yankton, D. T., on the 15th inst.

A TERRIBLE conflagration has taken place at Uleaborg, in Finland, and enormous losses have resulted, stores, hotels, theaters, etc., being destroyed.

MELVILLE stated his belief that the Jeannette was entirely seaworthy, and fully capable of making the voyage. Referring to De Long's discipline, he said that it was very severe.

In consequence of the outbreak of cholera at Mecca, quarantine has been established at Port Said on vessels coming from Suez.

HENRY M. STANLEY has become thoroughly acclimated in Africa now, and enjoys excellent health there. He is bronzed by the sun until he looks like an East Indian.

THERE is great distress at Alexandria among the victims of incendiarism who are waiting to be paid the indemnity. They have been compelled to appeal to private charity.

At Buena Vista, Oregon a "hop pool" was formed, into which went about 50,000 lbs. of hops, which the pool has just sold for 62½ cents a pound. The hop crop of Polk county brings nearly as much as the wheat crop this year.

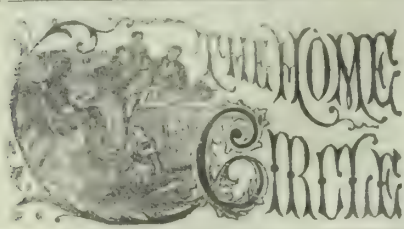
A LINE of steamships will shortly be established between San Francisco and Liverpool, which it is thought will divert some of the traffic of the Southern Pacific. One iron steamer of 3,800 tons has been launched for this service at Middlesborough, and another is being built.

In Spain and Italy the vines are expected to yield a return variously estimated at from one-sixth to one-half above the usual average. In Algeria the vintage is abundant beyond all expectation, and we are even told that vessels are not to be had in sufficient number to receive the juice of the grapes.

INTERESTING experiments in the use of the telephone by divers have been made in England. The length of the cable connecting the receiver in the divers' helmet with the transmitter above water was 600 yards. It was found that the diver could converse with ease, and ask for tools in any position which his work might require him to place himself.

The Kansas newspapers are agitating the subject of tree planting as a relief from cyclones. It is stated that if 10 acres of timber were grown on each quarter section in the land, and a pond constructed on each farm, the evaporation would be so great that the atmosphere would become heavy enough to prevent the wind from dancing so disastrously over the prairie.

At Virginia, Nev., one night last week, the wife of Daniel Glassett, a miner, left her home in a fit of insanity, and taking her three small children, struck out for the mountains north of the city. She wandered back into town at five o'clock the next evening, having been out through all the heavy snow storm. She came back with but two children, boys, seven and eight years of age. At first the woman said her babe had been frozen to death, but finally said it cried and she cut its head off with a hatchet she had carried with her. Officers went in search, and in an old stone quarry north of the city, where the woman said she and the children had slept, by the side of a big boulder, the body of the babe was found. Its head was severed, except a strip of skin back of the neck. Mrs. Glassett says before cutting the child's head off she drew the blankets over the faces of the two little boys, so they should not see her do the deed. She says she would have killed the boys, but thought too much of them.



Times and Seasons.

There's a time the proverb tells us—
For all things under the sun;
Even so may the proper seasons
For good words to be done,
And for good works to be said.
In the fear lest I or you
May miss the happy occasions,
Let us here note down a few.

When the trees are heavy with leaves,
When the leaves lie under foot,
When fruit on the board is frequent,
And while there is rind or root;
When the rain comes down from the heavens,
When the sun comes after rain,
When the autumn fields are waving
With the weight of golden grain;

When the hills are purple with heather,
When the fells are black with cold,
When the larches are gay with their tassels red,
When nuts are shrivel'd and old;
Whenever there's growth in the spring-time,
Or June close follows May,
And so long as the first of January
Happens on New Year's day;

When the mushrooms spring in the meadows,
Or toadstools under the trees,
When the gnats gyrate in the sunshine,
When the oak boughs strain in the breeze;
In the days of the cuckoo and swallow,
When the sea-gull's feeble foam,
When the night-jar croons in the gloaming,
Or the owl goes silently home;

When the lake is a placid mirror,
When the mountains melt in mist,
When the depths of the lake are as pillars of gold
On a floor of methyst;
When a rainbow spans the morning,
When the thunder rends the night,
When the snow on the hills is rosy red
With the blush of the wakening light;

When the soul is heavy with sadness,
When the tears fall drop by drop,
When the heart is glad as the heart of him
Who climbs to a mountain top;
When youth's smiles are a broken-branch,
Which age is grandly gray
As the side of a crag that is riven and scar'd
With the storms of yesterday;—

Believe that in all these seasons
Some good may be done or said,
And whenever the loving thought and will
Are loving enough to wed;
And well is it with the happy heart
That hath thoroughly understood
How the "time for all things under the sun"
Is always the time for good.

— W. J. Linton, in *St. Nicholas*.

Men and Women and the Law.

[Written for the Press by Mrs. C. T. H. NICHOLS.]

Mr. Berwick's article of Nov. 30th, following his of Aug. 26th, was like a blast of mid-winter following the sweet summer breeze. If in the paragraph of my article of Sept. 16th, addressed to him personally, I was a "trespasser on very delicate ground," he should have remembered that I was there by his invitation, to inform an "ignorance" [of law] which himself had presented and deprecated as standing in the way of an intelligent performance of his duties as an elector representing the interests of disfranchised women—his "nearest and dearest" among them.

That article was a continuation of my reply to his of May 13th, and was in the editor's hands when I received his of August 26th, announcing his presentation and advocacy of an equal legal rights resolution in the County Convention. For this action he deserved the thanks of every woman in the State, and would have found mine in a postscript to my article of the 16th, had knowledge of the fact, so honorable to himself, come to hand in time.

To be rudely reproached for discussing, in good faith and earnest good will, facts, positions and queries, on his own presenting—and for using the very terms in which they were presented—was, I confess, an unpleasant surprise. But let that pass. Brief notice of a few points in his last, relevant and irrelevant to our discussion, tends it on my part.

Mr. B. still mistakes the points at issue in the widow's case. "Burial expenses" were not even mentioned. The question, and the only one raised in the trial or reported by me, was "the widow's right of burial" on an estate in which she had only a life interest. The statutes of all the States provide for the payment of burial expenses of deceased persons from the avails of their estates precedent to distribution thereof; and wills of deceased persons to be accepted by courts, must make similar provisions. Burial expenses of paupers and persons leaving no estate are paid by town or county officials empowered by law.

Ever since of an age to appreciate an argument, I have admired the free thought and free speech of Adam's defense in the garden—"The woman, whom thou gavest to be with me, gave unto me and I did eat," though defiant and craven, it has the logical directness so valuable to an opponent.

Mr. B. says first, "Conscience and duty are both creatures of education; and mother-love is a prime factor in that education."

He says, second: "Woman is ill-educated, carried away by every wind of doctrine, and believes the parish priest, who knows no more than

herself; therefore, the ignorance of childhood is converted into the ignorance of adult prejudice or bigotry, whose darkness is oftentimes far more impenetrable."

This direct indictment of mother-love, and indirect indictment of the priesthood, Mr. B. uses as follows: "Having been cradled in orthodoxy, then, may excuse some of us for accepting the subjugation of women as a thing fitting and proper." It may or may not be a legitimate excuse for "some of us," but for him, father-love must have rocked that orthodox cradle, for in his article of May 13th he attributes to his father his opinions of propriety, of right and wrong, and even his prejudices.

I have discussed this subject of woman's subjugation (in private) with hundreds of women of the best classes, members of orthodox churches and families, and found but one who accepted the doctrine—except of necessity, as a peace measure—and that one held the reins of authority in her own hands, and thought "any woman might, by a little judicious flattery neatly applied, get her own way." But never have I made acquaintance with, or been informed of mother-love or wife-love that taught the doctrine to either sons or daughters. Further, I can assure Mr. B. and others, who, accepting the doctrine, are not likely to strike "bedrock facts" in the case, that husbands are more honored in the breach than in the enforcing of marital sovereignty, and in so doing win for themselves a measure of respect and considerate affection utterly impossible under an autocracy. I once knew a respectable deacon, who, on the marriage of each of his six daughters, supplemented the ceremony with a public homily on the wifely duty of "obedience in all things." Wife and daughters, intelligent, lovely and God-loving women, wept in private over an outrage calmly submitted to in public, and against which no appeal would have availed. Just laws and a more enlightened understanding of the absolute unity of human and Christian duty will adjust all domestic, as well as civil differences, and elevate the standard of family love and respect.

The Slow Coach.

In closing his article Mr. B. speaks of "considerations that tend to induce him to go slow" in the matter of woman's suffrage and woman's rights. Now, what are these considerations? He says, first: "So long as the world's ultimate appeal is to brute force (and all law has power just so long only as brute force backs it), so long must the superior physique of the male be a power in the land." As there is too little of this superior physique in the land to grade the track of the iron-horse and secure the bread of honest industry, woman can have no motive for abolishing or dispensing with its co-operation in the home or out of it. Husband, father, brothers, and the sons of her love belong to this force; to improve its quality and elevate its ambition, is woman's duty to the "male power of the land." Mr. Berwick's second proposition, that "all law has power only just so long as brute force backs it," is sufficiently discredited by his third position, that "ultimate appeal to the strongest arm (brute force) is a disgrace to civilization."

I pass his scheme of a "World's Federation" to right the wrongs of sex and race (which necessitates his detention till the brute force delegations from unfederated peoples, Patagonia, Africa, Fiji Islands, etc., overtake him), satisfied that so long as electricity and machinery (more powerful than even brute force), control the industries and intercommunication of the world; brain power, which originates, applies and controls, takes precedence. And this brings us to his last consideration for "slowing up" on the track of progress.

He says: "Finally, capacity of brain must ever be a power, if philosophy is to be credited. The average male skull is apt to be more capacious than the average female skull, which is a speaking fact in discussing this question of equality." A very dumb fact in the distribution of rights—our government being equally generous to large and small male heads, provided they be one remove from idiocy. As regards intellectual equality—which is irrelevant to our discussion—according to philosophy, quality and temperament, trump size. The more finely organized brain, in either sex, bears off the palm in the finer and nobler uses of brain power. With the advantage of quality and temperament in its favor, the smaller female brain, as education and opportunity conspire, is proving itself fully equal to man's. Having occupied more space in this gathering up of the odds and ends of our discussion than I intended, I close with the promise of a rare bit of history in my next.

Pomo, Oct. 25, 1882.

THE MOON'S INFLUENCE.—Those who yet cling to the old-time faith in the moon's influence upon the weather may be interested to learn that so eminent a scientist as Sir William Thomson has recently felt called upon to declare that careful observation with the barometer, thermometer and anemometer have failed to establish any such influence, and have proved, on the contrary, that if there is any dependence of the weather upon the phases of the moon it is only in a degree so slight as to be quite imperceptible to ordinary observation.

THE MILK TREE.—A French chemist has analyzed the juice of the so-called milk tree of Central America, to the nutritive qualities of which attention was first drawn by Humboldt, and has found that the vegetable product really possesses many of the characteristics of cow's milk.

Little Companies—Parlor Games and How to Play them.

[Written for the Press by LUCY UNDERWOOD McCANN.]
(Continued from last week's RURAL PRESS.)

Next our young folks tried a pretty game called "The Foreign Traveler." The person selected as the traveler leaves the room, when the company determine on the country he is to visit, and prepare themselves accordingly. Upon a given signal the traveler comes in and must guess the country represented from the scene before him. Let us suppose the tableau taken to be a Turkish one, which may be simply represented by a lady in a turban, reclining on a sofa cushion, or the accessories may be as rich and elaborate as the properties of the house allow, and as many as see fit may take part in it. In this case choose some handsome dark-haired man (the longer his beard the better). Twist a bright silk scarf or gay light shawl into a turban for his head. Let him take off his coat and vest; drape another shawl around him to represent the full Eastern costume. Convert your modern sofa into a divan by putting all the cushions you can find around and upon it. (Pillows covered with shawls will answer if you run short). Let your Turk recline amongst these, while the extension drop light from the gas with its stand makes no bad imitation of an Eastern pipe. As many pretty slaves may be introduced as you have effective beauties to display. Some of them may be fanning the Turk with feather dusters, if no better substitute can be found for peacock plumes among the properties. Whilst others sit on cushions on the floor, grouped in the most effective manner around the Turk who should be the prominent figure of the tableau.

So with the scenes from other lands. You may represent them in as simple and rapid a manner as you choose; for instance, Germany, by a student with a long pipe, a book and spectacles; Lapland with a tent and natives sitting around the fire. The tent may be made, or suggested rather, by a few chairs turned upside down and a sheet or shawl thrown over it, the natives wrapped in shawls and furs, etc. Switzerland with the apple scene from William Tell, and so on. Or the scenes may be made far more elaborate if thought best, the time taken in their preparation being the only objection to this effective method.

Their hostess now announced that refreshments were in order, which fact the delicious aroma of the coffee had already foreshadowed, and that if each gentleman would select one of the slips of paper from the pretty card-basket she held, he would find thereon the name of the lady whom fate had ordained he should escort to supper. The drawing of names and new groupings that it caused among them all gave a merry turn to the stiff and stupid pairing off for refreshments, and the dainty perfection of the dainty little supper, with its oysters, coffee and cream. Ham sandwiches, cakes and confections were duly appreciated and enjoyed by all the happy guests. Refreshed and mentally invigorated by that "cup that cheers but not inebriates," they return to the parlor, where, after some songs from the girls, a tenor solo from Karl's sweet German voice, and a few jolly chorus songs, like "Nancy Lee" and "St. Patrick's Day Parade," in which all that were musical joined heartily, it was proposed that they return to their games, as the young lady from the city had thought of one she was sure they would like, called

Historical Characters.

Which she immediately inaugurated by sending one of the gentlemen from the room with the information that he was to be named for some historical personage, and was to guess from their questions upon his return what character had been assigned to him. They choose for him that of Christopher Columbus, when he was called into the room again.

"How did the queen receive you?" asked one girl.

"It redounds to the honor of our sex forever that your merit was first recognized by a woman," said another of them.

"Did you have any difficulty in getting your crew?" asked one of the men.

"Was not your ship accommodations rather small for so long and uncertain a voyage?"

"Is it Sir John Franklin?" ventured the young man who had been weighing the various questions in his mind before hazarding a guess.

"No, it is not Sir John," was answered.

"Were you not terrible anxious in those last days with the dread of a mutiny before you to ruin all your hopes?" asked the hostess, who joined in all their games.

"Say," said Karl, "how did you like the color of the natives?"

"Christopher Columbus!" exclaimed our historical representative. "I guessed it at the question of my anxiety from our hostess, so she must take my place," which she did by retiring to the adjoining room until called out.

"I say," said one of the gentlemen, "let's name her the wife of John Rogers, who had 'nine small children and one at the breast.'" For

they all knew that their hostess had quite a band of bright little ones, and as the girls said, "the dearest little baby in the world," all of whom were the pride and delight of her heart. When she came in she was greeted with, "How in the world do you manage so nicely with the whole nine of them?" by Miss White.

"I should think you should have a government pension to support them all," said a gentleman.

"Ah! I know," exclaimed the hostess. "I am the living representative of the old lady who lived in a shoe, with so many children she didn't know what to do!"

"No, you are wrong; but tell us truly, does John think as much of them as you do? He can't really, you know," laughed the young man.

Many were the funny questions her character gave rise to, causing a great deal of merriment among them all and infinite confusion in the mind of the hostess, in her endeavor to place herself in history, until at last some one asked, "Were there really only nine of them, or did the one at the breast make ten?" when, of course, she guessed it at once.

"Let us try the game of 'Compliments.'"

Suggested she. "I long to get even with you all for the many nice things you have said of me! Who will go out to be complimented?"

"Oh! Do let me!" cried a bright young fellow, "I do love compliments, and I get so few!" he added pathetically.

"Yes! Do let him!" said another of the men who knew how the game was played. "He will get enough this time to last him the rest of his life;" at which all the rest laughed delightedly. When he had left the room, the hostess went around and collected the compliments so liberally bestowed upon him, writing them down upon a slip of paper as she went. When all were done, the exile was recalled, and she began:

"Who said your tongue was originally intended for a buzz-saw, but by mistake was set up in your head?"

All laughed heartily as, singling out one of the men, he answered, "Of course that was Karl. He has long been envious of the eloquence he could not imitate!" His guess proved to be wrong—nor does the game allow him to be told the author of any compliment unless he happens to guess rightly, when that person whose compliment he has guessed goes out in his stead.

"Who said you were the glass of fashion and the mould of form?"

"Ah! Miss Brown; I always knew you were a lady of great discernment. Thank you for the compliment," said the young man.

"Those have always been my sentiments, sir," laughed the girl, "but modesty has prevented the expression of my thoughts, so it is not to me that you are indebted."

"Who said you were the perfect corroboration of Darwin's theory, minus the caudal appendage?"

"Some beastly fellow whose sweetheart must be in love with me," laughed the irrepressible young man.

"Who said, had you lived in those days, the ancients had never chosen Apollo Belvidere as the type of manly beauty?"

He threw a loving glance at the pretty girl whose escort he was that evening, which caused her to blush a rosy red, whilst all the others laughed as she denied the "soft impeachment."

"Who said that if your mouth had been around in Goliah's time he might have mistaken it for the whale's, and never got to Nineveh at all?"

"That is the most unkindest cut of all," cried Mr. Jones. "If I am proud of any one thing above all others it is my classic mouth. All women appreciate its beauty. Some envious man said that, and I'll settle with the wretch when I find him out."

So the game went on, as he was greeted with chaffing from the men and compliments from the girls, until at last he guesses the right one, when that person takes his place and runs the gauntlet of their wit and humor in his stead. After playing compliments a few more rounds, it was proposed to try the game of

Scandal.

as nearest akin to it. All the players sit round in a circle, and the first person starts the game by whispering a secret in the ear of the person on the right hand. The sentence should be rather long in which the secret is told, as it makes more fun in the game. The player to whom the secret has been confided tells it to his right-hand neighbor, as he understands it from the rapid whispering in his ear, and so on it goes all around the ring until it reaches the last person, who repeats aloud what was told to him. Then the originator of the scandal gives out the sentence as he first told it to his neighbor. It will generally be found that in passing from one to another the whole sentence has been so changed that its author would have every right to declare that he had "never said any such thing." This game, though only the merry pastime of an hour, bears within it a moral so grave and potent that he who "runs may read" and learn a lesson to cast the mantle of charity around the scandal that he hears, and to "take heed lest he offend with his tongue."

Their hostess now proposed again, which was her favorite of all the old ones she knew, being full of fun, besides a capital practice in logic, called

(To be concluded next week.)

October.

[Written for the Press by Mrs. W. D. ASHLEY.]

October, 1882, will long be recollected for the heavy rains all over the State the first eight days of the month, damaging much unthreshed grain, unstacked straw, piles of wheat, and unpicked grapes; then for the beauty of the good roads and exceeding last three weeks, when spring returned to us with her freshness of suns and dews, bordering the waysides and spreading the fields with her tender green of grass and grain. Her fleecy clouds rocked and swam in the soft blue expanse; her grateful breezes, with the aroma of quinces and apples, mignonette and pansies, bore eastward incense from nature's sunlit altars of russet and bloom. Brisk, business-like bees, with no sad droning of frosty nights, sought portulacca's honey cups, where matchless roses bloomed. Swallows returned to the eaves, meadow larks carried their bursts of jog from the acorn laden oaks, higher toward the zenith, and jolly woodpeckers wroth at thieving jogs, bored their holes for acorns in tree and barn. Beautiful days! Bridal of earth and sky! Mild starry nights, soft with moonlight, magnificent with the great comet glorifying the eastern heavens!

On the tule islands, men say that they threshed where barley had grown up around the stacks two feet high, beginning to head out. In our gardens, great crisp cucumbers, tomatoes, cabbage, beans, etc., untouched by frost, follow the same lavish growth. Seed time walks right behind harvest, and the danger is that we shall work too hard in this semi-tropical land. Be this October the presage of drouth or flood, it has been rarely beautiful and admirable for making early gardens and friendly visits.

Stockton, Cal.

Chaff.

Tommy was a little rogue, whom his mother had hard work to manage. Their house in the country was raised a few feet from the ground, and Tommy, to escape a well-deserved whipping, ran from his mother and crept under the house. Presently the father came home, and hearing where the boy had taken refuge, crept under to bring him out. As he approached on his hands and knees, Tommy said, "Sh! Is she after you, too?"

A poor memory is a very inconvenient thing. So a poor man found it who lately called on a friend, and in the course of the conversation asked him how his good father was. "He is dead; did you not know it?" answered the friend. "Indeed! I am distressed to hear it," said the visitor, "I had no idea of it." And he proceeded to express his sympathy. A year after, he called again, and forgetfully asked, "And how is your poor father?" The clever reply was, "Still dead."

A BIBULOUS parson was introduced to a lady who had been represented to him as quite a talented artist. He greeted her by saying: "I understand, madam, that you paint?" She started, blushed deeply, and, recovering herself after a few seconds, said, with as much acidity of tone and style as she could command: "Well, if I do paint, I don't make any mistake and put it on my nose."

"I DIDN'T like our minister's sermon last Sunday," said a deacon who had slept all the sermon time, to a brother deacon. "Didn't like it, Brother A? Why, I saw you nodding assent to every proposition of the parson."

AMELIA: "You may talk about your city fellows, but give me a beau from the country." JULIET: "And why do you want a country beau, I should love to hear?" Amelia: "Because, sis, he's very likely to become a husbandman."

AN ENGLISH FOURTEEN-STORY HOUSE.—During a recent stay in London, says the editor of *La Nature*, we had an opportunity of observing the curious structure shown in the accompanying cut. The building is an apartment house, which, counting the floors beneath the level of the street, and the attics, number 14 stories. Besides these there are two subcellars. This house is located in a new quarter near the Westminster Abbey. On approaching it, the beholder is filled with astonishment at the aspect of a so truly monumental mass, whose total height is about 130 ft. The number of windows in the structure, inclusive of those looking out upon the vast courts within, exceeds 500. The tenants of the house and their visitors reach its different stories by means of a hydraulic elevator, which takes about two minutes to reach the 13th story. After reaching the latter, a marvelous panorama may be observed if the weather is clear. But, as well known, fogs are frequent in London, and it often happens that the tenants of the upper floors are immersed in clouds, after the manner of aeronauts. There is at Genoa an 11 story house, and there have been in former times some constructed at Paris of seven and nine stories, and in the United States numerous experiments have been made with similar structures, these becoming practicable with the use of elevators. The city of London has long had the reputation of having houses only of from two to three stories, but the example here brought to notice shows what can be done by English architects, who, it appears, are not restrained, as they would be at Paris, by administrative regulations.

YOUNG FOLKS' COLUMN.

Our Puzzle Box.

Cross-Word Enigma.

My first is in bad, but not in good;
My second is in peat, but not in wood;
My third is in love, but not in hate;
My fourth is in almond, but not in grape;
My fifth is in go, but not in come;
My sixth is in gin, but not in rum;
My seventh is in hat, but not in gown;
My whole is a small New England town.

ALLIE.

Syncope.

1. Syncope to consume by fire and leave a cake.
2. Syncope a sound and leave a part of the foot.
3. Syncope sharp and leave understanding.
4. Syncope gratis and leave a reward for services.

AUNT SARAH.

Blanks.

(Fill the blanks with the same words transposed.)

1. — gave the boy the hoe — rake.
2. The — came from the farm in the — yonder.
3. Ere the — was concluded the — was sold.
4. He — cold potatoes and drank hot —.
3. The door is —.

JERRY.

Word Square.

You are an unassuming fellow, with strong faculties, of a good race, and live in a respectable county.

AMOS K. TOE.

Curtailments.

1. Curtail a house for cattle and leave an assembly of lawyers.
2. Curtail a field and leave a rule.
3. Curtail a number and leave smooth or level.
4. Curtail to fascinate and leave to blacken.

MELANCHTHON.

Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Empire.
DECAPITATIONS.—1. Crack, rack. 2. Probe, robe. 3. Crocked, rocket. 4. Mink, ink.
CHARADE.—Partial (pa-shall).
SYLLABIC PUZZLE.—Iowa (eye-ow-a).
CURTAILMENTS.—1. Carp, car. 2. Beef, bee, be. 3. Pipe, pip. 4. Shovel, shove. 5. Herd, her, he.

Hints to Young Folks.

A father talking to his careless daughter said: "I want to speak to you of your mother. It may be that you have noticed a careworn look upon her face lately. Of course it has not been brought there by any act of yours, still it is your duty to chase it away. I want you to get up to-morrow morning and get breakfast, and when your mother comes and begins to express her surprise, go right up to her and kiss her on the mouth. You can't imagine how it will brighten her dear face. Besides you owe her a kiss or two. Away back when you were a little girl, she kissed you when no one was tempted by your fever-tainted breath and swollen face. You were not so attractive then as you are now. And through these years of childish sunshine and shadow, she was always ready to cure, by the magic of a mother's kiss, the little dirty chubby hands whenever they were injured in those first skirmishes with the rough old world. And then the midnight kiss with which she routed so many bad dreams, as she leaned over your restless pillow, have all been on interest these long, long years. Of course she is not so pretty and kissable as you are, but if you had done your share of the work during the last 10 years the contrast would not now be so marked. Her face has more wrinkles than yours—far more—and yet if you were sick, that face would appear far more beautiful than an angel's as it hovered over you; watching every opportunity to minister to your comfort, and every one of those wrinkles would seem to be bright wavelets of sunshine chasing each other over the dear face. She will leave you one of these days. These burdens, if not lifted from her shoulders, will break her down. Those rough, hard hands that have done so many necessary things for you will be closed upon her lifeless breast. Those neglected lips that gave you your first baby kiss will be forever closed, and those sad, tired eyes will have opened in eternity, and then you will appreciate your mother; but it will be too late.

Two Original Stories.

[By JOHN HAROLD WAUGH, aged four years, ten months.]

Once a time there was a little boy, and he had a papa and a mamma, and he runned away off to the woods.

And he saw a blue head and a blue tail and four blue feet, and two black ears and it was a wolf!

And the little boy runned and runned, and the wolf chased him and he climbed up a tree, and the wolf caught him by the leg and pulled him down on the ground, and he eat him all up; and a man came into the woods with a gun and shot the wolf dead, and that's what a wolf gets for eating little boys up!

II.

Once a time there was a little boy, and he had a papa, and his mamma was dead. And his papa went down to the creek and forgot his gun. The little boy got the gun and unloaded it at a bird, and shot the bird and the boy dead.—*N. Y. Tribune.*

A boy came from school very much excited and told his father that he believed all human beings were descended from apes, which made the old man so mad that he replied angrily: "That may be the case with you, but it aint with me; I can tell you that now."

GOOD HEALTH.

The Ear Drum Ruptured by Diving.

Dr. H. A. Wilson, aural surgeon to St. Mary's Hospital, Philadelphia, reports two cases of rupture of the drum of the ear, caused by diving. In both cases the hearing was seriously impaired, but the wound healed in the course of 10 or 15 days. Dr. Wilson says:

The mechanism of the rupture is not difficult of explanation. The water, forcibly impinging upon the column of air in the external auditory meatus, suddenly increased its pressure upon the membrane, while the normal pressure upon the inside remained unchanged. The eustachian tube permitted the the air to escape from the middle ear, and thus it will be seen that there was no resistance given to the internal column of air. The internal force of resistance being suddenly exceeded by the external impinging force, the rupture ensued. To prevent rupture when diving it is necessary that the pressure upon the membrane from without should be compensated for by an equal resisting pressure from within. To accomplish this, a full inspiration should be taken prior to diving; the mouth kept shut, and, to prevent the escape of air by the nose, the posterior nares should be closed by elevating the soft palate. This is done almost involuntarily, and retains the inhaled air in the lungs, buccal and aural cavities, its compression being produced by the contractions of the chest and cheek muscles. The act of swallowing will force sufficient air through the eustachian tube into the middle ear to resist the pressure from without.

Holding the nose is not essential to the closure above referred to, but is a crude method of accomplishing the same result, and is resorted to by those who either have not sufficient control over the palatine muscles, or who do so through fear of swallowing the water.

Bathers should be careful to guard against accidents of this nature, which Dr. Wilson believes to be more common than is suspected.

After a rupture of the drum-head, if the parts do not unite, there will be left a permanent opening, and the inconvenience caused by air whistling through it is not the only thing to be dreaded. The delicate structure of the middle ear being directly exposed to the action and changes of the atmosphere, serious inflammatory changes are apt to take place, and perulert discharges and impairment of hearing result.

The eye being exquisitely sensitive to the slightest touch, takes cognizance of the presence of the most minute irritant, and prompts the patient to seek immediate relief. The absence of this sensibility in the ear is very frequently the cause of neglect to attend to it when injuries of this organ take place.

THE IMPORTANT PERIOD OF MAN'S LIFE.

From the age of 40 to that of 60, a man who properly regulates himself may be considered in the prime of life. His mature strength of constitution renders him almost impervious to the highest attacks of disease, and all the functions are in order. Having gone a year or two past 60, however, he arrives at the critical period of existence. The river of death flows before him, and he remains at a standstill. But athwart this river is a viaduct, called the "Turn of Life," which, if turned in safety, leads to the valley of "Old Age," around which the river winds, and then flows without a doubt of causeway to affect its passage. The bridge is, however, constructed of fragile materials, and it depends on how it is trodden whether it bend or break. Gout, apoplexy and other bad maladies are also in the vicinity to waylay the traveler and thrust him from the pass; but let him gird up his loins and provide himself with perfect composure. To quote a metaphor, the "turn of life" has a turn either to a prolonged walk or into the grave. The system and power having reached their utmost expansion, now begin either to close, like the flowers at sunset, or break down at once. One injudicious stimulant, a single fatal excitement, may force it beyond its strength, whilst a careful supply of props and the withdrawal of all that tends to force a plant will sustain it in its beauty and vigor until night has nearly set in.—*Herald of Health.*

A CURIOUS DISEASE.—It has been observed that the manufacture of bichromate of potash has a singular effect upon the nose, manifesting itself in a curious manner. A little hole is formed on the septum or partition of the nose dividing the nostrils, and increases gradually until the partition entirely disappears, with the exception of its lower part, so that to a superficial observer there is nothing the matter with the nose, except a little outward depression. As soon as the partition is destroyed the process appears to stop there, neither the lungs, air tubes nor throat being in the least degree affected. Some workmen at the chrome factory in Russia, where the disease has been chiefly watched, have been employed for ten years and remained unaffected, while with others the hole in the nose begins to be formed after one month's work. But that the disease is something more than an individual peculiarity is evident from the fact that an inspection of all the hands proved that more than 50% of the men had diseased noses. The early symptoms are a slight tickling of the part affected, followed by bleeding, but with no uncomfortable feelings, and, in fact, the destructive process is painless.

DOMESTIC ECONOMY.

CALF'S LIVER LARDED.—Carefully lard the liver by passing strips of larding pork along the surface of the liver—the rows must be inserted regularly until the surface is covered. Lay the liver in a pan, with some chopped onions, carrots, some salt pork sliced, salt and pepper, a faggot of sweet herbs, and two or three cloves. Some gravy or good stock should be poured over it, and the whole cooked in a moderate oven for about an hour, until thoroughly done. Then take out the liver and put it on a dish. Have ready some good gravy and stir it among the vegetables, dredging in a little flour, and heat over the fire; then pour the whole over the liver.

A ROULADE OF VEAL.—Take the best end of veal; with a sharp knife remove the meat in one piece from the bone. Lay the meat flat on a board, and sprinkle thickly over the side from which the bones were taken minced parsley, sweet herbs, pepper and salt. Lay over this very thin slices of fat bacon, and then roll up the meat tightly, tying it into shape with broad tape. Rub over the outside of the meat with bacon, fat or lard, sprinkle a little pepper and salt and flour and roast quickly for about an hour and a half, basting it very frequently. It must be nicely browned on all sides. Serve with a rich brown gravy and garnish with spinach.

DISGUISED HAM.—Disguised ham may be likened to a good deed done in secret, its savor remaining always in remembrance. This delicate breakfast dish is prepared by grating a lb. of cold boiled ham, twice as much lean as fat. Season it slightly with pepper, powdered mace, and a few cloves. Beat the yolks only of four or five eggs, soft boiled and mix with the ham. Spread it over slices of well browned toast without crust and buttered while hot. Brush it over the surface with the white of an egg and brown it.

FRICASSEED CHICKEN.—Cut up the chicken and boil with a slice or two of pork, in sufficient water to cover, until quite tender. Fry some pork, and when cooked a little, drain the chicken and fry with the pork till quite brown. Then take out and pour the broth into the frying pan with the pork fat, and make gravy thickened with brown flour; season well with butter, and put the chicken into the gravy. Be sure to have the fat quite hot when the chicken is put in, so it will brown readily.

FRIED FISH.—The best of fried fish are those cooked in oil; small fish should be rolled in flour, seasoned with salt and cayenne, and quickly fried; medium sized or sliced fish are good for frying when rolled in Indian-meal or cracker dust, seasoned with salt and pepper and fried. The celebrated Philadelphia method of frying catfish is to skin and split them, remove the backbone, wash and dry the pieces, season them with salt and cayenne pepper, dredge with flour and fry them brown in smoking hot fat.

BAKED FISH.—Baked fish is apt to be dry, and can be improved by basting it with a little good fat or olive oil, or by laying a slice of salt pork over it, or strips of pork in slashes cut in its upper surface. Bluefish, bass, shad, carp, red snappers, or other fish from three to six lbs. in weight, are good for baking; brown gravy or sauce should be served with baked fish, and a highly seasoned bread stuffing increases their palatability.

ROLLS.—Pour one pint boiling milk over one quart sifted flour, two tablespoons sugar, two of butter, one of lard, and a little salt; when lukewarm, add one-half cup of yeast; mix early in the morning; knead at noon, adding flour enough for rolls; when light, roll thin; cut with a biscuit cutter, roll oblong, spread a little butter at one end and roll over; place in pans; let them rise, and bake ten or fifteen minutes. These are nice for biscuit, and should be sponged at night in cold weather.

SAUCE FOR BOILED CHICKEN.—Take two eggs and boil them hard, with the livers of the chickens. Chop them fine, adding a small quantity each of thyme, lemon peel and salt; also lemon juice, if you desire it. Mix all well together. Melt half a pound of butter, keeping it as thick as possible, and stir it in.

CORN BREAD.—Four eggs, two cups sour milk, two cups sweet milk, three tablespoons sugar, one teaspoonful soda; lard size of hen's egg, which must be melted before mixing; one teaspoonful salt; cornmeal to make batter thick enough to pour. Bake in hot, quick oven.

INDIAN CORN MUFFINS.—Beat one egg thoroughly; put in a coffee cup; add one tablespoon brown sugar; one tablespoon thick cream or butter; fill with buttermilk or sour milk, two handfuls corn-meal, one small handful wheat flour, one-half teaspoon soda, rubbed into the flour. Bake in muffin rings on a griddle.

CHOCOLATE CARAMELS.—Two cups molasses, one cup brown sugar, one cup cream or milk, one-half pound Baker's chocolate, piece of butter size of an egg. Beat all together; boil until it thickens in water; turn into large, flat tin, well buttered. When nearly cold cut into small squares.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 18 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line	.25	.80	\$2.20	\$5.00
Half inch (1 square)	\$.15	\$.50	1.00	24.00
One inch	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. G. H. STRONG

SAN FRANCISCO:

Saturday, November 11, 1882

TABLE OF CONTENTS.

ILLUSTRATIONS.—The Hansell Raspberry, 361. Section of Souvenir du Congrès Pear as grown on the University Ground, at Berkeley, Souvenir du Congrès, of Ellwanger & Barry's Catalogue, 369. John William Young—A Centennial, 370.

EDITORIALS.—The Hansell—The Earliest Raspberry; The San Jose Convention; Japan Clover; What to do With Oleomargarine, 361. The Week; The Season; Bees and Fruit; The Seed Business and the Tariff, 368. Souvenir du Congrès and Calabasse Monstre, 369.

CORRESPONDENCE.—That "Unlimited" Apricot Jim Market, 362.

FORESTRY.—Forest Trees of California, 362.

HORTICULTURE.—Nectarine on Almonds—Dormant Buds, 362.

THE FIELD.—Hop Picking in Puyallup, 363.

THE DAIRY.—Oleomargarine Products, 363.

FLORICULTURE.—The Flowers at the Santa Cruz Fair, 363.

PATONS OF HUSBANDRY.—Annual Meeting of the State Grange of California; A Beautiful Agricultural Wreath; The Cultivation and Encouragement of a Love of the Beautiful in Nature; Harvest Feast at North Butte Grange, 364.

AGRICULTURAL NOTES. from the various counties of California 364-65.

HOME CIRCLE.—Times and Seasons (Poetry); Men and Women and the Law; The Moon's Influence; The Milk Tree; Little Companies—Parlor Games and How to Play Them, 366. October; Chaff; An English Fourteen-Story House, 367.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Hints to Young Folks; Two Original Stories, 367.

GOOD HEALTH.—The Ear Drum Ruptured by Diving; The Important Period of Man's Life; A Curious Disease, 367.

DOMESTIC ECONOMY.—Calf's Liver Larded; A Roulade of Veal; Disguised Ham; Fricassee Chicken; Fried Fish; Baked Fish; Rolls; Sauce for Boiled Chicken; Corn bread; Indian Corn Muffins; Chocolate Caramels, 367.

QUERIES AND REPLIES.—Mad Itch; Seedling Strawberry; The Demand for Sultan and Prunes; 1. Lams for Knitings, 368.

MISCELLANEOUS.—John William Young—A Centennial; The Musa Ensete, 370.

THE VINEYARD.—Hints on Vine Planting; Wine Exhibited at Santa Cruz Fair, 373.

POULTRY YARD.—The Poultry Interest, 373.

NEWS IN BRIEF. on page 365 and other pages.

Business Announcements.

Agricultural Implements, Geo. A. Davis, S. F. Nurseries, Har doph Peters, Wilmington, Del. Nurseries, P. J. Keller, Oakland, Cal. Agricultural Machinery, Byron Jackson, S. F. Horse Liniment, H. H. Moore & Son. Plows, J. H. Condit & Co., Stockton. Improved Gang Plow, Wm. A. Dorr, Stockton, Cal. Myer's Improved Gang Plow, Rice's Plow Works, S. F. The Boss Pruner, Geo. Woolley, Ione City, Cal. Stockton Savings and Loan Society. American Compositors, Oliver Ditson & Co., Boston. Axton's Incubator, J. P. Clark. Wheeler's Patent Cammer, R. Wheeler, S. F. Victor Mowing Machine, Judson Mfg Co., S. F. Commission Merchants, J. H. Congdon & Co., S. F. Red Lands, Judson & Brown. Giff's Nurseries, Oakland, Cal. Los Gatos Nurseries, S. N. Whall, San Jose, Cal.

The Week.

The week has seen at least two sensations—one meteorological, the other political. The storm in amount of precipitation has been something unprecedented, for at Red Bluff nearly five inches of rain have fallen in three days, and of that nearly four inches came in one day. Sacramento, too, has enjoyed a bountiful downpour, the week recording 2.79 inches. The distribution was not very even, for while Red Bluff had nearly five inches, Los Angeles had but five-hundredths of an inch, and San Diego but a light shower. The whole northern half of the State is thoroughly wetted. As we write the rain is falling in Visalia, and the

great valley seems to be the favored section with the present storm.

The political sensation is nothing less than a revolution—the return of the Democracy to the charge of public affairs in a majority of the States from Massachusetts to California. Gen. Stoneman and his full list of associates will take the helm in California. The public will now be on the *qui vive* to see how the new regime will redeem its promises. Never was there a better opportunity for a party to do good work for the people than now, and the future will depend altogether upon the manner in which the opportunity is embraced.

The Season.

Rain has fallen in unusual quantities. November bids fair to rival October in generous downpours. The soil over wide areas of the State have been thoroughly drenched, and whenever the skies clear will be ready for active work by the cultivators. Already much has been done in the field, and preparations for an unusually large planting of trees and vines are under way. Our California seedsmen and nurserymen are full of business, and are displaying commendable enterprise in getting their supplies into good shape for the long and active demand, which bids fair to continue for several months, because conditions are so favorable for an early beginning. There will also be a large call for Eastern seeds and trees, no doubt, for it is well known that the local supplies of several favorite kinds of fruit trees will not nearly reach the demand; in fact, orders are already booked for a large percentage of the stock which will be available this winter from California propagators.

There is one thing which those who are used to the marked seasons of the Eastern States, and their alternating periods of activity and repose which they occasion, cannot fully understand with reference to California. They cannot realize that a man, who has will and water, can find some profitable outdoor work to do every month of the year. As they have often to fight the elements to get in the seed at the limited season which should include the sowing, they cannot appreciate the fact that we have half the year in which many seeds and plants can be safely confided to the soil. So, too, they have to put forth the sickle when the rain cloud still is in sight, and rush the grain to cover in an hour, while we often have four months of harvest without a threat of danger. The length of the planting season is a great boon to the grower of many crops. It enables him to catch up with his work and to carry out many plantings which would be otherwise quite impossible. The advantage of a succession of growths of the same variety of seed need not be enlarged upon. One feature of the long planting season in this State is the longer duration of trade in seeds, trees and plants. Our Eastern seedsmen who advertise for California trade are often, doubtless, surprised at the orders they get for seed for "immediate planting," which continue to reach them during half the year. The length of our planting season will explain it to them. They need not be surprised to find their trade beginning in October and continuing until April, and during all this period they should not fail to keep their desirable things in the planter's view.

There are many reasons to expect an active trade this fall and winter in nearly all kinds of useful and ornamental plants and trees. The increasing prosperity of the people is leading to a general disposition toward home adornment, within and without. The hosts of new and beautiful houses, both small and great, which are fast replacing the rude shelters of early settlement, must have an environment of leaf and bloom. The new wells and new ditches are yielding water to doorways hitherto dry, and the shrub and flower must follow. Added to these facilities for garden is the wider appreciations of gardening in its esthetic aspects, which is the result of the earnest tributes to the beautiful which have been read by all eyes and heard by all ears.

The disposition toward the planting of useful growths is also very active. There will be a most notable increase of our orchard and vineyard area this winter.

The demand for canning has continued, and the output of canned goods in California has been greater this year than ever before. It is true that prices have not been as satisfactory as in the two preceding years, but fruit growers have made some money and have full confidence in their business. The chance for successful and profitable work with evaporators was never more generally appreciated, and it will be the safeguard if the canners should be surfeited.

Vine planting will be pursued beyond any measure that can at present be made. Already there have been contracts for cuttings of certain favorite grapes, which will clean up nearly all the prunings of large vineyards. There is a disposition also to make many trials of the resisting vines in the phylloxera districts. In short, there is discernible on all hands a disposition to plant permanent growths this year. Large fruits and small fruits are all sharing in the accounts of new plantations which are hinted to us in conversation and correspondence, and we expect that all trustworthy propagators, both at home and at the East, will find the California trade very satisfactory this year, if people succeed in finding out what good things they have ready for introduction.

Bees and Fruit.

The old issue between the fruit men and the bee-keepers comes up continually in one shape or another. An unusual case was being tried in the Cumberland County (Penn.) Court lately, that of testing by a jury whether the keeping of a large number of bees in a town or borough is a public nuisance or not. The case is from West Fairview, a small town on the opposite side of the river from Harrisburg. Two citizens had about 130 hives of bees, and as the summer was scarce of material such as the bees feed upon, they came in large numbers into the houses, stores, grape arbors, and wherever there was anything for them to feed upon. In one instance they swarmed in a neighbor's kitchen, and were there for days, he not being able to hive them, the queen being killed. They were especially bad about canning and preserving time, compelling the housewife to do her preserving in the evening, and in one instance the wife had to climb in and out of the window for days, not daring to open the doors, for the bees would go in by hundreds; persons were stung passing along the streets and highways; entire houses became infested with bees, so much so that the inmates could not retire to rest at night without being stung by the bees; trays of fruit put out for drying were entirely consumed. Indeed, a reign of terror was experienced for several months, until a committee of citizens agreed to abate the nuisance, and after several efforts appealed to the court.

The defense claimed that the raising and keeping of bees was an industry, and as such could not come under the head of a public nuisance, and that suit could not be brought nor damages recovered for the keeping of honey bees. The attorneys on both sides presented the opinions of several judges and the law points in the case, after which the court decided the case should be tried, and the testimony was received. But one case seems to be on record in the State, and that was tried before Judge Pearson, in Dauphin county, years ago, in which the defendant was adjudged guilty, and had to pay a fine and abate the nuisance.

The Seed Business and the Tariff.

The seed growers have had an audience before the Tariff Commission. Mr. David Landreth, of Philadelphia, a member of one of the oldest seed houses in the country, asked for such a revision of the tariff on seeds for the farm and garden as would further encourage the successful raising of seeds that are indigenous to the soil, and for the free entry of such seeds as cannot be raised here. We are now protected, he continued, to such an extent by the act of 1874, which provides a duty of 20% ad valorem. He argues that this was not large enough, and that still further benefits would accrue to the seed trade through greater protection. Under the present tariff we have made marked advances. There are now 2,500 seed farms in the United States, and he estimated that these covered from 50,000 to 60,000 acres of ground, employed 10,000 hands and brought in millions of dollars. Notwithstanding all this he said it was a fact that foreign competition was very strong, and that seed growing had not yet reached the place it should occupy. The foreign article, he said, when brought into this country, was as a rule sold under the label of the American article. The foreigners could undersell our people because it costs them far less, owing to the fact that it is the peasant who are engaged abroad in seed raising. He urged that the duty be increased from 20 to 50 per cent, on such seeds as can be successfully raised here—that is to say, garden and certain other seeds, except grass and grain seeds. On the latter it would be well to retain the 2) per cent, and provide for the free entry of Canary, tree, bulb and other seeds not indigenous to the soil. Mr. Landreth overlooks the fact that Canary seed grows in California, and should enjoy the protection of the tariff on grains at least.

Mr. C. C. Moss, of Santa Clara, California, followed Mr. Landreth. He said that seed growing in California did not date back more than eight years, and in that time California had supplied sixty tons to the East. "We have," he added, "a tariff against us for the East in freight. We ask that the present tariff be increased while we are experimenting and working up the possibilities."

AN AUSTRALIAN SULPHUR DREDGE.—It is not the time of the year for sulphur vines, but the following description of an Australian hand dredge may interest some one: Take four pieces of deal, each eight inches long and six inches broad, and nail them together into a box, top and bottom open eight inches high, and four inches or five inches inside. I closed the bottom part with a square piece of very strong wire gauze, 144 squares to the square inch, and nailed across the open top a round piece of wood to be used as handle. This answered admirably. The sulphur only comes out when shaken. The man who applies it holds the box with one hand over the vine, or alongside, if there is any breeze, and a tap on the side of the box with a stick in the other hand, just causes an even spray of sulphur to fall through the wire gauze.

QUERIES AND REPLIES.

Mad Itch.

EDITORS PRESS:—As a subscriber to your paper, I write you for information in regard to a certain disease attacking my cattle. The symptoms are: (1) sudden and frequent jerking of the head, as if the animal had the jumping toothache; (2) eyeballs sunken into their sockets, making the bones round the eye more prominent, and making it appear as if that part of the face were slightly swollen; (3) frequent sneezing, muzzling of the lips, and frothing of the mouth; (4) violent rubbing of the jaw and side of the head on fences or any solid object, until the jaw is all raw and bleeding, or scratching the head with the hind foot, producing the same effect. The cattle are feeding on an alfalfa field, from which the last crop of the season has been cut, and have access to adjoining corn stubble. During the night they are in a corral, without food. For a short time previous to the appearance of the disease they were kept during the daytime in a pig pasture, feeding on growing alfalfa and corn fodder, hauled to them. The cows are milked regularly morning and evening.—JACOB VAND, Independence, Inyo Co.

The disease is mad itch, and results from letting the cattle follow the hogs on the corn fodder, as has been proved by general experience on the subject. The "mad itch" results from a gathering of food in indigestible and immovable masses in the manfolds. The appearance is sometimes called impact. In the Mississippi valley it has been most commonly met with where cattle have followed hogs on cornstalks. The hogs chew the stalk, extract the moisture and the cattle greedily eat the refuse, which, being dry, impacts in the third stomach as described. The symptoms of the disease are a wildness of the eyes, and by rubbing the nose and head against any object near them, as trees or fences. This is so violently done that they tear the skin horribly. The disease is primarily of the stomach, but affects the brain and head generally.

As a treatment for "mad itch," authorities prescribe bleeding in order to reduce any fever or to prevent it. After this a dose of physic is given to evacuate the intestines beyond the place of obstruction in the manfolds, and by its action upon them to induce them to return to healthy functions. The best purgative is epsom salts, about one pound to a dose with one-eighth of an ounce of ginger added. This, dissolved in water, may be administered by means of a small horn, or the pipe of the stomach pump introduced half way down the gullet and the liquid slowly pumped in. By operating carefully, the liquid may pass gently to the fourth stomach and finally excite action in the intestines. It is necessary to do something to loosen up the impaction of food in the manfolds, and this may be done by drenching, with an almost continued stream of warm water, administered through the horn or with the stomach pump. This water, as it passes through the canal of the esophagus, washes the lower edges of the manfolds as they hang down, and the food packed above between them is generally moistened, washed along by the drenching, and the stomach returns to its normal condition. It is well to add a little epsom salts and ginger to the water used in drenching, but all heating tonics, etc., should be avoided. The animal may be allowed soft and almost fluid mashes, and water or thin gruel as much as desired.

Seedling Strawberry.

EDITORS PRESS:—I send you some strawberries which I raised from the seed of the Monarch of the West. The berries that I send you were mostly picked from plants that put out from the old plants since the 15th of July last. I kept the runners cut off at that time. I send you some of the runners with the fruit attached to them, so that you can better judge their precious qualities.—GEORGE W. CLARK, Ferndale, Humboldt Co.

The samples were received, but the fruit was much decayed from surplus of moisture in the package. We could see that the berries were growing as represented—that is, young plants from runners were fruiting freely, and the fruit was large sized. The flavor, etc., was of course ruined by decay; but the editor of the Ferndale Enterprise, seeing the fruit in good condition, wrote of it as follows: "It is a very large, conical berry, smooth, white in color, moderately tart, less so than the Wilson, firm in texture, a perpetual bearer, and possessing all the qualities of a good market berry—one that would bear transportation admirably. This last berry the Enterprise names 'Clark's Humboldt Prolific,' trusting that it will make its way in the favor of the public. Small fruits should receive more attention than has been accorded them in the past in this section, and we congratulate Mr. C. on being so successful in his first attempt."

The Demand for Sultan and Prunes.

EDS. PRESS:—Is there a large demand for Sultan seedlings raisins? Some dealers say the demand is limited. Is there a demand for California prunes—say French Petite—and are they known in Eastern markets, and what price is usually paid for them dried?—SUBSCRIBER, Tuscul City, Cal.

What have our dealers or producers to contribute on these questions? They are certainly important, and all possible light should be thrown upon them.

Plants for Euclage.

EDITORS PRESS:—What would you advise to sow for Euclage?—J. W. SMITH, Ballard, Santa Barbara Co., Cal.

We would try on corn fodder, and if the result is satisfactory, alfalfa, green rye or other crops can be experimented with. The great points on using corn are cutting up finely enough and applying continual pressure, as by weights, so that the mass may be continually compacted as it shrinks and thus air be excluded. If this is not done, it will be hard to produce good euclage.

Souvenir du Congres and Calabasse Monstreuse.

[Written for the RURAL PRESS, by W. G. Klee.]

Some of the readers of the RURAL PRESS will remember that in March, 1880, a cut reproduced from Ellwanger & Barry's catalogue under the name of Souvenir du Congres gave rise to a little controversy between Mr. Ellis, then of Berkeley, and Ellwanger & Barry. While the general assertion of the pear answers well to the pear grown here, its form, as can be seen at a glance, differs widely from the form as pictured by Messrs. Ellwanger & Barry, which latter strikingly resembles the Calabasse Monstreuse, and sold to the University under this name at the same time of the other. To give the reader an opportunity to judge in this matter we give the letter of Mr. Ellis, as also the answer by Mr. Barry.

EDITORS PRESS:—In the PRESS of March 20th is a fine frontispiece of a new pear, and as you invite a test of its "behavior" in California, we will just state what we know of it. In the first place allow me to say that all our fruit trees, or nearly so, came from the nurseries of Ellwanger & Barry, of Rochester, N. Y., because we could rely on the truthfulness of their nomenclature. We grow "Souvenir du Congres," and know it. It is a very fine pear, but the pear you figure is not it. It belongs to the family of Bartlett or Clapp's Favorite, as the description given states: Such is "Souvenir du Congres." The pear figured is truthfully given, but its name is "Calabasse Monstreuse." It is the largest pear I have seen, even in California, excepting the well-known pound pear. The "Calabasse Monstreuse" fruits in clusters, and its color is a russet brown, the coat looking much like the winter russet apple of the East. There is no mixture of any other color in it. Webster, in his dictionary, says: "I have never known a pear so-called in America, though it seems in England pears have this name." Now I would remark that I have lived in this country 30 years, and this is the first pear that I have seen where the name of *russet* could be properly applied to what may be termed the skin of a pear. "Calabasse Monstreuse" seems to be an exception. I consider it a good cooking pear, and it ripens late in November. How this discrepancy has occurred I cannot tell, but the cut is that of "Calabasse Monstreuse," and, properly named.—JOHN ELLIS, University of California, March 22d.

The Reply.

EDITORS PRESS:—In your issue, March 27th, ult., we find a note from Mr. John Ellis in regard to the Souvenir du Congres pear. Mr. Ellis seems to think that the figure you published was not that of Souvenir du Congres, but of Calabasse Monstreuse. Mr. Ellis is mistaken. The cut you published was made from specimens grown in our own grounds.

We fruited the Calabasse Monstreuse more than twenty years ago, and discarded it on account of its indifferent quality. It is fully a month later than the Souvenir, and we have frequently seen specimens resembling the cut of Souvenir. Both these varieties are variable in form, large specimens generally being different in shape from the medium or small ones. The Calabasse is not covered with russet here, as Mr. Ellis says it is in California. You will find the Monstreuse Calabasse described as Van Marum in Downing's work, with no less than sixteen synonyms.—ELLWANGER & BARRY, Rochester, New York.

While we are aware of the great tendency of fruits to vary, and are loth to believe that Messrs. Ellwanger & Barry would have misrepresented the form of the Souvenir du Congres, we think it but justice to the cause and Mr. Ellis that it should be stated that we have never observed that peculiar shape here on pears grown on trees sent out by Ellwanger & Barry; whereas this shape and almost the size is frequently met with in the Calabasse Monstreuse. As regards the russet coat of the Calabasse, it is invariably so



SOUVENIR DU CONGRES, OF ELLWANGER & BARRY'S CATALOGUE.

days or a week earlier than the Bartlett; picked August 15, 1882. It was ripe the 1st of September.

The above is an extract from our record book, the judgment as regards quality formed from two years' observation of it here, and the outline cuts taken from nature. The trees are now in their eighth year, and were sold by Messrs. Ellwanger & Barry under the name of Souvenir du Congres, together with Calabasse Monstreuse, of which their original cut is presented for comparison.

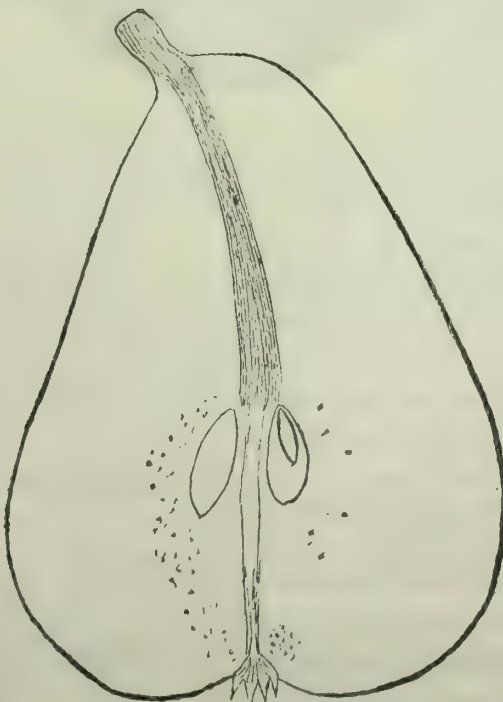
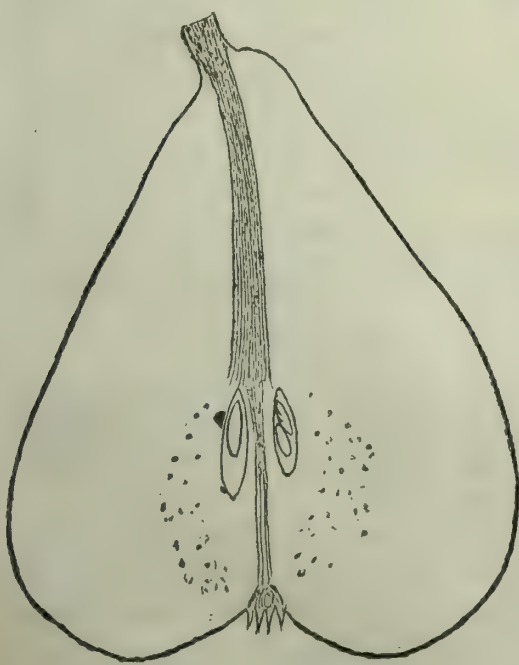
GROWING TREES TOO SLOW BUSINESS.—Artificial substitutes for the natural products of the forests have been attracting much attention for two or three years past. Our readers are already informed in regard to the manufacture of straw lumber, and now we are informed that a new company for this business has been formed at Joplin, Missouri. The *Daily News*, of that town, says: "A series of experiments were made with samples of the lumber in the presence of a number of stock-holders and others, all of which were satisfactory in the extreme. There having been expressed some curiosity as to whether the patent lumber could be worked with carpenters' tools with the same facility as any other lumber, the party all repaired to the shop of Hoyt & Chickering, where it was demonstrated that it would saw and also dress with a plane just as well as pine or walnut, and that it was susceptible to just as smooth a finish as any other lumber. It was also tested by fire, and failed to burn with the readiness of wood. Those who were somewhat doubtful about the utility of the new invention were fully reassured by these several tests, and there is no question but that straw lumber will, in a few years, to a certain extent, take the place of other kinds for inside finishing, and in the manufacture of furniture. The demand is already in excess of the facilities of the one factory, and the company organized here is confident it will have no difficulty in finding a ready sale for all that may be manufactured."

THE MICROSCOPE AT HOME.—In a lecture on the use of the microscope at home, by Henry Pocklington, the following directions are given for using the instrument to detect adulterated dry goods. Most people like to be sure that they get what they pay for. The microscope, in many cases, places the possibility of certainty on this point within the reach of its owner. Suppose, for example, that the lady of the house wishes to know whether the piece of silk she has set her heart upon for a dress is all silk, or a mixture with cotton, jute, or China-grass, and, if all silk, whether it has been loaded with dye and dressing. The microscope will set her mind at rest. Take a pattern of the silk, unravel the warp and weft, and examine it under the quarter-inch objective, and you will at any rate see whether all the little fibres of which the weft and warp are comprised look alike. That, of course, will not tell you whether the material is silk; but if you procure a piece of known silk, good raw silk, and study its appearance, and compare it with the suspected specimen, you will come to a sound conclusion very soon. Then take a little cotton and examine it to find that it consists of flattened tubes, curiously twisted,

FIG. 1.

FIG. 2.

FIG. 3.



SECTIONS OF SOUVENIR DU CONGRES PEAR, AS GROWN ON THE UNIVERSITY GROUNDS AT BERKELEY.

here, a point in which it differs from Downing's description of "Van Marum."

Its qualities are also superior to those given by Downing. Here it is a good keeper, an abundant bearer and a fine cooking pear, and could, no doubt, be grown for profit for this purpose. Whether Messrs. Ellwanger & Barry discarded it or not for general use, we do not know, but it remains a matter of fact that it was sold to the University, together with the Souvenir, each rightly labeled.

The following is a description of the Souvenir du Congres from the orchard record book of the University: Tree of vigorous and regular growth and upright habit, resembling the Bartlett considerably, but setting fruit spurs more evenly all over the tree; young wood, light brown. Specimen of average size, No. 2; the most common form, though, No. 1, is met with quite frequently, and even a still broader form. The shape may therefore be said to vary from obovate to ovate pyriform. Stem, short and

short, fleshy, one-sided, inserted without any depression. Skin when ripe, yellow, vividly flushed with crimson on the sunny side, smooth and rather thin; calyx open; the base well formed and distinct, pointing downward; basin medium; core medium; seeds perfect; flesh white, very fine-grained, rich, melting, juicy, and with some of the Bartlett flavor, but much less musky; a good bearer, but to obtain large size requires extra good thinning out. For an early pear, a good keeper; ripens here a few

quite unlike the long cylindrical tubes of silk, and different again from the long consistent tubes of flax, with their attenuated ends and marked walls. Take wool and hairs of different kinds and examine them carefully, noting their peculiarities, and you will soon be able to tell whether your coat is all wool, or, as is much more probable, not; whether your wife's sable muff or seal jacket is what it professes to be, and will not improbably learn a lesson in the department of trade morality.

John William Young—A Centenarian.

[Written for the RURAL PRESS by J. W. A. Wright.]

So rarely in these days do men live for a century, that few if any parts of the Pacific coast can claim a centenarian, unless it be one of our earlier inhabitants, an Indian or a Mexican, and in such cases their ages are usually uncertain. But Tulare county can now undoubtedly boast of a worthy citizen, who has recently passed his hundredth birthday. The word boast is used advisedly, for the friends of the subject of this sketch may well be proud of him, so vigorous and active is he for this time of life, and so well are his mental and bodily faculties yet preserved.

On the 20th of July just past, John William Young, who lives with one of his sons in Hanford, was 100 years old. The members of his large family, who have watched his advancing years with deep interest and solicitude, and the old gentleman himself, feel very confident that such is his age. Mr. Young says he never heard of but one doubt expressed about the date of his birth by those who ought to know; that his mother always said he was born July 20, 1782, while an aunt of his thought he was born two years earlier. In a pleasant interview with the writer of this sketch recently, Mr. Young gave the following

Incidents in His Long Life.

He was born on the farm of his father, John Young, in what was then the southern part of Sussex county, now Warren county, New Jersey. It was located about 20 miles north of Trenton and 10 miles east of the Delaware river, being about the latter distance from Belvidere, which even then was quite a town. His father was a native of Amsterdam. His mother was of German descent, and was born in New Jersey. Delaware Water Gap, so noted for its picturesque scenery, was only about 15 miles distant. He remembers going to the Gap in his younger days with parties that camped out a week or two, and gathered honey that was deposited by the wild bees in rocky crevices along the face of the mountains on the Pennsylvania side. Barrels of this honey were gathered every year. Most of his first 50 years he lived in New Jersey, though he spent seven years, including the war of 1812, that is, from 1811 to 1818, in Canada. He married in New Jersey at the age of 36, soon after his return from Canada. He remembers distinctly the death of General Washington in 1799, and this incident is one of the strongest proofs of his age. His father, who had in the Revolutionary war been a captain of the "Jersey Blue Horse," and Col. Correll, who commanded that regiment, rode together on horseback most of the distance to Mount Vernon to attend the funeral. He remembers catching his father's horse—a retired horse—called Jersey Blue, and saddling him on that occasion. He was then between 17 and 18 years old, and his mother was uneasy about him, fearing that the horse—rather a fractious animal—might hurt him. But his father insisted, and he got through the job all right.

Among incidents of the Revolutionary War which he remembers to have heard his father relate, was the part his regiment of horse, the "Jersey Blues," took in the rout and

Capture of the Hessians.

At Trenton. The regiment marched from Valley Forge and swam the Delaware river the night before the capture. They crossed the river at Black's Eddy, or Black's Ford, four miles above Trenton. There was then a ferry at that point, but there were not boats enough to take them over in time. So they swam the stream that cold Christmas night in 1776, so cold that their clothes were frozen from the wetting. He saw Washington himself more than once when he came to visit his father, and Col. Correll several days at a time, and Lady Washington came with him on one occasion.

When La Fayette visited their country in 1824, Mr. Young was a member of the

Sussex County Troop

Of cavalry, which formed part of the escort for the great Frenchman from New York to Philadelphia. He described their route as from Jersey City to Newark, thence through Morristown, Princeton and Trenton. They visited the camp grounds and battle fields on the trip, which occupied four or five days, and they rode more than 100 miles. He recalls La Fayette well as a man of medium height, with pleasing features, iron-gray hair and beard—his beard consisting of goatee and moustache. He says La Fayette had his son with him, and he was rather a plain looking young fellow. Mr. Young's experience during

The War of 1812

Was a peculiar one, and was forced upon him unexpectedly by a chain of circumstances beyond his control. He relates it as follows: In 1811 a sister of his was married, somewhat against her parents' will, and moved to Canada. He went with her, by his mother's request, to help look after her welfare. Before the war broke out military companies were formed throughout Canada, and he joined one, not supposing at the time that his company was ever to fight his own people. They were mustered into service, when, to his astonishment, war was declared against the United States. In those times men were not kept posted on

current events, as we are now by the daily press. Mr. Young never saw a paper in Canada in those days. The first he knew of the war was when, by command of General Brock, the declaration of war was read to his regiment. He at once applied to the General for a discharge, explaining the odd position in which he found himself, and asked to be sent across the line into New York. But the General refused, saying he would have to send over a good many others if he sent him, and told him he must remain in the English service, and do the best he could. Rather than desert, Mr. Young remained and fought through the war, being in the service three years, three months and ten days. He was in

The Battles

Of Lundy's Lane, Queenstown, where General Brock was killed, Fort George and Stony Creek. He was wounded several times. Among other scars, he shows one from a saber cut on his right arm, just above the wrist. He says Gen. Scott had him a prisoner for about 20 minutes in the battle of Lundy's Lane, but he was recaptured. Among other interesting facts, he mentions that when he went with his sister and her husband through New York in a two-horse wagon, and on horseback, to Canada, in 1811, they passed through Rochester and other towns that were then just starting. Rochester then had only one house in it, a log tavern, as was the case with Canandaigua. Buffalo was not then as large as Hanford, which had a population of only about 800. From New Jersey Mr. Young removed to Pennsylvania, near Mauch Chunk, and worked for a time

On the Lehigh Canal.

From there he removed to what is now Cayuga county, New York, where he lived two years in Ludlowville, 12 miles north of Ithaca, and subsequently lived in Steuben county. He then went to Canada and lived in Niagara district

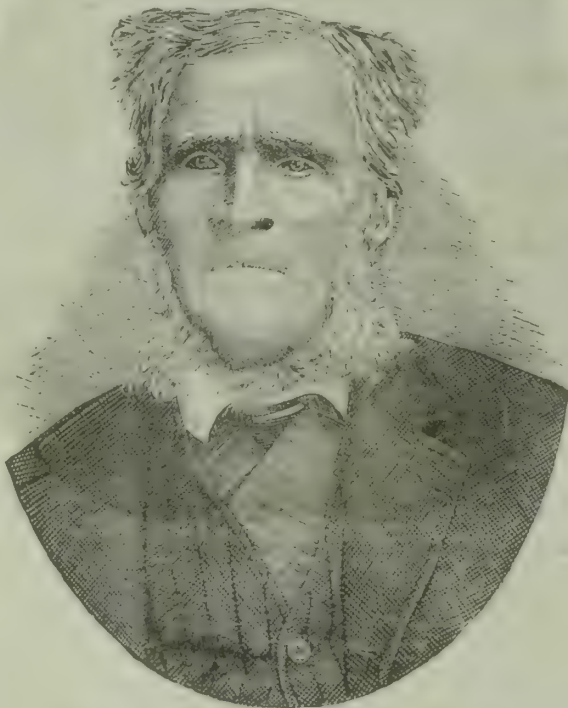
thence came by rail to California in 1873. Living with a daughter in Watsonville for a time, he has made his home in Tulare county the greater part of the last eight years, most of the time near Tulare lake, but since last spring with a son in Hanford, where his three sons, Amor, John and David are living.

Our Centenarian

Retains his faculties wonderfully well. None of his senses are seriously impaired. His memory is remarkable. He enjoys a good joke as much as anybody. He reads our daily newspapers without glasses. When asked if he hasn't his second sight, he says he has his third sight, for he has twice had to use glasses, and has now laid them aside a second time, and never uses them. He is rarely sick, only suffering occasionally from a slight headache. He has chewed tobacco in moderation for 70 years, but never smoked much. Though a moderate drinker till after his 70th year, he has been a total abstainer for the last 20 years or more. Most of his hundred years have been spent on a farm, the chief exceptions being when a soldier or a canal boatman or a resident of Chicago. He now weighs 133 lbs., and is 5 ft. 7½ in. high, though he says his former height was 5 ft. 10 in. His step is firm, though he is somewhat bowed with age. He is very

Fond of His Grand-Children.

And they are devoted to "Grandpa." He helps to take care of the younger ones, and puts "the baby" to sleep about twice a day. One of his grand-children is his bed-fellow, and the old man says he could "hardly live without him." Mr. Young is a devoted believer in the Bible, and reads it daily. So our aged friend, whose face and life are given here, having completed his five-score years, is still living—simply, actively, faithfully, cheerfully, thoughtfully—surrounded by the little ones and many kind friends; and, sustained by the Christian's un-



JOHN WILLIAM YOUNG A CENTENARIAN

more than 15 years. Here most of his children were born. After his return to New Jersey, he had married, in Sussex county, Prudence McLain, of Scotch descent, her father having previously been Sheriff in Detroit. Their family consisted of six sons and four daughters. Eight of these are still living, and all are married. His wife died in 1872, in Iowa. The old gentleman has about 80 grand-children and 10 great grand-children. One great granddaughter is married and living in New Jersey. She has one or two children.

From Canada he removed to Illinois, and was in Chicago during the Mexican war. He was occasionally at Galena afterwards, where he had a son-in-law. There he knew Gen. Grant when he was a farmer and a harness-maker. He confirms the current testimony of Grant's dissipated habits at that time. He asserts positively that he saw him one Fourth of July lying in the shade of a tree, and, to use the old gentleman's words, "so drunk that he didn't know whether he was dead or alive."

This fact is not here mentioned of Gen. Grant disparagingly, for, to have so reformed from the recklessness and dissipation of his earlier years, and to have attained such deserved eminence since, as a soldier and a civil magistrate, is highly creditable to him, and is one of the most remarkable evidences of his strong will and other sterling qualities.

Mr. Young, formerly an "old line Whig," has of late years usually voted the Republican ticket. Still he voted for

"Old Hickory"

for President, and like the mass of modern voters says, he will occasionally "scratch his ticket." He amused his hearers, though, by saying, with a laugh, when asked if he voted for Grant, "No, he wasn't my kind of a man." He voted at our late election. From Illinois Mr. Young removed to Aldamakee county, Iowa, and

failing belief, he patiently awaits the summons, which, though it may yet, as we hope, be long delayed, must end his probation of more than a hundred years.—Hanford, Cal.

PHOTOGRAPHING AN EXPLOSION.—The United States Engineers recently photographed the explosion of a wreck, which was blown to pieces by submarine charges of dynamite, to ascertain, among other things, how long the spectacle really lasted. The result was exceedingly interesting. There were six cameras employed, and the instant of the explosion, as also the several instants when the exposures were made by shutter, were electrically timed by a chronograph. A photograph taken one-tenth of a second after the explosion showed the vessel broken, and a column of water 70 feet high; a photograph secured 1.5 seconds after the explosion showed a column of water 160 feet high; a third photograph, taken 2.3 seconds after, showed the column at its full height of 180 feet, while fragments of wreckage were in the air, but none had fallen to disturb the surface of the water; a fourth picture, taken 3.3 seconds after, showed the column falling, and the surface of the water disturbed; while a fifth photograph, secured 4.3 seconds after, showed that all was over.

CHANGES ON THE MOON'S SURFACE.—Prof. M. W. Harrington refers to two kinds of changes on the moon's surface which may be regarded as fairly established. The first is the land slides, which may doubtless be caused by the great alterations of temperature to which the moon is subject. Many of these slides may be easily recognized with good telescopes. The second form of change is illustrated by craters, which have been proven to be different in size and shape from what they were recorded by earlier observers. Many other changes have been suspected, but they are of a more uncertain and doubtful character.

The Musa Ensete.

[A paper read before the San Mateo Horticultural Society by JOHN McLEARN, and furnished for publication in the RURAL PRESS.]

The *Musa ensete*, or Abyssinian banana, a native of the east coast of Africa, is one of the grandest and noblest plants that have been introduced into our sub-tropical gardens. Its immense leaves are 13 ft. in length by 2½ ft. in width, with a very prominent mid-rib of a reddish color, and well deserves a place in every garden of note in the country where it can be grown successfully.

San Mateo is not the most favorable climate for the cultivation of large-leaved plants. I tried the *Musa coccinidii* in the same situation, but it presented a very sorrowful appearance. Its leaves were all, as soon as formed, torn into shreds by the wind. It certainly made one or two attempts at growth, but our famous trade winds came along and tore the leaves into ribbons, and in a few days they were all withered up, whereas this variety has stood the whole summer, and every leaf is perfect. It has made one leaf every week since planted out on May 15th.

For centers or foliage beds, for single specimens or groups on lawns, it is unrivaled, and gives a tropical character to the landscape peculiarly unique and beautiful. Whether it will stand the winter or not I do not know, but am satisfied that with a little protection it will, and next year will rival the magnificent specimens I have seen in European hothouses.

Its cultivation is very simple. Sow the seed in a brick heat in January in light, leafy soil; cover the seeds to a depth of about one-fourth of an inch, and see that they do not get dry. In about three weeks they will be up. As soon as they make two leaves put them into four-inch pots in soil composed of half old hot bed manure and half light loam with a sprinkling of sand. Plunge the pots in bottom heat of 70°. In about one month more they will be ready for another shift. This time they will require eight-inch or 10-inch pots, which will serve them until planting out time.

The middle or end of May is a good time to plant them in the open ground. Select a sheltered place for them where they will get plenty of sun. Dig a hole about four ft. wide by two and one-half ft. deep; fill in with good rich soil, and after the plants have been hardened by exposure to the sun and air, plant them. After planting give a good soaking of water, and give abundance of water all summer. You will be well repaid for the trouble with enormous tropical looking leaves which will attract the attention and admiration of all lovers of handsome leaves and noble looking plants. I am not aware of another specimen of *Musa Ensete* growing out of doors in this country. That is my apology for giving you this paper at this time.

OFFENSIVE BREATH.—This is generally an annoyance to the person who has it, and is especially annoying and disgusting to his friends. Sometimes it is caused by decaying teeth. If so, it is unwholesome, for the person who has it inhales with every breath putrid particles that are absorbing into his blood. A good dentist should be seen, and if the offensive odor is caused by decaying teeth, he can soon "abate the nuisance." But quite often bad breath is caused by the blood's being loaded with waste matter, which ought to have been separated—eliminated—from it by the liver and other glands. Waste in the body must be gotten rid of somehow, as certainly as the waste of our dwellings must be taken away, if we would have them healthy. Nature has provided glands whose office is just this, and whose powers, in health, are fully equal to it. In case these fail somewhat of their work—if they failed in full, speedy death would result—it is done in part by other glands, which are then said to act vicariously. Thus, the skin can come to the relief of sluggish kidneys. The kidneys, in turn, can aid the skin when its pores are closed by a cold or a fever. So, also, matter which should be separated from the blood by that great gland, the liver, and by other intestinal glands, is taken from it by the mucous glands of the mouth and air-passages. In the process, however, it is more or less changed chemically, and given the breath its disagreeable odor. To correct this disorder it is necessary to arouse the proper glands to a higher activity. The stimulus should be slight and continued for some time. As all the excretory organs aid each other, it is well to stimulate the skin and kidneys, also, for a short time at least. As the trouble in the first place often brings with overeating, the diet should be diminished and regulated.—Ed.

HIGHT OF BUILDINGS.—In the *Insurance Cyclopaedia*, Mr. Walford mentions the Swedish law which came into force in 1875, and which prohibited the erection of buildings in cities and towns of a height more than five feet above the width of the street on which they are built. A wise precaution, says the *American Exchange*, to secure proper ventilation and avert the spread of conflagrations, and which somewhat qualifies Capt. Shaw's rule that the safety or saving of the individual ignited building is indirectly in the ratio of the height to area or cubic content under equal combustible conditions (otherwise). This is part of the question, whether we shall in the future build cities, or continue, as in the past, to build capacious individual structures.

HOME PRODUCTION !!

VICTOR MOWING MACHINE.

Judson Manufacturing Company's

The First and Only Mower Made on this Coast.

Silver Medal Awarded at the Mechanics' Fair, San Francisco, 1882.

FIRST PREMIUM AWARDED AT THE SAN JOSE FAIR, 1882.

The following are a Few of the Testimonials Received from those who have Used the VICTOR MOWER the Past Season:

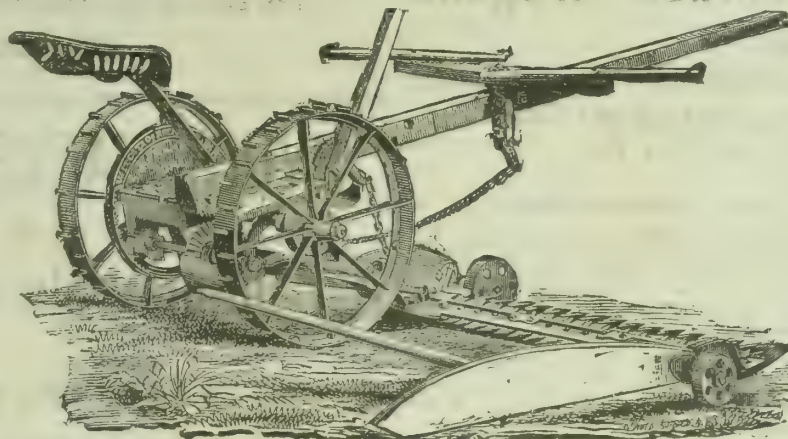
BOONVILLE, Mendocino Co., Aug. 3, 1882.

JUDSON MFG CO., San Francisco.

GENTS:

I am very well pleased with the Victor Mower purchased of you: 1st, Because there is no side draft, the horses pulling direct from the cutting apparatus. 2d, Because the pitman is shielded from any obstruction, and not liable to be broken. 3d, Because you can stop and start without backing, and turn without increase of speed. 4th, The wheels carrying the cutting bar remove much of the friction. 5th, The floating apparatus lets it run over very rough ground with ease and without breakage, (which is no small item in parts remote from the city). Also, the boxes are better than I ever saw before; in fact, the whole machine, for simplicity, strength, durability and light running, make it the best Mower of the day. Yours respectfully,

A. G. RUDDOCK.



HEALDSBURG, Aug. 28, 1882.

We, the undersigned, having used the Victor Mower made by the Judson Manufacturing Co., of San Francisco, can testify to its superior qualities, and conscientiously recommend it to the farmer as an excellent machine, and the best adapted for use on this coast of any mower that has ever come under our observation.

H. M. WILSON,
President Bank of Healdsburg.
WM. MATHORN, Healdsburg.
E. TEUAFER,
A. H. BARTH, Windsor.

BOONVILLE, Mendocino Co., Aug. 27, 1882.

JUDSON MFG CO.

GENTLEMEN:

I can truthfully testify to the excellent qualities of your Victor Mower. I purchased one last May, and have cut 120 acres over very rough ground. It is the lightest draft Mower I ever run. Wishing you success, I am your obedient servant,

WILLIAM PRATHER.

CENTERVILLE, Alameda Co., Aug. 30, 1882.
JUDSON MFG CO., San Francisco.

GENTS:

I have used one of your Victor Mowers during the past season, and consider it the best machine ever made. It is by one-third the lightest draft machine I ever used, and I have run mowing machines for the past 20 years. There is no side draft whatever, and it is a very easy machine to operate. My boy, who is only 10 years old, cut over 60 acres during this season, of Burr clover, wheat and wild oats, mixed, that cut over four tons to the acre. Success to the Victor.

JOSEPH ROSE.

WEST POINT, CALAVERAS Co., Aug. 4, 1882.

JUDSON MFG CO.:—The Victor Mower I purchased of you has given perfect satisfaction, both in heavy alfalfa and fox tail; as I had the machine on trial, you may be sure that I gave it a good test. It is the lightest running and best adapted for all purposes of any machine I ever saw. One of my neighbors, Mr. Ham, has a Victor, and he thinks there is no machine like it.

FRED. GREIVE.

VANCOUVER, W. T., Aug. 10, 1882.

JUDSON MFG CO.:—One of the Victor Mowers sold by us cut 170 acres and never stopped a minute for repairs.

GRIDLEY & WHITNEY.

JUDSON MANUFACTURING CO.,

Factories at Oakland.

Office, 402 Front Street, SAN FRANCISCO.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.

Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

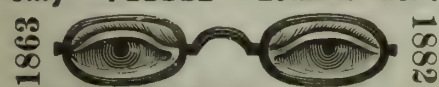
HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, LINFORTH, RICE
& CO., 323 & 325 Market St., S. F.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting 12 Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

Only "PEBBLE" Establishment



1863 Muller's Optical Depot, 185 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.



This cut represents a No. 1 CALF SKIN SHOE, made in GAITER or LACE, all sizes, which we are manufacturing with a view to meeting the wants of a large class of people who must have the best shoe for the least money. It is guaranteed as to STYLE, FINISH and QUALITY, and will compare favorably with any \$5 shoe in the market. In order to introduce our goods, we will send FREE to any address for the low sum of \$3.85 a pair, thereby saving to the consumer the large profits of the jobber and retailer. TRY ONE PAIR AND BE CONVINCED.
F. H. WILSON, 232 West Baltimore St., Baltimore, Md.

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

Attention, Housekeepers!!

The immense stock of

Furniture, Carpets, Crockery and Household Goods of

A. EASTON,

Will be offered at cost from OCTOBER 1st until JANUARY 1st. Bargains for all.

El Dorado Street, One Door South of Main, STOCKTON, CAL.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

CLUB-FOOT SHOE.



APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

W. T. ADEL,
City Carriage Manufactory,

No. 263 First Street (opp. N. Y. Exchange), SAN JOSE.

Family Carriages, Rockaways, Top and Open Buggies,

Light and Heavy Express Wagons,

Made of the best-selected and thoroughly seasoned timber and warranted.

Driving Carts, with open seats and spring shafts, the only cart in the market that takes away the jolt. Send for circular and price list.

Jobbing, Carriage Trimming, Painting and Blacksmithing Neatly Done.

Prices as Low as the Lowest.

Orders Will Receive Prompt Attention

PACIFIC RURAL PRESS.

A first-class 20-page Illustrated Agricultural Weekly, filled with fresh valuable and interesting reading. Every farmer and ruralist should take it. It is immensely popular. Send for a sample copy.

DEWEY & CO., Publishers, S. F.

MRS. C. V. TURNER,

Inventor and Manufacturer of the



EXCELSIOR

Perfect Fitting
CORSET,

(Patented July 5, 1881.)

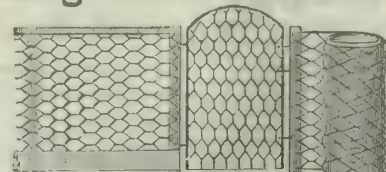
Is now prepared to manufacture to order, on short notice the above Corset.

Rules for self-measurement sent on application, and Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St., SAN JOSE, CAL.

All parties are cautioned against making or causing to be made the above Corset without my License Stamp, under full penalty of the law.

Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will turn dogs, pigs, sheep, and poultry, as well as the most vicious stock, without injury to either fence or stock. It is just the fence for farms, ranches, stock ranges and railroads, and very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint (or galvanized) it will last a lifetime. It is Superior to Boards or Barbed Wire in every respect. We ask for it a fair trial, knowing it will wear itself into favor. The Sedgwick Gates, made of wrought-iron pipe and steel wire, defy all competition in neatness, strength and durability. We also make the best and cheapest All Iron Automatic or Self-Opening Gate, also Cheapest and Neatest All Iron Fence. For Prices and Particulars ask Hardware Dealers or address the Manufacturers,
SEDGWICK BROS.,
Richmond, Ind.

Mention this paper.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller.	Hill's Sweepstake Road and Breaking Plows.	Gillis' Improved Horse Powers.
" Improved Granger Gang.	" Side Hill Gang.	Cultivators.
" Improved Single Sod and Tule Plow.	" Double Deep Tiller.	Gem Seed Sowers.
" Single Plows.	Fresno Ditching and Grading Plow.	Hill's Improved Headers.
		Wood and Iron Harrows, etc.

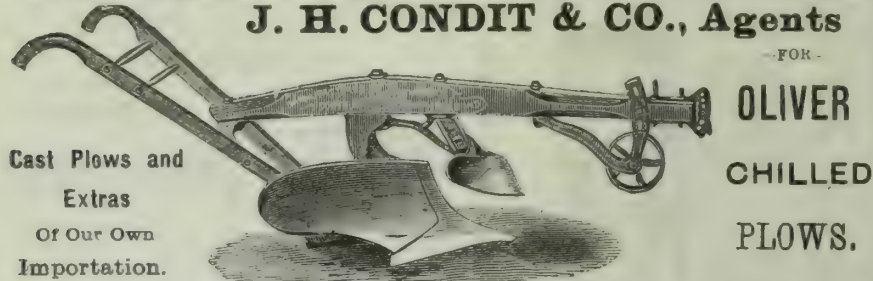
Remember that Water-Communication insures Cheap Freight. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

J. H. CONDIT & CO., Agents

-FOR-



Cast Plows and
Extras
Of Our Own
Importation.

OLIVER
CHILLED
PLOWS.

Steel Plows, Reversible Molds, Eureka Gangs, Seed Sowers, Harrows,

Fence Wire, Wheelbarrows, Hardware and Ship Chandlery.

Rubber and Leather Belting. Rubber and Hemp Packing. Tents, Hose and Twine. Garden, Flower and Field Seeds—Alfalfa.

J. H. CONDIT & CO, Hunter St., near Main, Stockton.

KELLER'S NURSERIES,

Oakland, Cal.

FOR SALE, AT BEDROCK PRICES,

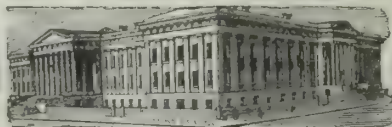
Fruit Trees, Ornamental Evergreen Trees, Plants and Shrubs; also several thousand Gum and Cypress trees, Flowering Bulbs, Roses, Fresh Seeds. Please send for catalogue and price list.

P. J. KELLER, Seedsman and Florist,

Nursery near Cemetery; Seed and Floral Store, 502 & 511 Seventh Street, bet. Washington & Clay, OAKLAND, CAL.

DEWEY & CO.'S

Scientific Press



Patent Agency.

[ESTABLISHED 1860.]

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY,

W. B. EWER,

GEO. H. STRONG.

WAKELEE'S

PATENT

AND

Squirrel



Gopher

EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

WAKELEE & CO., Chemists,

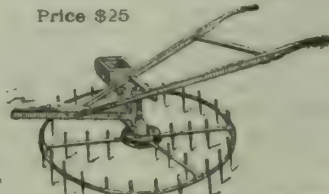
Occidental Hotel, S. F.

BYRON JACKSON,

Manufacturer of

Agricultural Machinery.

Price \$25



Jackson's Vineyard Harrow.

WOODEN HARROWS With Solid Steel V-Shaped Teeth.

IRON HARROWS With Solid Steel Teeth.

Vineyard Harrows, Rotating Either Way.

ADDRESS,

BYRON JACKSON,

625 Sixth Street. - - - SAN FRANCISCO.

NOTICE!

To Farmers and Stockmen!

You well know the virtue of our H. H. H. Horse Liniment. It has been used for years throughout the entire Pacific Coast, and has been found without an equal as a Liniment for man and beast. We have now added to our list of medicines "The H. H. H. Hoof and Healing Ointment," and the "H. H. H. Condition Powder." No stock raiser, once having used our medicines, will ever be without them in the house. For sale everywhere.

Trade: H. H. H. Mark Trade: H. H. H. Mark Trade: H. H. H. Mark

Hoof and Healing Ointment, HORSE LINIMENT, Condition Powders,

For Brittle Hoofs,
Fever in Feet,
Founder,
Contracted Hoofs,
Sand Cracks,
Quarter Cracks,
Collar Galls,
Harness Galls,
Scoratches,
Mud Fever,
Etc., Etc.

The most effectual Liniment
ever used for
Ringsbone,
Spavin,
Sweeney,
Callous Lumps,
Old Sores,
Sprains,
Stiff Joints,
Bruises,
Windgalls, Etc.

For Inward Strains,
Hide Bound,
Loss of Appetite,
Yellow Water
Poll Evil,
Scratches,
Mange,
Rheumatism,
Epizootic,
Coughs,
Colic, Etc.

H. H. MOORE & SON.
Sole Proprietors.H. H. MOORE & SON,
Sole Proprietors.H. H. MOORE & SON,
Sole Proprietors.

SOMETHING NEW,



DORR'S IMPROVED GANG PLOW.

Over 700 Sold Last Season.

Adjustable Draft Bar and Lifting Device. Superior in Strength, Durability and Lightness of Draft. Address,

WM. A. DORR, Agent,

No. 206 El Dorado Street,

Stockton, Cal.

THE VINEYARD.

Hints on Vine Planting.

EDITORS PRESS:—We have gotten over our unusually heavy early rains without what frequently follows in their wake, a heavy frost. There have been several slight frosts, enough to check vegetation, that is all. Although the grape crop has generally been rather light, the prospects are by no means discouraging. The vines have made a good growth, and the wood is ripening well, which may promise great things for next year. The phylloxera is the one bug-bear; but if our grape-growers would unite to do what they can intelligently, even this evil may be overcome. I would again urge planters to take every precaution in properly handling their cuttings previous to setting out, and to heel them in as recommended in a recent article in the RURAL PRESS. Also, let them be planted earlier than is customary, proportionately so according to the soil and the average rainfall in a given locality. I believe nine inches to be deep enough in the ground under ordinary circumstances, never more than 12. Practically there is no need for any of the cutting to be really above ground, certainly not more than three or four inches. Then how is it that we so often see six to ten inches exposed to the evaporating influences of sun and air, while there is no root to supply the moisture thus wasted? This method of planting, together with the want of care preparatory to planting, are the chief reasons why we see so many failures in young vineyards. Amongst the many cuttings I sent out last year, some stands of 95% may be found, and others of the same cuttings of about 40%. Surely a little more care will pay.

I am of the opinion that the common practice of pruning all varieties on all soils to two eyes has been conducive of more disease than most growers are aware of. To treat thus strong growing sorts in our rich bottom lands is murder most foul; more wood must be left, only let it be allowed to run horizontally, rather than trained up like hops. Vines on poor or hilly land can generally be cut to two eyes to advantage.

Why does not every grower in the State spend a few dollars in resistant stocks? If he does not like to plant a large vineyard with them, let him invest in a few thousand cuttings, and start a little nursery of them. The Wild Riparia, which is the best stock for most soils, makes wood and roots wonderfully fast, as my experience proves. The expense of rooting these, of setting them out in the vineyard, and grafting the following year, is nothing when we think of the immeasurably greater satisfaction of having a vineyard of this kind than when the dread of the phylloxera haunts us night and day.

LEONARD COATES.

Napa, Cal., Nov. 4, 1882.

Wine Exhibit at Santa Cruz Fair.

The Wine Committee at the Santa Cruz fair, Messrs. Henry Meyrick, W. Effe and Joseph Francis, having tasted all the samples on exhibition, submitted their report to the Executive Committee, as follows:

The Haraszthy brands exhibited by M. Cappelman, including Burgundy, Reising, Zinfandel, Angelica, and the well-known Eclipse champagne, they found to be well matured wines, fit for the table of any connoisseur, and highly creditable to California; but no less creditable were the comparatively newer and cheaper wines made in our own town and exhibited by Jackson Sylvar, Christofanini and others, all of them genuine and many of them excellent. Of course, as such wines gain in age, and such makers gain also in careful experience, great improvements will result. But already they far excel the common wines of Europe, with which several of your committee are familiar, in sterling quality, rich fullness of body and fluency of flavor. However your committee may differ in their individual tastes as to the relative merits of the various brands, they are all agreed on the general merits of the wine exhibit, as showing the great possibilities of growing first-class wine in Santa Cruz county, from the highest mountain ridge right down to the very tide-water of the bay.

That remarkable, sound, full-bodied claret shown by Mr. Brunett was grown and made within a rifle shot of the sea at S.quel.

Your committee would advise the greatest care in every particular of wine making—in the selection of the proper sort of grape for each particular sort of wine, the gathering at the right time, before too ripe, and the rejection of every single damaged or unsound grape, these, with scrupulous cleanliness and intelligent watchfulness, being some of the great secrets of wine making.

Your committee can not conclude without expressing their regret at the absence of exhibits from some of the leading wine growers of Santa Cruz county. It is to be hoped that your next fair will find Messrs. Mel, Jarvis, Fitch, Waterman and others well represented.

A NOVEL FIRE ESCAPE.—The last invention for the protection of theater audiences is a "penetrable safety wall," which has just been patented by an engineer at Kottbus, Germany. The plan is to make the interior walls in all parts of the theater of papier mache, made after a certain method. Such a wall will have the appearance of massive stone, but, by pressure upon certain parts where the words are to be painted in luminous letters, "To be broken open in case of fire," access to the exterior corridors is to be obtained, whence escape to the outer air can be made.

TEETH FACTORIES.—There are at present in the United States 12 large factories for the production of artificial teeth, turning out between them 10,000,000 teeth a year. The gold used in stopping decayed teeth in America amounts to \$2,500,000 yearly.

POULTRY YARD.

The Poultry Interest.

EDITORS PRESS:—As to the origin of our domestic fowl nothing is definitely known; suffice it to say that Aristotle, Cicero and Columella, all before the Christian era, wrote understandingly of distinct breeds of fowls. Aristotle's description of a chicken during the different stages of incubation has never been improved upon. Whether there are to-day any of the exact type of those ancient fowls, it matters not; the skill of the modern breeder has, we think, developed varieties sufficient in number to suit the most varied tastes.

Poultry raising on this coast is but in its infancy. The enormous quantities of eggs and poultry shipped into the San Francisco market from Eastern points demonstrates that the home supply falls far short of the demand, and to be convinced that our own production is greatly preferred, one only need to examine the market reports. Prices the last season have ruled higher than for several years, and we anticipate no depreciation in prices, at least until the home supply equals the demand, which is a problem for future years to solve.

Senator Miller, in a conversation with the editor of the New York Graphic, said: "California, which has a population of 850,000, can support from 8,000,000 to 10,000,000 people, and I predict that within a few years, under the stimulus of immigration, it will rank with some of the more populous of the Eastern States. All that is required for the development of the thousands of acres of tillable land is good bone and muscle, and this we will get, now the vexed Chinese question is practically settled." Sharing in this view of California's future we see no danger of the demand being lessened, nor can we conceive any legitimate line of pursuit wherein the profits are so great for the amount of capital invested, and it is a matter of surprise the farming community of the State are not more universally engaged in poultry raising. True, there has been for all time a little indefinable stigma attached to poultry raising, but were our people fully aware of the status of this industry it would forevermore vanish.

The United States Census reports of 1870 showed the total annual products of eggs and poultry to be upward of \$600,000,000, and it has grown enormously with each succeeding year. This is more than all our great wheat crop, one-third more than our cotton crop, one-third more than the sum total of beef, mutton and pork, nearly double that of all the butter and cheese made. A nice little pill for those to swallow who regard the "chicken business" as unworthy of their notice. We take the following from the *Journal of Applied Science*: "Besides our foreign supplies, the home production is considerable. The Midland Railway brings up 150 tons of eggs, and the Great Eastern over 5,000 tons of poultry and game annually. But this is a mere fleabite in the course of a year. It is no uncommon thing in the early spring months for the Aylesbury Railway to carry two or three tons weight of ducklings and eggs in one night to London, and nearly \$100,000 per annum is returned for ducks to the neighborhood of Aylesbury alone. Ireland produces 500,000,000 eggs, and the Continent supplies us with about 755,000,000, and if to this is added the annual production of Great Britain the enormous consumption may be approximately estimated."

The egg traffic of the United States is now exceedingly large. Large as is, however, the production, the imports of eggs reach 6,000,000 dozens a year, chiefly from Canada. Over 20,000 carloads of live and dressed poultry are carried into New York city yearly, and 25,500,000 dozens of eggs go to the same market. Not a bad showing for one city. With these glaring facts staring us in the face, we ask, why should an industry of so vast importance be regarded by some as not altogether a manly occupation? Away with the idea that it is only child's play! Some of the best and ablest men and women of our land are numbered among those who, by energy, toil and indefatigable effort, have succeeded in raising to its present status and enormous proportions this pleasant, as well as profitable industry.

While hands have found plenty to do, the inventive mind of the age has not ignored this field, but has added to this vast industry new life and vitality. The incubator of to-day plays no small part in the experienced breeder's, as well as the poulterer's, yards. Since my first venture with a artificial incubator they have been greatly simplified. I have used different machines aiming to keep pace of the times; and while some have been little better than no machine at all, others have done well. I can say of the one in use at present at my yards (not manufactured by myself), that it is of the most simple, and as near perfect as can well be attained; and I would not dispense with its use under any consideration. Just as we people learn more about their principles will they be more universally adopted.

My success has been such that I recognize in them an essential to the future poultry-keepers' prosperity. With this valuable aid the poultry interest will make much more rapid strides.

The cost of feed last season prevented many

from raising the usual quantity of chicks, and also led to early marketing. The present ruling high prices of all kinds of meat will have its effect upon the poultry market, so that there never has been a more auspicious time for poultry raising on a large scale than the coming season.

L. C. BYCE,

Petaluma.

The Black Wattle.

Among the Australian trees which have been brought to California is the black wattle (*acacia decurrens*) which has shown its adaptation to our conditions by making a very satisfactory growth. The specimens now growing on the University grounds at Berkeley show that the growth is rapid and satisfactory. The *acacia decurrens* or black wattle is the source of the bark largely used for tanning in Australia and elsewhere, and the trees are becoming so scarce that plantations are urged even to the lands where the tree is indigenous. The present price of the bark in the London market is from \$50 to \$65 per ton, with every prospect of an increase. As a source of supply for bark for tanning purposes the black wattle tree is much superior to the oak tree. It grows far more rapidly, and the bark it produces contains a larger percentage of tannin than oak bark. In the course of five or six years after planting a small supply of bark would be available for sale from the thinnings of the plantation. The quantity would increase yearly for some time if the plantation were properly managed, and it could be so arranged that a succession of trees would be ready for stripping every year. The return for the outlay would thus become available at a much earlier stage than is the case generally with the planting of forest trees. The timber is hard and well adapted for turners' work, and also makes the best of firewood. This last would be a great consideration in many districts where firewood is scarce and a coal supply not available.

GLYCERINE IN GLUE.—Herr. Puseher, a German chemist, has reported that the value of glue is greatly increased by the addition of 25% of glycerine, all cleaving and breaking of the glue being thus prevented.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

The Story of a Great Discovery.

There appeared, not long since, in the *Chicago Weekly Inter Ocean*, a remarkable article with the above title, occupying nearly five columns of that able journal. It describes, very clearly and with great particularity, the inception, development and successful result of an effort by a thoroughly educated and intelligent American physician to discover an element, or combination of elements, in nature which would, without a resort to drug medication, cure diseases through a restoration of weakened or exhausted nerve and life forces to their normal condition. The scientific aspect of the discovery is so clearly explained in the article that both the learned and unlearned can see the basis of facts and legitimate deductions upon which to rest. Many of the practical results already obtained through the use of this vitalizing substance, and in cases of the most desperate character, where all remedies had failed and the most skillful physicians found themselves at fault, are given in the article, and its high value as a health-restorer testified to by individuals well and honorably known throughout the country, who have in their own persons proved its wonderful healing powers. The paper referred to is written calmly, and presents the whole subject in a way to arrest attention and bring conviction to almost anyone who can reason from known facts and natural laws, and weigh evidence with impartiality. In order to give the article a still wider circulation than it obtained through the source in which it first reached the public, it has been printed in a neat pamphlet, and will be mailed by STARKEY & PALEN, 1109 Girard Street, Philadelphia, to anyone who will drop them a letter or postal card.

All orders for the Compound Oxygen Home Treatment directed to H. E. Mathews, 600 Montgomery Street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

FORTY THOUSAND HORSES are bought and sold annually by seventeen of the leading dealers of New York and Chicago, who unanimously declare that the one-half and three-fourths blood Percheron-Normans have more style, action, best endurance on pavements, and sell for more money than any other class of horses on the market.—*Chicago Tribune*. Nearly 1,000 of this popular breed have been imported from France by M. W. Dunham, Wayne, Ill.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. MCGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JARED C. HOAG—California.
L. L. WOODMANSEY—Nevada State.
B. W. CROWELL—Los Angeles county.
L. WALKER—Butte, Tehama and Shasta counties.
E. A. WILLIAMS—San Francisco.
JAMES MOHOLME.
S. E. BAKER—Eastern States.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

WHEELER'S

Patent Canner,

—FOR THE—

Cooking of Fruits, Jellies, Marmalades, Vegetables, Meats and Fish.

Cooks in Glass (without breakage) Earthen Jars and Tins

Adapted to the Largest Cannery as well as the smallest Cooking Stove.

No standing over a hot stove. No danger of burning the contents. Its management extremely simple. It saves fifty per cent in fuel and 25 per cent in labor over any other Canning Apparatus. Its management extremely simple. Fruit put up by the

WHEELER CANNERY

Stands stronger tests than that put up by any other method. We challenge contradiction in this respect. We are ready to contract with responsible persons to

Put Up Canneries of any Capacity,

No money to be paid until all terms of the contract are fulfilled.

PRICES:

Family Canners.....\$ 7 50
Capacity of Ten dozen per hour..... 250 00
Capacity of Twenty dozen per hour..... 450 00
Capacity of Fifty dozen per hour..... 900 00
Larger capacities accordingly.

At the State and San Joaquin District and Mechanics Fairs the

VERY HIGHEST ENCOMIUMS

Were passed upon the utility of this new invention. It makes

The Finest and Clearest of Jellies and Marmalades.

To each Cannery of Ten dozen or more per hour a

FRUIT DRIER,

Heated by the fuel used while the cannery is in operation, is attached, making this invention one of the most useful combinations ever offered to the horticulturists of this State.

STATE AND COUNTY RIGHTS FOR SALE.

Address,

R. WHEELER, Patentee,

Care of T. A. MUDGE,

322 Montgomery Street, San Francisco.

GILL'S NURSERIES.

Special Offer of

Blue and Red Gums. Also Monterey Pines and Cypress 1, 2 and 3 years old, in large lots at low rates. Prices on application. Address

B. GILL, Nurseryman,
28th St., near San Pablo Ave., Oakland, Cal.

LOS GATOS NURSERIES.

I offer the trade this season a large and general assortment of Fruit and Ornamental Trees, and Small Fruits. My Trees are healthy, stalky and well grown. Address,
S. NEWHALL, San Jose, Cal.

IRRIGATION UNNECESSARY.

FREE BY MAIL.—Searchers after homes, fruit and farming lands should send for the Californian Real Estate Exchange and Map; new number just out. Address
EXCHANGE & MAP, Santa Cruz, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilded Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and Importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and drom Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5 B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

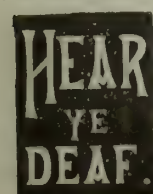
COPP'S

AMERICAN SETTLER'S GUIDE, A Popular Exposition of our Public Land System.

Send to the office of this paper and get a copy of this popular book. PRICE, 25 cents, postpaid.

LADIES

Why pay such enormous prices for Sewing Machines when you can buy as good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. **H. P. ANDREW**, Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.



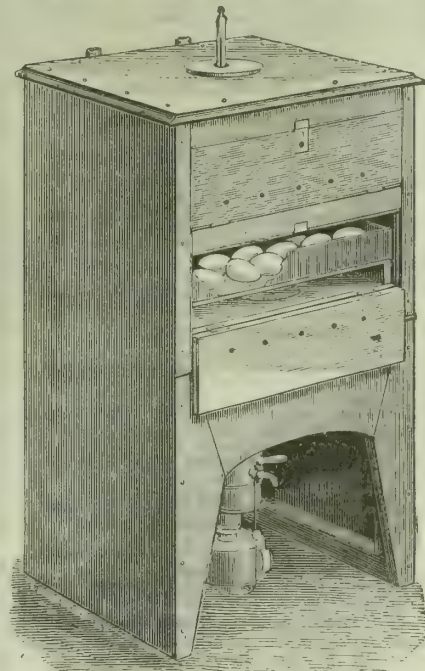
Garmore's Artificial Ear Drum. As invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured. **JOHN GARMORE**, Fifth & Race Sts., Cincinnati, O.

S. Los Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE. RANSOME, 402 Montgomery St., S. F. Send for circular

ANNUAL STATISTICIAN OF 1882.—"It is the most complete and accurate work of its kind in the world."—S. F. Call Address L. P. McCarty, 602 Taylor St. Price, \$4.

GEORGE B. BAYLEY.

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to **GEO. B. BAYLEY**, Box 1771, San Francisco.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

LANGSHANS.

My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported Eggs for hatching.

MRS. J. RAYNOR, 1416 Polson St., S. F.

JERSEY BULL FOR SALE.

A thoroughbred. Year and half old. Ready for service. Good color. Well broke to lead. Took a prize at San Mateo and Santa Clara Agricultural Fair this year. Enquire of

J. T. HOYT, San Mateo, Cal.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON** S. F., Sole Agent for Pacific Coast

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, **DR. J. McLEISH**, No. 215 West Fourth Street, Cincinnati, O.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Haire's Asthma Cure, proves most conclusively that it is all that it is represented to be. Dr. Haire's Treatise on Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address **Dr. B. W. HAIRE & SON**, Cincinnati, Ohio.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

HOG RINGING A FAILURE! OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each. "Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address **G. G. WICKSON**, General Pacific Coast Agent, No. 319 Market Street, San Francisco, Cal.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

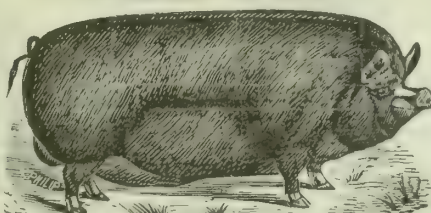
Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address **WILLIAM NILES**, Los Angeles, Cal.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER, 18th and A Streets, Sacramento City, Cal.

NAPA VALLEY POULTRY YARDS.



I have for sale all the leading varieties of Pure-bred Poultry: Single birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn Chickens and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list. **R. G. HEAD**, Napa, Cal.

LAUREL RANCH.

Thoroughbred Spanish Merino SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop. Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO. Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office. For particulars apply to **CHAS. DUSENBERG & CO.**, Sole Agents, 314 Sacramento Street San Francisco.

LITTLE'S SHEEP DIP.

Price Reduced TO \$1.25 PER GALLON. Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip. Apply to **FALKNER, BELL & CO.**, San Francisco

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER

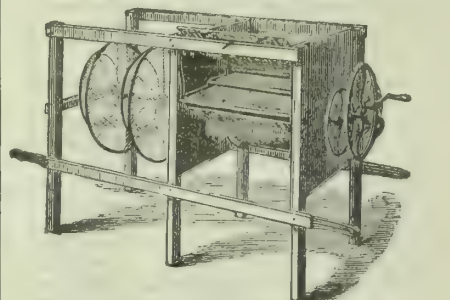
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and price.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

BOOK & SONS Successors to COOKE & GREENE

Mission Rock Dock and Grain Warehouse,

San Francisco, Cal.

\$5,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—318 California Street, Room 3.

General Merchandise.

WHOLESALE.

WEDNESDAY M., Nov. 8, 1882.

CANDLES.	Cement, Rosen-
Crystal Wax.....16 @ 18	dale..... 1 75 @ 2 00
Paraffine.....20 @ 20	Portland..... 3 75 @ 4 00
Patent Sperm.....25 @ 28	
CANNED GOODS.	PAINTS.
Assorted Pie Fruits.....25	Assorted sizes, keg, 3 75 @ 4 00
2 1/2 lb cans..... 35 @	PAINTS.
Table oil..... 35 @	Pacific Glue Co's
Jams and Jellies..... 35 @	Nearfoot, No. 11 00 @ 1 00
Pickles, hf gal..... 35 @	Castor, No. 1..... @ 05
Sardines, qr box..... 1 67 @	do, No. 2..... @ 95
Hf Boxes..... 2 50 @ 1 90	Baker's A A..... @ 1 30
Merry, Faul & Co's	Olive, Plagnoll..... 25 @ 75
Preserved Beef..... 35 @	Palm, lb..... 75 @ 25
2 lb doz..... 35 @ 23	Linseed, Raw, bbl..... @ 60
do 4 lb doz..... 60 @ 66	Boiled..... @ 65
Preserved Mutton..... 35 @ 30	Cocoanut..... @ 60
2 lb doz..... 35 @ 30	China nut, cs..... 68 @ 68
Beef Tongue..... 5 75 @ 6 00	Sperm..... 1 40 @
Preserved Ham..... 5 50 @ 5 60	Coast Whales..... 35 @
Deviled Ham, 1 lb..... 3 00 @ 3 50	Lard..... @ 21 00
do Ham 1 lb doz 2 50 @	Petroleum (110°)..... 18 @ 22
do Ham 1 lb doz 2 50 @	Petroleum (150°)..... 28 @ 35
Boneless Pigs Feet	
3 lbs..... 3 50 @ 3 75	PAINTS.
2 lbs..... 2 75 @	Pure White Lead..... 7 1/2 @ 8
Spiced Fillets 2 lbs 3 50 @	Whiting..... 1 1/2 @
Head Cheese 3 lbs 3 50 @	Putty..... 1 1/2 @
COAL-Jobbing.	Chalk..... 1 1/2 @
Australian, ton..... @ 8 50	Paris White..... 2 1/2 @
Coca Bay..... @ 6 00	Ochre..... 3 1/2 @
Bellingham Bay..... @ 6 50	Venetian Red..... 3 1/2 @
Seattle..... @ 13 00	Averil mixed Paint
Cumberland..... @	gal
Lehigh..... @	White & Tints, 2 00 @ 2 00
Liverpool..... @	Green, Blue and
West Hartley..... @ 9 50	Ch Yellow..... 3 00 @ 3 50
Scotch..... @ 8 50	Light Red..... 3 00 @ 3 50
Scranton..... @	Metallic Roof..... 1 30 @ 1 60
Vancouver Id..... @ 8 50	RICE.
Wellington..... @	China Mixed, lb..... 4 1/2 @ 5
Charcoal, sack..... @	Hawaiian..... 4 1/2 @ 5
Ooke, bush..... @	Common..... 6 50 @ 14 00
COFFEE.	Carmen Id..... 14 00 @ 22 00
Sandwich Id lb..... @	Liverpool fine..... 14 00 @ 20 00
Costa Rica..... 12 @ 14	SOAP.
Guatemala..... 12 @ 14	Castile, lb..... 9 @ 10
Java..... 15 @ 20	Common brands..... 4 1/2 @ 6
Manilla..... 15 @ 20	Fancy Brands..... 7 @ 8
Ground, in cs..... @ 22 1/2	SPICES.
FISH.	Cloves, lb..... 3 1/2 @ 40
Sac'd Dry Cod..... @ 7	Cassia..... 19 @ 20
do in cases..... @ 7 1/2	Nutmegs..... 85 @ 90
Eastern Cod..... 7 @ 7 1/2	Pepper Grain..... 15 @ 16
Salmon, bbls..... 3 50 @ 4 00	Pimento..... 16 @ 17
Hf bbls..... 1 12 1/2 @ 1 22 1/2	Mustard, Cal lb
1 lb cans..... 1 12 1/2 @ 1 22 1/2	Glass..... @ 1 25
Pk'd Cod, bbls..... @	SUGAR, ETC.
Hf bbls..... @	Cal Cube lb..... @ 12 1/2
Mackerel, No. 1	Powdered..... @ 13
Hf bbls..... 8 50 @ 9 00	Fine Crushed..... @ 12 1/2
In Kits..... 1 65 @ 1 70	Granulated..... @ 11 1/2
Ex Mess..... 3 00 @ 3 25	Golden O..... @ 10 1/2
Pickled Herring,	Cal Syrup, kg..... 65 @ 50
box..... 3 00 @ 3 50	Hawaiian Molasses..... 25 @ 30
Boston Smoked	TEA.
Herring..... 65 @ 70	Young Hyson..... 40 @ 65
LIME, etc.	Moyune, etc..... 40 @ 65
Plaster, Colden	Country pk'd Gun-
Gate Mills..... 3 00 @ 3 25	powder & Im-
Land Plaster..... 10 00 @ 12 50	perial..... 35 @ 75
Lime, Santa Cruz	Hyson..... 30 @ 35 1/2
bbl..... 1 25 @ 1 50	Foo-Chow O..... 27 1/2 @ 32
	Japan, medium..... 35 @ 37

Fruits and Vegetables.

(WHOLESALE.)

FRUIT MARKET.	WEDNESDAY M., Nov. 8, 1882.
Apples, bx..... 35 @ 1 00	Blackberries..... 14 @ 16
do, Basket..... 50 @ 60	Cherries..... 28 @ 30
Apricots, bx..... 50 @ 75	Dates..... 9 @ 10
Bananas, bunch..... 2 50 @ 3 50	Figs, pressed..... 4 @ 7
Blackberries..... @	do, loose..... 3 1/2 @ 4
Cantaloupes, crt..... 50 @ 60	Nectarines..... 11 @ 12 1/2
Casaba, each..... @ 12 1/2	Peaches..... 6 @ 7
Cherry Plum..... 75 @ 80	do pared..... 13 @ 15
Cocoanuts, 100..... 6 00 @ 7 00	Pears, sliced..... 7 @ 8
Crabapples, bak..... @ 50	do whole..... 6 @ 7
Cranberries, bbl..... 15 00 @ 17 00	Plums..... 5 @ 6
Currents, chst..... 4 00 @ 5 00	Pitted..... 10 @ 12 1/2
Figs, box..... 75 @ 1 00	Prunes..... 10 @ 11
Gooseberries..... 4 @ 8	Raisins, Cal, bx..... 2 25 @ 2 50
Grapes, bx..... 40 @ 50	do, Halves..... @
do, Rose Peru..... 50 @ 85	do, Quarters..... @
do, Muscat..... 60 @ 90	do, Bunches..... 8 @ 10
do, B. Hamb'g..... 60 @ 85	Zante Currants..... 8 @ 10
do, Tokay..... 75 @ 90	VEGETABLES.
do, Isabella..... 70 @ 75	Artichokes, sk..... 25 @ 50
Limes, Mex..... 5 00 @ 6 50	Asparagus, box..... @
do, Cal, box..... 75 @ 3 50	Beets, chl..... @ 1 00
Lemons, Cal, bx..... 50 @ 3 00	Cabbage, 100 lbs..... 50 @ 75
Sicily, box..... 6 10 @ 7 50	Carrots, sk..... 30 @ 40
Australian..... @	Cauliflower, doz..... 75 @ 1 00
Nectarines..... @	Corn, green, sk..... 75 @ 1 00
Oranges, Cal, bx..... 2 25 @ 2 75	Cucumbers, bx..... 40 @ 50
do, Tahiti M..... 35 00 @ 37 50	Eggplant, box..... 75 @ 1 00
do, Mexican..... @ 25 00	Garlic, lb..... @ 2 1/2
do, Loreto..... @	do, poor..... 1 @ 1 1/2
Peaches, box..... 50 @ 1 25	Lettuce, doz..... 10 @
do, Smocks..... 50 @ 60	Mushrooms, bx..... @
Pears, bak..... 50 @ 1 25	Ora, green, lb..... @ 4
Pineapples, doz..... 6 00 @ 8 00	Peas, green, lb..... 2 1/2 @ 3
Plums..... 40 @ 60	Parsnips, lb..... @ 1
Quinces, bak..... @	Peppers, sk..... 75 @ 1 00
do, box..... 75 @ 1 25	do, Chile..... @ 7
Rhubarb, bx..... 25 @ 75	Squash, Marrow..... 8 00 @ 10 00
Summer Squash..... 40 @ 50	String Beans..... 4 1/2 @ 5
Tomatoes, box..... 25 @ 30	do, wax..... @
Turnips, chl..... 75 @ 1 00	do, Lima, lb..... @ 5

Lumber.

WEDNESDAY M., Nov. 8, 1882.

Redwood.	Shingles..... @ 2 50
CARGOES.	Posts, each..... 15 @ 17 1/2
Rough..... @ 18 00	Fine.
Surfaced..... 24 00 @ 30 00	CARGOES.
Floor and step..... @ 27 50	Rough..... @ 18 00
RETAIL.	Surfaced..... 22 00 @ 28 00
Merchantable..... @ 22 50	RETAIL.
Surfaced, No. 1..... @ 37 50	Rough..... @ 22 50
Tongue & Groove..... 30 00 @ 37 50	Flooring..... 33 50 @ 35 00
Pickets, rough..... @ 20 00	Floor and step..... 35 00 @ 37 50
do, fancy..... @ 30 00	Laths..... @ 3 75
do, square..... @ 17 50	

Retail Groceries, Etc.

WEDNESDAY M., Nov. 8, 1882.

Butter, California	Rice..... 8 @ 10
Choice, lb..... 45 @ 55	Yeast Powder, doz..... 1 50 @ 2 00
Cheese..... 17 @ 25	Can Oysters, doz..... 2 00 @ 3 00
do, Eastern..... 25 @ 30	Syrup, S F Gold'n..... 75 @ 1 10
Lard, Cal..... 20 @ 25	Dried Apples, lb..... 10 @ 15
do, Eastern..... 20 @ 25	Ger. Prunes..... 12 1/2 @ 20
Flour, ex. m. bbl..... 8 00 @ 9 00	Figs, Cal..... 9 @ 10
Corn Meal, lb..... 2 1/2 @ 3	Peaches..... 15 @ 25
Sugar, wh. crushd..... 12 1/2 @ 13 1/2	Oils, Kerosene..... 50 @ 60
Light Brown..... 8 @ 9 1/2	Wines, Old Port..... 3 50 @ 5 00
Coffee, Green..... 23 @ 35	French Claret..... 1 00 @ 2 50
Tea, Fine Black..... 50 @ 60	Cal. doz bot..... 2 @ 4 50
Finest Japan..... 55 @ 60	Whisky, O K, gal..... 3 50 @ 5 00
Candies, Adm..... 15 @ 25	French Brandy..... 4 00 @ 8 00
Soap, Cal..... 7 @ 10	

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, Nov. 2, 8 P. M.

SILVER.	
GOLD BARS, 990 @ 910. SILVER BARS, 10 @ 18 1/2 cent. dis.	
count.	
EXCHANGE on New York, 30 premium; London, 49 1/2 @ 49 1/2.	
Paris, 5.13 francs @ dollar; Mexican dollars, 91 1/2 @ 92 1/2.	
New York (4 per cent), 119 1/2.	

WENDELL EASTON,
Pres'd. mt.G. W. FRINK,
Manager.

PACIFIC COAST LAND BUREAU,

OFFICE AND SALESROOM:

No. 22 Montgomery Street, opposite Lick
House, San Francisco.

J. O. ELDRIDGE.....Auctioneer.

WEDNESDAY.

WEDNESDAY.....November 15, 1882.

AT 12 O'CLOCK, NOON,

ON THE PREMISES,

About One Mile From

VACAVILLE, SOLANO COUNTY,

WE WILL SELL

BY ORDER EXECUTORS OF PIERCE ESTATE,

-ON-

Long Credit and Easy Terms of Pay-
ment,

ABOUT 600 ACRES

Choice Fruit Lands

IN FARMS TO SUIT BUYERS.

TERMS OF SALE.—One-third cash; balance in two and four years, in two equal payments. Deferred payments to bear interest at the rate of 8 per cent. per annum, and to be secured by mortgage on the property. Interest payable annually.

These lands are located in the celebrated Vaca Valley, in the very heart of the Fruit Belt, which produces the earliest and best fruit in the world. The lands are surrounded by the elegant paying orchards of Messrs. W. W. Smith, E. G. L. W. Buck, E. G. M. R. Miller, William Cantelow, Dr. W. J. Dobbins and others, to whom we make reference as to the quality of the land we offer, as well as to all fruit growers in Solano County, wholesale fruit dealers in San Francisco, Sacramento and Eastern exporters. The property has the advantage of pure water, good roads, low taxes, near to schools and churches, and the finest climate in the world, with water communication at Suisun and railroad direct from Vaca to all points East.

SPECIAL NOTICE.

The farms will be sold in tracts from ten acres up, and we specially invite the attention of small buyers to this rare and attractive sale. Special arrangements have been made for parties desiring to view the land.

Tickets for this delightful excursion may be had at the office of the Auctioneers for \$3.70 for the round trip to Elmira and return; fare on the Narrow-gauge extra to Vacaville, 50 cents. Conveyance from Vacaville for all comers FREE to view the land.

These lands will pay from 20 to 50 per cent per annum on the outlay, and for trust funds or a safe, sure investment, present to the capitalist or persons of small means special inducements.

Sale as Advertised. Rain or Shine. Ample
Collation Provided for All Comers.

TITLE ABSOLUTELY PERFECT.

Don't Fail to See This Land Before the
Day of Sale.

For tickets, Catalogues, maps, diagrams and full particulars apply at the office of THE PACIFIC COAST LAND BUREAU, No. 22 Montgomery street. Parties at a distance will be sent catalogues on application by mail.

EASTON & ELDRIDGE,
Auctioneers.

ROCK'S NURSERIES.

TREES!

For Sale,

A LARGE ASSORTMENT OF

Thrifty, Well-grown Fruit, Shade and
Ornamental Trees.

NEW AND RARE EVERGREENS.

Palm, Bamboos, Shrubs, Roses, etc. Small Fruits, including a large variety of Grapevines, for table, for wine and for raisins.

STRAWBERRIES

Of newest and best varieties for market and for profit

Descriptive Catalogues will be sent as follows:
No. 1. Fruits, Grapevines, Berries, etc.....3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc.....3 cts.

JOHN ROCK,

San Jose, - - - California.

Dewey & Co. 252 Market Street, Patent Agts

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON CONSIGNMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

-IMPORTERS AND-

Wholesale Crocers,

-AND DEALERS IN-

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

JAS. P. HULME,

JACKSON HART.

Late Miller & Co.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

[Members of the San Francisco Produce Exchange]

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and
500 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments

J. H. CONGDON & CO.,

General Commission Merchants,

34 California St., San Francisco.

Doing business exclusively on Commission. Liberal advances made on Consignments at Low Rate of Interest. Personal attention given to all Consignments.

Special attention given to WOOL, GRAIN and COUNTRY PRODUCE.

Sole Agents for

Paradise Mills' Flour, Modesto.

STOCKTON

SAVINGS AND LOAN SOCIETY.

L. U. SHIPPEE.....President
FRED. M. WEST.....Cashier

Authorized Capital.....\$500,000
CAPITAL PAID UP.....\$500,000

Receives Deposits repayable ON TIME and ON DEMAND. Pays interest at the rate of 5 per cent. per annum after 30 days from date of deposits. Buys and sells United States Currency, Domestic and Foreign Exchange and transacts a General Banking Business.

Redlands.

GOOD WATER, RICH SOIL AND MAGNIFI-
CENT VIEW.High Elevation, Dry Air, Few Fogs and
Northerners.

NO BRUSH OR FENCES ON THE LAND,

Which is especially adapted to
the culture of the Orange
and Raisin Grape.Near to Church, School, Store and
Depot.

HOTEL OPEN. TELEPHONE COMMUNICATION.

Stage from San Bernardino Tuesdays,
Thursdays and Saturdays.

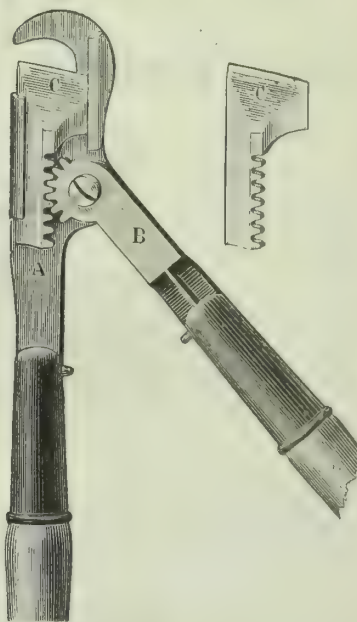
SEND FOR CIRCULAR.

Judson & Brown,

REDLANDS, SAN BERNARDINO CO., CAL.

THE BOSS PRUNER.

Patented January 8, 1878.



The best pruner made. Small size, cuts 1 inch, price, \$3.50. Large size, cuts two inches, price, \$4.50. For simplicity, ease, rapidity and durability they are unequalled.

Apply to

GEO. WOOLSEY,

Ione City, Amador County, California,

General Agent for the State.

REGISTER YOUR
TRADE

MARKS

Through DEWEY & Co.'s Scien

J. P. SWEENEY & CO.,**Seedsman,**

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50% to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Crabbe, C. Grozinger, T. L. Grigsby, D. Emerson, M. M. Estee, Prof. Hosman, Berringer Bros., and others, Napa county. I. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dreese, James Shaw and others, Sonoma county. R. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wykoff, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

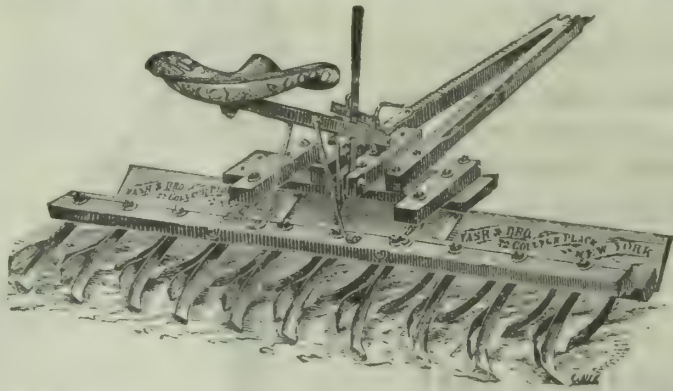
P. K. STOCKTON,

St. Helena, Napa County.

CALIFORNIA.

"ACME"**PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.**

For the Orchard, Vineyard, Nursery and Grain Field.



Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "alough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,
22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store.

San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

**PACIFIC COAST LAND BUREAU.**

President, Wendell Easton, Vice President and General Manager, Geo. W. Frick; Treasurer, Anglo-Californian Bank, Secretaries, F. B. Wilde, 24 Montgomery Street, San Francisco, San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock raising or dairying down to fruit culture. On the east of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, and land diseases are unknown. Irrigation is not resorted to, and figures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale. The prices vary from \$2 to \$20 an acre. Some choice lands higher. We will sell on terms of one-fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands at from \$3 to \$10 an acre. 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$9.50 an acre; 540 acres fine grazing land, 7 miles from San Luis Obispo, \$6 an acre. 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

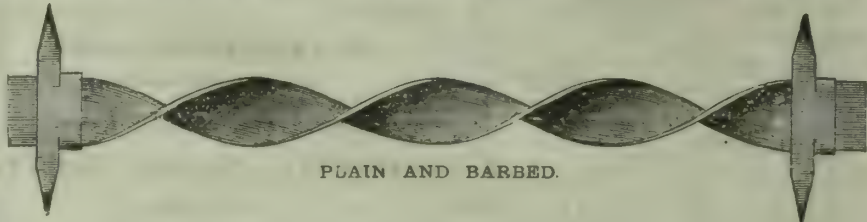
SACRAMENTO.

SAN FRANCISCO.

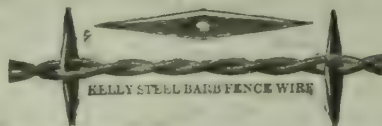
HUNTINGTON, HOPKINS & CO.,

Hardware, Iron and Steel.

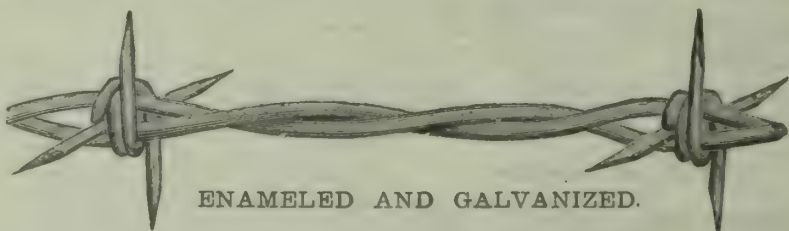
AGENTS FOR

BRINKERHOFF GALVANIZED FENCING,

PLAIN AND BARBED.

"KELLY" BARB WIRE.

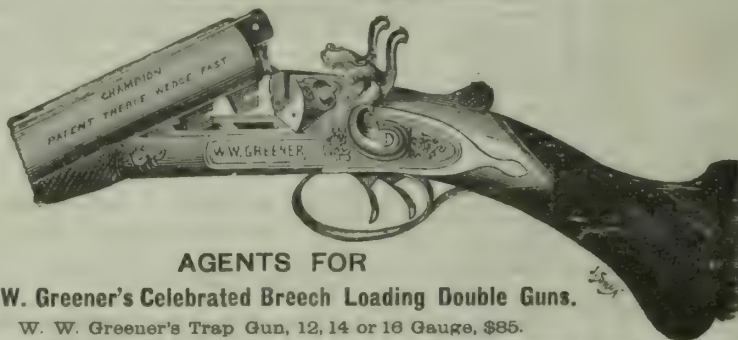
ENAMELED AND GALVANIZED.

"Red Star," 4-Pointed, Barb Wire,

ENAMELED AND GALVANIZED.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

H. C. SHAW PLOW WORKS.**THE H. C. SHAW STOCKTON GANG PLOWS.**

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in



Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
607 Sansome Street, S. F.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD

For sale at low prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES.

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at \$1.00 each. Send for Catalogue and prices to

C. W. REED & CO.,
Sacramento, Cal.

HOLLAND BULBS

ROSES AND
PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO.
SEEDSMEN,
Rochester, N. Y. & Chicago, Ill.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.,

Box 275.

Fruit and Ornamental Trees

OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER,
Petaluma, Sonoma County, Cal.

FRUIT TREES FOR SALE

Bellevue Nursery.

25,000 Pear Trees, mostly Bartlett; 20,000 Apricot; 15,000 Apple. Also Peach, Plum, Prune, Nectarine, English Walnut and Orange Trees. The above Trees have made a good growth, and are free from disease or any scale or other parasites. For further particulars address P. O. Box 304, Los Angeles, Cal. MILTON THOMAS.

JAMES HANNAY'S NURSERIES.

East San Jose, Cal.

For sale, a large and general assortment of healthy well grown Fruit Trees, comprising Apple, Pear, Peach, Plum, Prune, Apricot, Cherry, etc., of all the leading varieties now mostly in demand. Address,
JAMES HANNAY, San Jose, Cal.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nellis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also,

TREES IN THE DORMANT BUD.

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

THE NURSERY OF

C. M. SILVA & SON

Is the Pacific Coast

HEADQUARTERS FOR THE "HANSELL"

New Extra Early Red) Raspberry, James Vick, Manchester and Finch's Prolific,

And other Valuable New Strawberries, and all other good small fruits, new and old. A large stock of fine

PLUM AND PRUNE TREES.

First Quality of Everything, Free from Scale.

Will issue New Illustrated Catalogue of Small Fruits about November 15th. Send for it. Address,

C. M. SILVA & SON,

Newcastle,

CALIFORNIA.

W. R. STRONG & CO.

WHOLESALE SEED MERCHANTS.

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. can be obtained at our establishment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Dealers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,

Sacramento, Cal.

ORANGE HILL NURSERIES,

Penryn, Placer Co., Cal.

W. R. STRONG & CO., Proprietors,

Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Price catalogue on application. Address,

W. R. STRONG & CO.,

Sacramento, Cal.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

WAREHOUSES—

115, 117 & 119 Kinzie St.

104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,
CHICAGO, ILL.


JOHN ELLIS,

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET, - - STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

SANTA CLARA NURSERIES,

San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurel.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Repluopsis orata.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Balsam Fir.....	2 to 3 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of

Miscellaneous Fruit Trees, Small Fruits,
Ornamental Shade Trees, Evergreens,
Roses, Bulbs, Greenhouse Plants,
Etc., etc.RICHARD D. FOX,
San Jose, Cal.THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.THE DINGEE & CONARD CO'S
BEAUTIFUL EVER-BLOOMING

ROSES

SPLENDID POT PLANTS, specially prepared for immediate bloom. Delivered safely by mail postpaid. All post offices. Splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for \$10; 100 for \$13. WE GIVE a Handsome Present of choice and valuable ROSES free with every order. Our NEW GUIDE, a complete Treatise on the Rose, 76 pp., elegantly illustrated—free to all. THE DINGEE & CONARD CO.,
Rose Growers, West Grove, Chester Co., Pa.

WILD GRAPE SEED.

I have a small quantity of Wild Grape Seed for sale, and can furnish Wild Grape Roots for grafting. Seed is worth \$8 per pound, and the Roots \$20 per thousand. Send to JAMES M. HUTCHINS, Kelseyville, Lake Co., Cal. Terms cash in advance.

1838-1903. POMONA NURSERY.

5,000 KIEFFER'S HYBRID PEARS in orchard, 5,000 in nursery propagated exclusively from healthy STANDARDS. NO BUDS or SCIONS taken from DWARFS. APRICOTS in dormant buds, by mail or express. Catalogue free. WM. PARRY,
Perry P. O., N. J.

SILVER TREE OF CAPE OF GOOD HOPE.

(Leucadendron Argentum*)

Fresh seed direct from the "Cape" can be supplied by the undersigned at \$2.00 per ounce, free by mail. This beautiful tree is undoubtedly hardy in the southern portion of the State.

JOHN SAUL,
Washington, D. C.

TREES AND SEEDS TRUE TO NAME

APPLES—4 to 10 to 20; 20 to 30; 30 to 40; 40 to 50; 50 to 60; 60 to 70; 70 to 80; 80 to 90; 90 to 100; 100 to 120; 120 to 150; 150 to 200; 200 to 250; 250 to 300; 300 to 350; 350 to 400; 400 to 450; 450 to 500; 500 to 550; 550 to 600; 600 to 650; 650 to 700; 700 to 750; 750 to 800; 800 to 850; 850 to 900; 900 to 950; 950 to 1000; 1000 to 1100; 1100 to 1200; 1200 to 1300; 1300 to 1400; 1400 to 1500; 1500 to 1600; 1600 to 1700; 1700 to 1800; 1800 to 1900; 1900 to 2000; 2000 to 2100; 2100 to 2200; 2200 to 2300; 2300 to 2400; 2400 to 2500; 2500 to 2600; 2600 to 2700; 2700 to 2800; 2800 to 2900; 2900 to 3000; 3000 to 3100; 3100 to 3200; 3200 to 3300; 3300 to 3400; 3400 to 3500; 3500 to 3600; 3600 to 3700; 3700 to 3800; 3800 to 3900; 3900 to 4000; 4000 to 4100; 4100 to 4200; 4200 to 4300; 4300 to 4400; 4400 to 4500; 4500 to 4600; 4600 to 4700; 4700 to 4800; 4800 to 4900; 4900 to 5000; 5000 to 5100; 5100 to 5200; 5200 to 5300; 5300 to 5400; 5400 to 5500; 5500 to 5600; 5600 to 5700; 5700 to 5800; 5800 to 5900; 5900 to 6000; 6000 to 6100; 6100 to 6200; 6200 to 6300; 6300 to 6400; 6400 to 6500; 6500 to 6600; 6600 to 6700; 6700 to 6800; 6800 to 6900; 6900 to 7000; 7000 to 7100; 7100 to 7200; 7200 to 7300; 7300 to 7400; 7400 to 7500; 7500 to 7600; 7600 to 7700; 7700 to 7800; 7800 to 7900; 7900 to 8000; 8000 to 8100; 8100 to 8200; 8200 to 8300; 8300 to 8400; 8400 to 8500; 8500 to 8600; 8600 to 8700; 8700 to 8800; 8800 to 8900; 8900 to 9000; 9000 to 9100; 9100 to 9200; 9200 to 9300; 9300 to 9400; 9400 to 9500; 9500 to 9600; 9600 to 9700; 9700 to 9800; 9800 to 9900; 9900 to 10000; 10000 to 10100; 10100 to 10200; 10200 to 10300; 10300 to 10400; 10400 to 10500; 10500 to 10600; 10600 to 10700; 10700 to 10800; 10800 to 10900; 10900 to 11000; 11000 to 11100; 11100 to 11200; 11200 to 11300; 11300 to 11400; 11400 to 11500; 11500 to 11600; 11600 to 11700; 11700 to 11800; 11800 to 11900; 11900 to 12000; 12000 to 12100; 12100 to 12200; 12200 to 12300; 12300 to 12400; 12400 to 12500; 12500 to 12600; 12600 to 12700; 12700 to 12800; 12800 to 12900; 12900 to 13000; 13000 to 13100; 13100 to 13200; 13200 to 13300; 13300 to 13400; 13400 to 13500; 13500 to 13600; 13600 to 13700; 13700 to 13800; 13800 to 13900; 13900 to 14000; 14000 to 14100; 14100 to 14200; 14200 to 14300; 14300 to 14400; 14400 to 14500; 14500 to 14600; 14600 to 14700; 14700 to 14800; 14800 to 14900; 14900 to 15000; 15000 to 15100; 15100 to 15200; 15200 to 15300; 15300 to 15400; 15400 to 15500; 15500 to 15600; 15600 to 15700; 15700 to 15800; 15800 to 15900; 15900 to 16000; 16000 to 16100; 16100 to 16200; 16200 to 16300; 16300 to 16400; 16400 to 16500; 16500 to 16600; 16600 to 16700; 16700 to 16800; 16800 to 16900; 16900 to 17000; 17000 to 17100; 17100 to 17200; 17200 to 17300; 17300 to 17400; 17400 to 17500; 17500 to 17600; 17600 to 17700; 17700 to 17800; 17800 to 17900; 17900 to 18000; 18000 to 18100; 18100 to 18200; 18200 to 18300; 18300 to 18400; 18400 to 18500; 18500 to 18600; 18600 to 18700; 18700 to 18800; 18800 to 18900; 18900 to 19000; 19000 to 19100; 19100 to 19200; 19200 to 19300; 19300 to 19400; 19400 to 19500; 19500 to 19600; 19600 to 19700; 19700 to 19800; 19800 to 19900; 19900 to 20000; 20000 to 20100; 20100 to 20200; 20200 to 20300; 20300 to 20400; 20400 to 20500; 20500 to 20600; 20600 to 20700; 20700 to 20800; 20800 to 20900; 20900 to 21000; 21000 to 21100; 21100 to 21200; 21200 to 21300; 21300 to 21400; 21400 to 21500; 21500 to 21600; 21600 to 21700; 21700 to 21800; 21800 to 21900; 21900 to 22000; 22000 to 22100; 22100 to 22200; 22200 to 22300; 22300 to 22400; 22400 to 22500; 22500 to 22600; 22600 to 22700; 22700 to 22800; 22800 to 22900; 22900 to 23000; 23000 to 23100; 23100 to 23200; 23200 to 23300; 23300 to 23400; 23400 to 23500; 23500 to 23600; 23600 to 23700; 23700 to 23800; 23800 to 23900; 23900 to 24000; 24000 to 24100; 24100 to 24200; 24200 to 24300; 24300 to 24400; 24400 to 24500; 24500 to 24600; 24600 to 24700; 24700 to 24800; 24800 to 24900; 24900 to 25000; 25000 to 25100; 25100 to 25200; 25200 to 25300; 25300 to 25400; 25400 to 25500; 25500 to 25600; 25600 to 25700; 25700 to 25800; 25800 to 25900; 25900 to 26000; 26000 to 26100; 26100 to 26200; 26200 to 26300; 26300 to 26400; 26400 to 26500; 26500 to 26600; 26600 to 26700; 26700 to 26800; 26800 to 26900; 26900 to 27000; 27000 to 27100; 27100 to 27200; 27200 to 27300; 27300 to 27400; 27400 to 27500; 27500 to 27600; 27600 to 27700; 27700 to 27800; 27800 to 27900; 27900 to 28000; 28000 to 28100; 28100 to 28200; 28200 to 28300; 28300 to 28400; 28400 to 28500; 28500 to 28600; 28600 to 28700; 28700 to 28800; 28800 to 28900; 28900 to 29000; 29000 to 29100; 29100 to 29200; 29200 to 29300; 29300 to 29400; 29400 to 29500; 29500 to 29600; 29600 to 29700; 29700 to 29800; 29800 to 29900; 29900 to 30000; 30000 to 30100; 30100 to 30200; 30200 to 30300; 30300 to 30400; 30400 to 30500; 30500 to 30600; 30600 to 30700; 30700 to 30800; 30800 to 30900; 30900 to 31000; 31000 to 31100; 31100 to 31200; 31200 to 31300; 31300 to 31400; 31400 to 31500; 31500 to 31600; 31600 to 31700; 31700 to 31800; 31800 to 31900; 31900 to 32000; 32000 to 32100; 32100 to 32200; 32200 to 32300; 32300 to 32400; 32400 to 32500; 32500 to 32600; 32600 to 32700; 32700 to 32800; 32800 to 32900; 32900 to 33000; 33000 to 33100; 33100 to 33200; 33200 to 33300; 33300 to 33400; 33400 to 33500; 33500 to 33600; 33600 to 33700; 33700 to 33800; 33800 to 33900; 33900 to 34000; 34000 to 34100; 34100 to 34200; 34200 to 34300; 34300 to 34400; 34400 to 34500; 34500 to 34600; 34600 to 34700; 34700 to 34800; 34800 to 34900; 34900 to 35000; 35000 to 35100; 35100 to 35200; 35200 to 35300; 35300 to 35400; 35400 to 35500; 35500 to 35600; 35600 to 35700; 35700 to 35800; 35800 to 35900; 35900 to 36000; 36000 to 36100; 36100 to 36200; 36200 to 36300; 36300 to 36400; 36400 to 36500; 36500 to 36600; 36600 to 36700; 36700 to 36800; 36800 to 36900; 36900 to 37000; 37000 to 37100; 37100 to 37200; 37200 to 37300; 37300 to 37400; 37400 to 37500; 37500 to 37600; 37600 to 37700; 37700 to 37800; 37800 to 37900; 37900 to 38000; 38000 to 38100; 38100 to 38200; 38200 to 38300; 38300 to 38400; 38400 to 38500; 38500 to 38600; 38600 to 38700; 38700 to 38800; 38800 to 38900; 38900 to 39000; 39000 to 39100; 39100 to 39200; 39200 to 39300; 39300 to 39400; 39400 to 39500; 39500 to 39600; 39600 to 39700; 39700 to 39800; 39800 to 39900; 39900 to 40000; 40000 to 40100; 40100 to 40200; 40200 to 40300; 40300 to 40400; 40400 to 40500; 40500 to 40600; 40600 to 40700; 4

1882. GEO. A. DAVIS & CO., 1883. AGRICULTURAL IMPLEMENTS.



FURST & BRADLEY GANG PLOW.

We challenge any Sulky or Gang Plow to a Plow Trial. We sell our Gang Plow under a *Guarantee* to give satisfaction, or no sale. We will sell the Gang Plow to any responsible Farmer, Rancher, or anyone wishing a Gang Plow, upon trial, and if the Plow does not give satisfaction it can be returned to us at our expense.

We have chilled iron bottoms for our Furst & Bradley Gang Plows. We have chilled iron shares, which will fit steel bottoms. We have steel shares which will fit chilled iron bottoms. We have steel bottoms for our Furst & Bradley Gang Plow.

The Gang Plow above represented is the result of many years' experience in their manufacture, sided by a long series of practical tests in the hands of some of the best farmers on the Pacific Coast. They are extremely simple, strong and durable, and have several features superior to all other known Gang Plows. One feature of great importance is the *BRAKE* arrangement, for raising the Plows out of the ground. By this means even a boy can raise them with perfect ease, since the horses do the raising as soon as the brake is applied to the wheel. Another desirable feature consists in having but one simple lever for regulating the depth of furrow, and raising or lowering the Plow.

Every Plow Has a Land Gauge Lever Furnished Free.

It can be operated by the driver while the Plow is in motion. For plowing around circular corners, or curved furrows of irregular-shaped lands, it works to perfection.

We also make a *JOINTED FURROW*, which allows a free up and down play of same, and does away with any pressure upon the horses' necks, that may otherwise occur in plowing over uneven surfaces. They are guaranteed to do as good work as can possibly be done by any Gang Plow in existence.

LA DOW'S PULVERIZING HARROWS,

Fish Bros' Wagons, Garden City Clipper Plows, and a General Line of Agricultural Implements. Send for our New Illustrated Circular.

GEO. A. DAVIS & CO.,

327 Market St., S. F.

AMERICAN COMPOSERS.

As regards musical compositions of note, America is undoubtedly young. A great deal has, however, during the last few years, been accomplished. The following are all by native composers:

- Zenobia.** (\$2.00) By R. G. Pratt.
- A Grand Opera of much merit.
- St. Peter.** (\$1.00) By J. K. Paine.
- A well-known Oratorio.
- Redemptio Hymn.** (30 cts.) By J. C. D. Parker.
- A short, but complete and impressive work.
- Christmas.** (50 cts.) By A. C. Gunterson.
- A sacred Cantata for Christmas time.
- Fall of Jerusalem.** (80 cts.) By H. E. Parkhurst.
- An impressive and musical Cantata.
- 46th Psalm.** (80 cts.) By Dudley Buck.
- A first-class sacred composition.
- Praise to God.** (\$2.00) By G. F. Bristow.
- An Oratorio. Noble words and music.
- Belshazzar.** (\$1.00) By J. A. Butterfield.
- Grand and beautiful scene Cantata.
- Joseph's Bondage.** (\$1.00) By J. M. Chadwick.
- A splendid oriental sacred Cantata.
- Christ the Lord.** (80 cts.) By W. Williams.
- Easy Christmas Cantata.
- Don Munio.** (\$1.50) By Dudley Buck.
- A legend of the crusaders set to music.
- Plenio.** (\$1.00) By J. R. Thomas.
- Will do (in doors) for a winter concert.
- New Flower Queen.** (75 cts.) By G. F. Root.
- New arrangement of a famous Cantata.
- Burning Ship** (60 cts.) and **Storm King.** (38 cts.) By B. F. Baker. Easy and striking Cantatas.

OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.

BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasture, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

A TURNED LEAF will point out the article supposed to be of special interest to persons receiving sample copies of the paper.

MYER'S IMPROVED GANG PLOW.

The only Plow that ever Received the \$100 PREMIUM at the State Fair.

Simplest and Most Effective Plow in the World!

The Lifting Gear and Land Gauge need only be seen to be appreciated.

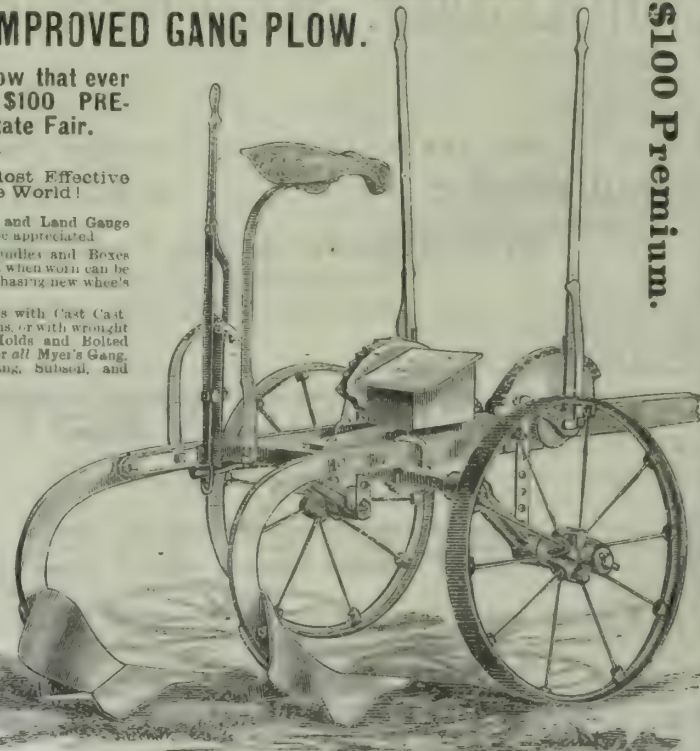
The Adjustable Spindles and Boxes are a new feature, and when worn can be replaced without purchasing new wheels or arms.

We have these Plows with Cast Cast Steel Spindles and Boxes, or with wrought extra heavy Steel Molds and Bolted Shares; also Extras for all Myer's Gang, Single, Sidehill, Gang, Subsoil, and Vineyard Gang Plows.

We will have, in time for summer fallowing, Myer's Gangs with the Celebrated Collins Cast Cast Steel and Bolted Shares, with extra high Moldboard for Deep Plowing.

In ordering Extra Shares, to give number of Plow.

AGENTS SOUGHT AND LIBERAL TERMS GIVEN.



\$100 Premium.

RICE'S ENGINE, BOILER AND PLOW WORKS,

Manufacturer and Sole Agent.

Nos. 52, 54, 56, 58 and 60 Bluxome St., bet. Fourth and Fifth, near C. P. R. R. Depot.

25 Fifth Street Cars pass every Five Minutes.

Illustrated Catalogue. Photograph and Lecture. 10c. Automatic Cabinet. Play any Tune.

MAGIC LANTERNS AND VIEWS ORGANS ONLY \$5.

Magic Lanterns and Slides WANTED. Musical Wonder Catalogue FREE. HARBACH ORGAN CO., 809 FILBERT STREET, PHILADELPHIA, PA.

AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical, a real understanding. This is not a *Toy* but a *Practical* *Manufacturing Machine*. CAN BE RUN IN ANY TEMPERATURE. As Farmers, Amateurs and others are ready to use a good, reliable, self-regulating incubator, that can be produced easily, we now offer one that holds 120 eggs. The Baby Price, \$28. 33 Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast.

ANNUAL STATISTICIAN of 1882—"It is the most complete and accurate work of its kind in the world."—S. F. Call. Address L. P. McCarty, 502 Taylor St. Price, \$4.

50,000 APRICOTS

And a large stock of Peaches, Apples, Plums, Kiefer and Leonora Peaches, Grapes and Small Fruits; sizes suitable to send by mail, express or freight. Also Pear, Apple, Cherry and Quince Stocks. Grafts put up to order in large and small lots. Catalogues showing how and what to plant, with much valuable information, gratis.

Great Northern and Southern Nurseries, Wilmington, Delaware. RANDOLPH PETERS.

CORRESPONDENCE is cordially solicited from reliable sources upon all topics of interest and value to our readers.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

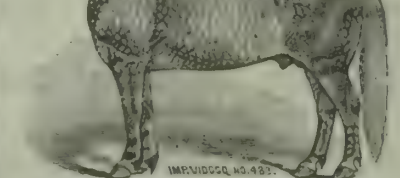
OAKLAWN FARM, Wayne, Du Page County, Illinois.

25 miles west of Chicago, on C. & N. W. R.R.

468 OF THE FINEST

Imported from France by him during the past

12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.



Is the best Pump in the world. Another New Improvement is Lewis Patent

Spray Attachment. Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER, 111 Leidesdorff St., S. F. T. P. S. A sample can be seen at this office.



Volume XXIV.]

SAN FRANCISCO, SATURDAY, NOVEMBER 18, 1882,

Number 21

A Chapter in the History of Tea.

We give on this page engravings of leaves of the tea plant growing in different Asiatic countries, which serve well to illustrate some historical notes on the tea plant. There seems abundant reason for the belief that, so far from the tea plant being the distinctive and original product of China, it had its true birthplace in upper India, and was transported across the Himalaya range into the Celestial empire, where it was cultivated in a degenerate form very inferior to the true and parent stock. In Assam it is still to be found growing wild, keeping up its purity as an indigenous growth. With its discovery in that province it has been thought the tea enterprise in India had its beginning. But it is here proved to have originated with Col. Kyd, who in 1780 formed a tea garden in Calcutta with plants from Canton—the nucleus of the well-known Botanic Gardens. It met with anything but encouragement, being looked upon as an unwelcome rival to the China tea trade, then a source of much profit to the East India Company. The tea plant is, it seems, to be found growing wild in the forests and jungles of upper Assam, the Sylhet hills, the Himalaya, and the great range of mountains that extends from thence through China to the Yang-tse-Kiang. The assamensis, though differing in minor points of structure and size, is pronounced by botanists to be specially identical with the tea of China, partaking of the characters both of *Thea bohea* and *Thea viridis* in its geographical distribution as to the latitude approaching the black plant, and in its stations the green. The date of its introduction into China seems past determination. It has always been felt to be a matter for surprise that no mention of tea drinking should have been made by Marco Polo Soliman, an Arabian merchant, who wrote an account of his travels in the East about the year 850 A. D., but he is quoted by Macpherson, in his "History of European Commerce With India," as stating that tea (sah) is the usual beverage of the Chinese; yet no other mention of the custom has been met with prior to the Jesuit missions to China and Japan a little before the middle of the Sixteenth century. Botero is quoted as speaking of it in 1590;

Texeira, a Portuguese, about the year 1500 saw the dried leaves of tea at Malacca, and Olearius in 1638 found it in use among the Persians, who obtained the leaves from China through the medium of the Usbeck Tartars. Tea seems to have been first introduced into Europe by the Dutch East India Company, and to have found its way into London from Amsterdam. Tea, coffee and chocolate are all mentioned together in an Act of Parliament of 1660, wherein a duty

There are now plants from Indian seed growing in the Southern States, and the subject promises to have much interest in the future.

A HOP-HOUSE FRUIT DRIER—The Healdsburg *Flag* says: J. D. Grant has turned his hop drying house into a mammoth fruit drier, and the fruit comes out beautiful. He has dried as high as 450 lbs. a day, and the capacity is only limited by the amount of shelves that

How to Apply Fertilizers to Fruit Trees.

Many orchardists in California are awakening to the necessity of maintaining the fertility of their orchards by the application of manures of different kinds, and it will be timely to introduce some facts concerning the method of application. There is a wrong way and a right way, and fortunately the proper method can be shown by a series of systematic experiments. A writer for the *Country Gentleman* gives the following: A rule adopted by old writers gave the length of the roots as equal to the length of the branches above. It is safe to say that this rule does not indicate generally more than a tenth of the ground which the entire roots really occupy. Many years ago, I made an experiment on a row of peach trees planted in grass and within a few feet of each other. They had been set three or four years, and were eight or nine ft. high. Within a few feet of one end of the row, the ground was made very rich with a heap of manure. Its stimulating effect on the nearest tree was such that the shoots made in one season were two ft. and a half long. The tree, which stood seven ft. from the manured ground, made shoots 15 inches long, and at 11 ft. distance the shoots grew seven or eight inches. At 15 ft. no perceptible effect of the manure was visible, the growth not exceeding three inches. The experiment showed that a decided benefit was gained to the tree at 11 ft. distance through the few roots on one side, and that the roots formed a radiating circle, at least 22 ft. in diameter. The absurdity of the practice of applying a small heap of manure at the base of the trunk of a tree is obvious.

PENNSYLVANIA BI-CENTENNIAL—We have received a copy of a neat pamphlet containing the proceedings at the celebration at Santa Barbara of the bi-centennial of the landing of Penn. Addresses were made by Mayor Fernald and Horace J. Smith, readings by Prof. John Murray and Jno. E. Richardson. The exercises were participated in by about 250 people, and were appropriate to the occasion in every respect.

ICE is commencing to run heavily in the Missouri.



LEAVES OF DIFFERENT VARIETIES OF THE TEA PLANT

of 81. is charged upon every gallon of chocolate, sherbet and tea made for sale. How great a novelty it was is shown by Pepys' well-known entry, September 25, 1661: "I sent for a cup of tea (a Chinese drink), of which I had never drank before." It long continued to be imported in small quantities only, the East India Company having purchased in 1664, for presentation to the King, 2 lbs. 2 ozs. of tea. In 1678 they imported 4,713 lbs. of tea, it being then for the first time thought worth their attention as an article of trade.

Especially interest inheres to the Indian tea plant, because the native varieties growing on high altitudes in that country are looked upon as more hardy, and therefore more likely to succeed in this country than the Chinese plant.

can be constructed. Gangs of men are in the orchards preparing fruit for this drier. This is a new use for the hop driers and a good one.

A JERSEY RECORD.—An official test has been made of the yield of the Jersey cow Bomba, owned by Mr. A. B. Darling, of New York, by the American Jersey Cattle Club, of New York. The club detailed Mr. Barnett, of Southboro, Mass., to conduct the experiment, and he had the cow milked twice a day for a week under his personal supervision, and sealed the milk up in a room, etc. The result from seven days' milking was 205 lbs. 6 ozs. of milk, from which was churned 21 lbs. 11½ ozs. of butter. This is claimed to be the largest yield on record.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Pasadena Notes.

EDITORS PRESS:—Pasadena colony still goes on flourishing and enlarging its area, and filling up the vacancies with many new dwellings. The stranger is so much puzzled to know if he is in the country or in a large town that holds a few unsettled blocks.

The main avenues running north and south are named, and the regular cross-streets also; but the various fancy, gracefully curved drives, in and out, to the various mansions and cottages, are where the uninitiated will find the opportunity to become bewildered.

It is difficult to appreciate the advancement that has been made in four years. Orange trees, which, during the drouth of '77, scarcely showed any growth, and some even looking pale of leaf, and bringing many a doubt to the new colonist, are now large thriving trees, six or seven inches in diameter, heavily laden with fruit, and some breaking for the lack of more careful propping.

The orchards are generally finely cultivated, not a weed or sucker of any kind to be seen, the trees kept very neatly pruned, and very possible the orange trees are injured by taking away too much of their leafy lunge; but fashion here must rule. While I abominate fashion's notions in banging, squawking and idiotizing a nice intelligent maiden lady, I think the nurserymen make almost as great a mistake in their persistence in depriving the trees of too much of their foliage.

I examined many of the trees, and could find no signs of any scale insects or disease.

Hundreds of acres are being added to the fruit fields of Pasadena; and still they come on from the East to escape the hard winters and hot summers. Some sales are being made of almost wholly unimproved land—say a few trees and no house—at \$400 per acre for five acres. Improved land with bearing trees is held at about \$1,000 per acre. But these lands are supplied with water pipes, and carry a water-share right in their title.

There are some lands beyond the tract owning the water which seems equally good land, but can be bought much less as dry land. Messrs. Wood and Bundy, from Iowa, bought 80 acres of this dry land at less than \$50 per acre, and sunk a well 175 feet to get good water, which they raise by a 14-foot wind-mill to a large supply tank, from which both families are supplied—the whole outfit, including mill, costing them about \$700. Some who were having colony water were hauling from this well for drinking purposes. As I have said, Pasadena continues to draw from the East large accessions of good, intelligent, christian people, who make homes and community social wealth.

Lake avenue is a beautiful level street on the easterly part of the colony, running north and south, rising gradually until it strikes the Sierra Madre Mountain, about two miles distant, passing near the Woodbury mansion. This avenue passes through the 210 acre tract that was improved by a joint stock company under the superintendence of Mr. C. C. Brown, who planted and cared for the trees. The lands are now separated, and Mr. Brown is in charge of C. T. Hopkins' portion, an 80 acre tract. Everything around this tract seems to be planned with care and good taste. There is a neat, plain residence and all the convenient surrounding buildings, including a tank tower, supplied with colony pipe water. To the east of the avenue are 300 acres in oranges, now just coming into bearing, and are well cared for trees, though but once irrigated in the season. The trees are mostly seedlings of the best varieties. On the west side there are 15 acres of imported Italian Queen olives, for pickles, and 30 acres of choice table and raisin grapes. About five acres are appropriated to buildings, ornamental trees and shrubbery, with various deciduous fruits. Mr. Brown is now, like many others, planting along the avenue a cypress hedge, that will soon make an effectual fence and windbreak—but will also shut off all covetous visions of the golden oranges within.

Mr. Hopkins can well afford to endure the chilling winds of San Francisco for a season, when he has such a well prepared home for his retirement, where he can look off to the east and see his old neighbor, C. C. Hastings, clothier of San Francisco, planting himself high up on the slope of the Sierra Madre, east of the Villa mansion. Mr. Hastings sought extensively for a place of health, and none suited his frail constitution so well as the Sierra Madre Villa. So he bought 60 acres still higher than the Villa, and eastward of it, and since then has purchased 800 acres more, reaching to and beyond Baldwin's. He now has the mechanics at work on a residence, which, though fine, is only a prelude to the real mansion to be erected. He contemplates large improvements in vines and trees when his tract shall have been cleared and brought under cultivation.

To the west, and more elevated than the Villa, is Kinneyloa, the residence of Abbott

Kinney, a young man of culture and refinement, who has seemingly spared no pains nor the expense of making a residence that crowned heads might covet. I speak of it as I see it from a distance, and hope some day to have the pleasure of enjoying the hospitalities so kindly proffered by Mr. Kinney.

West of Kenneyloa, but in a depressed valley, is the stately residence of William Allen—large two-story, with extensive acres of vines and orchards. Adjoining him and south is the estate of J. F. Crank, that spreads off to the east of the colony, with a gentle slope to the south and east; 500 acres in his tract; 300 in fruit and vines, and 30 acres in raisin grapes. He now has a large gang of mechanics finishing up his new residence that will cost near \$25,000. Mr. Crank has an only son and aged father with him. He is President of the First National Bank, Los Angeles, a public-spirited, enterprising citizen.

But to return to center of colony, we will call on Dr. Congar, at his packing-house, where he is supervising the boxing of his raisins. A very perfectly cured raisin, carefully trimmed from all surplus stems, and weighed and put in each box with neat, clean white paper lining. The Doctor has everything around him neat and orderly, and always in the attitude of a learner from any that know a better way. His trees and vines are ample in their growth; his 10-year-old oranges from the seed are now six inches in diameter. He now has good, hardy trees, raised without irrigation mostly; but to help them support a large crop of fruit and give it size, he will aim to irrigate as needful. His tree culture is hard to beat in the colony or out of it. He has six-year-old trees from seed now bearing oranges. He has 450 trees on about 6 acres, about 25 ft. apart. He has some original fixtures for raisin handling worthy of mention, but we will pass that for the present.

Dr. Congar's neighbor on the opposite corner, Prof. Carr, late State Superintendent of Instruction, and formerly professor in Madison University when Dr. Congar was a student there. I find the Doctor in quite feeble health, but able to walk out and look at the workmen as they are molding up the concrete walls for the foundation of their mansion. Mrs. Jeanne C. Carr was out, busy among the laborers in her vineyard, securing all possible before the threatening rains. Judging from observation, Mr. and Mrs. Carr have been very busy during their few years in the colony, getting so many acres covered with trees, vines and nursery stock.

Near by we will take a peep at Mr. Rosenbaum's 15-acre farm. That little artificial pond has carp in it, and they are doing well. The coons used to come and fish them out at night. He remedied that, first by setting a steel trap in the water and placing a bait over it on a short stick, which soon brought the coon to grief. He then deepened the water in the pond. I here ate some of his first-premium cured figs. His Japan loquats are now in bloom, the fruit to ripen in April. Long rows of guavas are now in full bearing. Olives four years old from the cuttings are now bearing. His grapes, though partially blighted, ate very well. His imported cactus pears, very large, looked quite tempting, though not fully ripe.

The private cannery has grown from a small beginning to quite an important industry of the colony. The proprietor speaks in high praise of the superiority of his white help over his Chinese laborers. The latter, he says, are entirely too slow. "The white girls can beat them every time."

Better than a gold mine is that fine stream of water lately struck by a little tunnel on David Raab's place, and 1,200 gallons an hour, or 200 gallons per minute, now flow out into his orchard, and two or three of his neighbors have a similar boom of clear water from a little tunnel made into the hill. Mr. Raab is an early settler, and took his chances of settling on high grounds, but now proves to be well located in every respect, and has a splendid ranch.

Pasadena, night and day, says: "A railroad we need to get in our lumber and groceries and to ship out our fruits." There are now large amounts of lumber needed there in building, and lumber teams are scarce in the colony. Wise ones say the railroad will be built soon. Then will the town be located. Now business is timid, for where the main center is to be none can tell. They now require four public school teachers in the colony, and other districts must soon be organized.

Is the land productive? Yes, quite so; very fine sweet potatoes were grown without irrigation, and a fine growth of corn, now nearly ripe, that was planted on the 26th of July by Amos Wright on ground not at all irrigated and that had not been rained on for three months previous to planting the corn and no rain after. It seems to hold its moisture well, and is adapted to great variety of crops. Los Angeles, i. e., 36 square miles area, is now booming. All the houses filled and hundreds of buildings being erected; some property changing hands. To-day's daily states that Rev. Dr. A. F. White sold nine and one-fourth acres of his 30 acre orange grove, corner Jefferson and Main streets, Los Angeles, to Mr. W. H. Mawdsley, recently from England, for \$8,000. The purchaser will immediately erect a fine residence on the same. The purchase is considered a lucky bargain.

The heavy rains are past and the plows are started, and all is hopeful for a prosperous year.

B. W. CROWELL.

Pasadena, Nov. 8, 1882.

Plowing for Beets.

EDITORS PRESS:—Now is the time, before the heavy rains come, to plow the ground for next year's beet crop. Nearly every farmer has some low spot where the wheat and hay drown out, giving him little else than a crop of weeds each year, and yet this same wet spot is the richest and strongest land he possesses, and ought to bring him the greatest returns. And it would if he only knew what to do with it. This is just the land for beets, being a deep, rich, strong soil, made from the washings from the surrounding hills. Such land will produce from 25 to 40 tons of mangels to the acre, and one acre of such a crop is worth from three to five acres of hay for feeding cows and hogs.

This land should be plowed up now, opening a plenty of deep dead furrows, and leaving the whole surface as rough as possible. Then about next March or April plow it up again, and it will be in fine condition for planting beets. One such trial will convince any man that he cannot afford to raise weeds any longer.

Napa, Nov. 10, 1882.

W. C. DAMON.

THE STOCK YARD.

Jersey Notes.

The reports of Eastern Jersey sales show a maintenance of values which is gratifying to those in the Jersey interest. The N. Y. Herald reports a sale last month at which Mr. T. S. Cooper, of Coopers, Pa., disposed of a grand lot of his imported cattle. The sale was held at the American Horse Exchange, and Mr. Egston, the manager, who officiated as the auctioneer, succeeded in realizing for the owner the highest average ever obtained for so large a number of lots. Seventy-five head were brought to the hammer, and the total of \$46,685 was reached, an average of \$622 each. The highest price paid was \$5,100 for the famous Coomassie bull, Sir George, three years old, which is also the highest figure ever reached for a Jersey in this or any other country, and Col. Henry S. Russell, of Milton, Massachusetts, may well feel gratified in possessing so noble an animal. Cicero, two years old, another bull of the Coomassie strain, was the admiration of all present, and could he have shown heifers as old as Sir George's he would no doubt have also gone above \$5,000. He was purchased by Mr. W. H. Wilkinson, of Holyoke, Mass., for \$3,100. The highest-priced female was Mabel 21, six years, also of the Coomassie strain, and Col. Russell was again the fortunate purchaser at \$2,200; her two-year-old daughter went to Mr. W. K. Vanderbilt for \$1,700, and her five-weeks' heifer calf realized \$625. Mabel 5th, seven months old, a sister to Mabel 21, by Sir George, was also secured by Col. Russell for \$1,350.

A Maine Farm.

We find in the *Home Farm*, published in Augusta, Maine, an account of a visit to Saddleback, the breeding farm of Orestes Pierce, in which our California breeder, Henry Pierce, of Yerba Buena ranch, Santa Clara county, has an interest. The writer says that there are at Saddleback "enough strains of the best blood to make the reputation of any dozen Jersey herds in the country. The celebrated families represented are: Jersey Belle, of Scituate, Panay, and Farmer's Glory. The great strength of the herd is in Belle of Scituate stock, and as Mr. Pierce is this year breeding entirely from King of Scituate, a son of Jersey Belle he will intensify the blood of this celebrated strain in his prospective herd. He will subsequently breed to Pierson for beauty of form and constitution, and again breed back to King for milking qualities. The cows are all beautiful animals, generally of fawn, fawn and white, or squirrel-grey, with occasionally some that are dark or dun—solid colors predominating. The nice points of the Jerseys are exquisitely developed in all the individuals of the breed, without exception, the soft, delicate, supple touch; deep yellow skin; well developed escutcheons; large udders and prominent milk veins; waxy horns, amber hued and gracefully curved; slim, flat limbs; finely shaped heads; full, intelligent eyes.

Belle of Middlefield has a record of 16 lbs. 5 ounces in one week, or 2 lbs. 5 ounces in 24 hours. Her progeny are all high prize winners, one of her heifers, Dido of Middlefield, being a 20 quart cow, and record of 2 lbs. 5 ounces in 24 hours in winter. Queen of Scituate is the best Scituate cow living; by King of Scituate, out of Minnie of Scituate, a grand-dam of Jersey Belle. Old Corona, one of the best of the old families of Jersey, is now 10 years old, but is milking well and giving ten quarts a day. Hurd's Fairy Queen is the only living offspring of the celebrated Panay. Comtesse D'Espange has repeatedly made one pound of butter from six quarts of milk." Mr. Henry Pierce was at the East last month, and has arranged to bring out some more of the Saddleback stock to Yerba Buena. He brings a Farmers' Glory calf and a few more Scituates and Coomassies, which are already represented at Yerba Buena. Having this Eastern source of the best Jersey bloods, Mr. Pierce is able to keep his Yerba Buena herd at the head of Jersey fashion and progress.

FLORICULTURE.

California Roses, No. 1.

Seedling Roses.

EDS. PRESS:—Having promised numerous patrons some cultural notes on rose growing, and more especially how new roses are produced from seed, I design in a few short articles to give my experience, in the hope of assisting those, who, like myself, feel a deep interest in the queen of flowers.

New roses are produced in three ways, viz: By seed, by bud variation, and by grafting sensitive varieties on some sort that may have a strong influence on the graft, thus giving different tinting in color, habit, etc. By bud variation, we mean a sport, when a lateral may grow, giving a rose of very different color and character. These, then, are taken off, the cuttings either rooted or grafted to perpetuate the variety. Indeed, many of our most valuable sorts have been thus produced, and in the hands of a skillful propagator, often returns to the fortunate producer a moderate fortune, and I may state that \$5,000 to \$10,000 is often received from the sale of a single variety, one really choice and rare in all the points that constitutes a fine variety.

For the sake of greater perfection in detail, I would state that our work commences in spring, with the first opening roses that may come in perfection. In using the term seedling roses, I especially desire to be understood that the name shall apply not to such sorts as are used for stocks, as the *Manetta*, *Rosa Canina*, or *R. Carolinense*, but varieties that are grown for the beauty of their flowers—such as *Gen. Jacquemint*, *Bon Silene*, *Ophir*, etc. If we design to grow but a few varieties, we will select such sorts as are perfectly healthy and vigorous, and of purity in color and perfection in form of flowers; because in roses, we have greater hopes of greater perfection in the progeny of such roses. If we design to cross or to fertilize by artificial means, we will choose the moist, warm weather in early April, before the heat of the season comes, not only to secure greater success in fertilization, but at a later date our buds and fruit may blast, drop off, or not ripen.

Cross Fertilization.

Fertilization by hand is resorted to to give more certain results. To chance it, to let nature do the work herself, entails many dangers of imperfection; hence the scientific procedure must be artificially done. In France, for many years past, where the greater number of our fine roses have been produced, the plan has been to let nature do the work, gather the fruit when ripe, and take the chances. But by this method a great many are grown only to throw away as inferior, while, by fertilizing artificially, much valuable time is saved. The procedure is very simple, easily done by the careful, painstaking operator, and, to the amateur, adds deeper interest to his work, because of those hidden complex laws of nature which we know exist, but which are beyond our ken to fully understand the true inwardness of cause and effect.

We have at hand a small hair pencil, such as may be purchased at any paint store for 15 cents, a small pair of long, pointed tweezers, and a magnifying glass of some three or more inches in diameter; also a sharp knife, a few light stakes and a heart full of great expectations. Having selected our finest roses, say a *Jules Margotten*, as one parent, we will take *Safrano* for the other. This will give us hybrid tea roses. Or we may take two teas, or any sort. They all cross very easily.

Nature does her work very early in the maturing bud, and if we wait till the bud is open, an insect may have crawled in and done all the mischief, so that our labor may be in vain; so we take the matured bud, before or just ready to open, and very carefully cut away the leaves of the buds; from this we will get our pollen to fertilize the seed we design to plant. A close examination with the naked eye, or better still, with our magnifying glass, will reveal the fact that the little pollen-bearing stamens are closely crowded over and around the style, each ready to do the part that nature designs, if others fail, and so that the least jar will cause the dusty particles to fall down. So we will be very careful in our work. Having proceeded so far satisfactorily, we will open the bud we design to impregnate, not by cutting away, as before, but by carefully unfolding each petal of the rose, and, with our glass in one hand ready to assist the eye, with our tweezers we will very carefully remove all the stamens, using the greatest precaution not to jar any of the pollen off. By practicing on a few buds by way of experiment, taking them apart, one will very easily learn how nature has constructed the bud; in fact, a beautiful lesson may be learned in the examination—the handiwork of nature—Divinity even in a flower. But I cannot afford to be poetical now; we are impatient for the interesting work before us.

We had cut off the bud we intended to get our pollen from, and being handy by our side, we take our hair pencil and carefully collect the pollen on the point, then apply it to the style of our rose bud, give it a good dose to be certain. The work is done; only carefully cover the flower with a thin gauzy muslin, tying it down around the stem of the bud, else insects may get in and carry pollen from some other rose. Nature goes on, maturing the fruit, and in early fall, when ripe, we have successfully passed the first step in growing seedling roses.

Not infrequently it may be necessary to secure the lateral which we design to fertilize by a stake to hold it steady, or to support it in case of any accident. It is better always to secure them, and we never have fertilized a bud except we had a good support driven firmly in the ground for protection. We often operate on a dozen buds on one plant, removing all flowers except those we intended to operate on, and never allowing but a very few flowers on at any time during the season.

Natural Fertilization.

Authorities differ widely as to the time nature does her work, some holding the pollen is not yet ripe before the flower opens; others insist fecundation takes place before it opens. To this theory the venerable Jean Sisley holds, and to such authority I must bow in silent veneration. I cannot question it yet, having some rudimentary theories of my own which I am working out; another year must pass before I can come to any conclusion of my own.

There are some species in the vegetable kingdom that reproduce their kind from the seed. These are strong, distinctive types, of pure blood, and nothing foreign in their natures to sport off. But not so with cultivated, highly bred roses. They also have foreign blood in their parentage, hence Nature never produces two just alike. Even in twins there is some difference, and in rose growing by natural fertilization, this variation is what has in the past given us the greater part of our new roses. Most excellent results may be obtained—there is yet a world for improvement—and we here, in this glorious climate, can, if we will but take the care and pains which the rosarians in France have taken to produce good results, beat the world, challenge their admiration, and defy competition.

The Seed.

In my early experience I always thought that when the fruit was yellow or red the seed was ripe and should be gathered. Each variety would be gathered, carefully labeled with the name of the parent, because we always must know if possible whose children we are caring for. In due time I would open the seed pods, take out the seed, plant in a bed or boxes, and then wonder why I got none in many varieties, and often but few plants. It was a serious obstacle to my success. I could not understand it. What in the world could be the matter? Well, I was too green to be successful. I had to be a little ripier in my experience, and so must my rose seed be before gathering; and it was not till my valued correspondent, Jean Sisley, sent me some seed of the Japanese rose, *Polyantha*, that it began to dawn on me what ripe rose seed was like.

Ripe rose seed, when ready to be gathered, must be soft and pulpy, the fruit easily mashed in the hand. This should be stratified in sand, by taking a box or pot—put in a layer of sand, then the layer of fruit, then more sand and fruit alternately. In this condition nature fully matures, and by springtime the seed should be washed out, separated and planted, and in due time your reward will most amply repay for all the long months of hope, care and great expectations.

The seed should not be sown too deeply, not more than one-fourth of an inch, covering with a very light, sandy loam. The young plants must be well shaded from hot suns and biting winds until able to take care for themselves. Ultimately they must be shifted to the garden, where they are to flower and prove their true value. I have briefly given all the points of value to the amateur, based on my limited experience. Should anything further be desired in the way of details on any point, I will most gladly communicate them.

Petaluma, Cal. W. A. T. STRATTON.

THE DAIRY.

Death of X. A. Willard.

We receive with deep sorrow the announcement of the death of X. A. Willard, the well-known writer and lecturer on dairy subjects. Prof. Willard was a warm personal friend of ours, and for years an associate in different lines of dairy work. His death will be generally mourned, for he was known wherever the dairy industry is practiced in the country, and in many foreign parts. His services in the up-building of the dairy business of New York on the modern plan were great, and entitle him to grateful remembrance. The following sketch of his life from the *American Dairyman* of Nov. 2d is eminently fair, and certainly does not overrate his work:

For more than 20 years the dairymen of America have formed the most active and progressive class among the farmers of the country. During this period their special industry has been widely extended and revolutionized in its methods. Many associations have been organized to advance the dairy interests, and a dairy literature has been created which, in originality, variety and volume, surpasses that of any other department of American agriculture. Among the many engaged in this good work, no one has been more prominent, industrious and useful than X. A. Willard, of Little Falls, N. Y., whose sudden death, at the age of 61, it becomes our painful duty to announce. No other name is so familiar to the dairymen of this country, and none so closely identified with the progress of American dairying, both at home and abroad.

Professor Willard, as he was best known to the public, was an active worker and engaged in the organization of several of the earliest dairy associations and Boards of Trade. His wide reputation is chiefly due, however, to his popularity as a public speaker at dairy meetings and as a writer on dairy topics. There is hardly a Dairymen's Association in existence which has not listened to him with pleasure at one or more of its annual meetings, and the publications of most such organizations contain several of his addresses. His special province, however, was as a writer. For a quarter of a century he has frequently contributed to the agricultural journals of the country, upon various farming subjects, but generally those connected with dairying. His literary labors began in 1858 as editor of the *Herkimer County Journal*, which position he occupied for three years. He was then in the service of the Canal Department a few years, his writings being more irregular during this period. From 1864 till 1869 Mr. Willard was one of the editors of the *Utica Herald*, and established and conducted the agricultural department of that paper, which has ever since been one of its leading features. For the next eight years he was dairy editor of the *Rural New Yorker*. During the last five years he has not been specially connected with any paper, but has been the leading dairy writer for several of the most prominent agricultural journals. So prolific has been his pen that for 10 years not a month has passed without something new from it, and almost every week one or more agricultural papers have published articles written by him.

The more permanent works of Prof. Willard are his "Essays on Agriculture," published in 1859; "Practical Dairy Husbandry," an octavo volume of 550 pages, published in 1871, and "The Practical Butter Book," which appeared three years later. He was also the author of several pamphlets on "Cheese Dairying in Herkimer County," "The Associated Dairies of New York," "European Dairying," "American Butter Factories," and "Condensed Milk Manufacture." These were published by the New York Agricultural Society, and the last two in the *Journal of the Royal Agricultural Society of England*. Mr. Willard had the honor of being the first American invited to write for "The Royal."

Mr. Willard spent most of his life upon his own farm in the famous dairying county of Herkimer, and gave much attention to the details of the industry in its varied forms. He lived near enough to the great dairy markets to keep well informed as to the course of trade. At different times he traveled extensively in this country and abroad, visiting Great Britain and the continent of Europe in 1866 as the special commissioner of the American Dairymen's Association, and became acquainted with all the best dairy districts of the world. He was thus thoroughly informed upon his chosen specialty, and wrote from a most practical basis. He was not naturally an original investigator, like Sturtevant and Arnold, and, although generally abreast of the times, can hardly be called a leader in the new departures. Writing so much, he at times relied too much upon memory, when he could easily have verified his statements by data within his reach, and was thus sometimes inaccurate, especially in statistical matters. But his compositions were fluent, entertaining, timely, generally instructive, and unquestionably among the most popular of the dairy writings of his time. Mr. Willard's proper place, as an author, may be said to be that of historian of the American dairy.

X. A. Willard was born in Herkimer county, N. Y., in 1821, the son of Dr. N. S. Willard, who died six years later. After suitable preparation he entered Hamilton College at the age of 20, and graduated at that institution in 1845. His intention was then to enter professional life, but after studying law for a time, he married (1848) and engaged in farming. At that time he purchased the farm near the town of Little Falls in his native county, which has ever since been his home. There he died from heart disease on Thursday last, the 26th day of October.

IS FINGAL'S CAVE THE WORK OF MAN?—At a recent meeting of the Geological section of the New York Academy of Sciences, Mr. F. C. Whitehouse exhibited, by means of the magic lantern, a large number of views of caves on the island of Staffa, the most interesting of which was a view of the famous Fingal's Cave. After fully describing their form, size, etc., Mr. W. surprised his audience by affirming his belief in the theory that they were not, as generally supposed, formed by natural causes, but that they are really artificial caves, made by the hand of man at some very early period. The speaker gave as a reason for his conclusion the shape of the roofs, which, in all known natural caves, are low and flatly arched; but here, in all cases, high, with Gothic arches like a Catholic church. Moreover, the rocks in which these caves are found do not crumble into irregular pieces, but keep their columnar form. If the caves had been excavated by action of the sea waves, their columnar remains would have been much more abundant as debris in the vicinity. They were probably taken out carefully and carried off, probably to Scotland, where many are found. The members were not generally prepared to accept the theory, but were very much interested in the discussion which was raised in regard to it. The subject affords abundant food for research and thought.

THE STABLE.

The American Horse.

Hon. George B. Loring, Commissioner, is an ardent lover of the horse and a close student of his history. He made an address at the late Horse Fair at Chicago, from which we shall take a ringing paragraph. The remarks have, it is true, a local bearing to some extent, and do not include agencies which are at work developing the fine horses of California, but still there are some matters in which his remarks apply to our own stock and the history of their development. Dr. Loring spoke as follows:

I desire to say here once more that of the importance of the thoroughbred as the foundation of the American horse, too much cannot be said. I recognize the value of those old progenitors who brought into our country, many years ago, the bone and muscle and nerve and wind and capacity of the English thoroughbred of that day, and who, mingling their blood with the common mares of the country, especially those of French extraction, gave us our valuable horses of all work, and our trotters and roadsters.

I am mindful of the old Messenger, and what he and his sons have done, and I cannot, moreover, forget that his fame as the ancestor of trotters was established, not in Bucks county, Pa., where he stood two seasons after his arrival in this country (in 1780), but on Long Island and various other points in New York State, whence his stock was distributed throughout the best breeding sections of New England. As the sire of Miller's Damsel (the dam of American Eclipse) and of Sir Harry, out of mares of undoubted pedigree he won a fine reputation but it was as the sire of Mambrino, whose dam had no pedigree, except that she was "by imp. Sourkrout" and of Hambletonian, who was by Messenger himself, but whose granddam was "unknown," that he won his distinction as the ancestor of some of the most remarkable trotters known on earth. And how, as generations went on, and that "unknown" blood worked in, did the speed of this family increase. From Mambrino sprang Abdallah, dam Amazonia, and Mambrino Paymaster, dam by imp. Paymaster; 2d dam unknown. From Abdallah, with his unknown mother, we have, one and two generations removed, each with its unknown dam, Rysdyk's Hambletonian, with his famous sons Dexter, George Wilkes and Mountain Boy. From Mambrino Paymaster we have Mambrino Chief, dam unknown, though said to be of Messenger descent, and from Mambrino Chief we have Lady Thorne, and Mambrino Pilot and Mambrino Patchen, and Ericsson, and Brignoli, and Ashland, in whose pedigree will be found as many unknown dams as there are sires and grandsires. And as I trace the blood of the old horse into Maine and Vermont, where all the mares were unknown, what a tribe of our earliest and best trotters arises before my vision! Ripton, the gallant "white-legged pony," the favorite of Hiram Woodruff, the resolute and plucky and triumphant, rivaling Dutchman as a three-miler, and defeating Lady Suffolk, an Eastern horse, undoubtedly of Messenger and Morgan blood; and Daniel D. Tompkins, a wonderful little horse, and Gen. Taylor, "a very famous trotter and sticker," and Independence, the delight of my boyhood; and Fanny Pallen, the dam of Trustee, the 20-miler; and Shepherd Knapp, and Mac, and True John, and Green Mountain Maid, and Gray Vermont, and Sontag, and Ethan Allen (dam a Messenger mare), the best balanced horse ever seen on an American track, the evenest gaited horse from the walk upward ever bred, and the most striking illustration of the enervating influence of high feed and rapid work in early life ever known in horse annals. These horses, far removed from the original thoroughbred, and fortunate in the strain of blood which they do possess, spring from families in which an admixture of various races is undoubtedly to be found; members of a list honorable and illustrious, commencing with Topgallant, and Whalebone, and Dutchman, and Confidence, and Washington, and Rattler, and Lady Suffolk, with their "unknown" strains, and ending in our day with Flora Temple, and Goldsmith Maid, and Dexter, and American Girl, and Lucy, and Bonner's Pocahontas (the Bates mare), the queen of mares, with their absolute defiance of time and space—these horses, I say, illustrate what I mean by that power of the American trotter, which is to be obtained by removal, step by step, from the form and gait of the thoroughbred.

But not everywhere does this removal accomplish the object which the breeder of horses in America has in view. Old Messenger did not leave behind him the same prints in Pennsylvania that he did in New York. He met nowhere in that more southern region the blood which it was necessary to mingle with his own in order to produce the genuine American horse. Who can tell that his fame as the ancestor of a long line of trotters is not due as much to the fortunate locality in which his lot was cast as to his own intrinsic merit? Who can tell that Diomed and his two famous sons, Henry and Duroc, would not have been rivals of Messenger and his more famous sons, Mambrino and Hambletonian, had the two families exchanged residences, and Messenger had gone down into Kentucky among the

thoroughbreds of that State, while Duroc had cast his lot among the unknown mares of the North? However this may be, sir, we have got the American horse all along the northern line from Eastport to Detroit, aye, still farther West—a mingling of various bloods, invigorated by the sharp air of our northern hills, refreshed by our cold northern streams, fed into hard bone and vigorous muscle by our short and sweet northern pastures, and capable of carrying his sturdy forces and implanting them for a generation or two, at least, among the heavier bones and softer muscles of more luxuriant valleys, milder skies and warmer springs. That he gets somewhat of his power from his native soil and climate there can be no doubt. But how has he converted that stilted gait of the thoroughbred into the swinging stride and powerful knee action of the trotter? What has changed the narrow and confined shoulder of the thoroughbred, with its short humerus attached, and the necessarily advanced position of the fore leg so near the point of the shoulder that a line falling thence touches the toe—to lose shoulder-blade and long humerus—long from the elbow to the point of the shoulder, so that a line falling from this point touches the ground far in front of the foot—and to that massive and muscular base which wins for the good trotter that common exclamation, "What a rousing shoulder!" What has cut down those sharp, thin withers of the thoroughbred, and filled in the space above the top of the shoulder-blades with such a mass of strong muscle? What has strengthened that lower jaw so that the horse and his driver may be made one through the bit and rein? What has dropped the point of the hips below the level of the rump, where they stand usually in the thoroughbred? What has judiciously cooled the ardor and increased the patience and enlarged the sagacity of the thoroughbred? What has encased the untiring channels of true blood in a new frame of proportions hitherto unknown to them, until they are subjected to the influence of American companions, and American wants, and American institutions? Probably no single cause, but many combined. The habit of driving, to which I have alluded, has undoubtedly done much towards bringing about this result. But this alone is not sufficient, and I am constrained to believe that we owe much of the shape and stride which distinguish our best trotters to a larger or smaller infusion of Canadian blood, derived from the early importations of Norman horses into Canada, which have been improved in size and quality by the soil and climate of their new home. In very many of our good trotters this is manifest. All the descendants of Henry Clay (whose sire was Andrew Jackson, and whose dam was "Surry, a mare of great speed from Canada"), especially the get of Cassius M. Clay (a son of Henry), have the thick jaw and heavy ear and round muscle and thick sinews and coarse-grained foot of the family from which their mother sprang. How the Morrills show it, even when brought down to Young Morrill, and, through him, that wonderful Steve French mare, to the pair of princes, *duo geminos fulmina belli*, Fearnought and Fearnought, Jr.! How apparent it was in Hiram Drew! Sometimes there is enough of it to make them faint, and sometimes just enough to send them along. So Pilot, a "genuine Cannuck," came over into the States, and stirred up the thoroughbred to the extent of Pilot, Jr., and his rousing son, John Morgan, and rushing daughter, the dam of Mambrino Pilot. So from a Canadian mare, Rysdyk's Hambletonian get Bruno and the brother of Bruno, and their full sister, Brunette. So Old Morrill received and transmitted that tremendous stride which his family will never lose until they are swamped by the daisy cutters of Virginia or the English turf. So that wonderful little incarnation of equine genius, Justin Morgan, son of True Briton and the great unknown mare, inspired and elevated the cold-horse blood of Vermont (undoubtedly largely filled with a French infusion at the time of his arrival there) up to the courage and endurance and style of Sherman and Green Mountain, and, at last, to the speed of Black Hawk, and Ethan Allan, and Lady Sutton, and Gen. Knox, and Lancet, and Gen. Lyon, and Honest Allen, and Gilbreth Knox. And so the thousands of medium sized, hardy, enduring horses in the service of the family, in the stage coach, in livery, on the track and on the road, and whirling on with their Norman stride, of their thoroughbred wind and courage.

ARTIFICIAL SILK.—E. Stutzer, of Berlin, has devised a method for producing goods with a beautiful silky luster by mixing wool with vegetable fibers, such as flax, hemp, jute, etc. It is well known that in bleaching and dyeing in the ordinary way, vegetable fibers require an entirely different treatment from those of animal origin; but Stutzer has found that this unequal dyeing is due to the presence of a gummy substance in the cells of plant fibers, and he has devised a peculiar boiling process, with chemicals, which remove the gum and admits of uniform dyeing. It is also well known that when silk is to be mixed with vegetable fibers a similar difficulty is met with in dyeing the mixture; but Agache and Imbs, of France, overcame this difficulty by softening the vegetable fibers in an emulsion of animal oils with a solution of soda, and then piling them up in heaps until fermentation takes place. The plant fibers are moderated in this way, and then when mixed with waste silk can be spun like flax, wet or dry.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 11.

Written for the Rural Press by CLARA PRINCE.

Small Things.

"We ought not to go through life neglecting to pay attention to small things; 'great oaks from little acorns grow,' large fortunes are accumulated by small savings, great deeds are often the result of small endeavors, the whole sum of one man's happiness is made up of little things; and it is well to notice that they give us more pleasure than great things."

This paragraph is one that would attract the attention of most any one and set him to thinking, and he would soon come to the conclusion that the author was right. Small beginnings are the rule rather than the exception of the great heroes of history. The men who ascend high up the ladder of fame are the ones whose childhood and early life have been spent among hardships, and who gained their education mostly by their own exertions; and who were neither afraid nor ashamed to grasp the small advantages that came in their way. Whereas, on the other hand, the man who has had every advantage is apt to wait for some time when he can see his way clear to perform some grand deed, despising the small ones that fell to his lot, and, Macawber like, is always "waiting for something to turn up." Fortune unsought seldom favors man. Waiting is well enough in some cases, but action is what brings us to our goal. While we wait for the time to come for some special duty we can find some way to employ the intervening moments. The saying is "a watched pot never boils," but if we employ the time at some other occupation it is sure to boil over, and we have to make haste to raise it from the fire. So it is with those who are waiting for business engagements, the time, if unemployed, "hangs heavy on our hands."

Young men or ladies who contemplate leaving home to try new fields of labor, and are waiting for an answer to a letter or for the arrangements to be completed, will find themselves and others made happy by doing all they can to help mother, seeing and doing many little things about the house. An armful of wood brought in, the garden attended to, the dust wiped off of the table set; every little helps the ever busy hands and flying feet. Such little deeds of kindness and consideration warm the mother's heart and cheer her on her weary way.

It costs but little to be kind and courteous to those around us; it gives them great pleasure, and brings naught but happiness to ourselves. One kind word begets another, and helps us to float gently down the stream of life.

The small duties that have to be done over day after day are more trying and wearing than the large ones that only have to be performed occasionally. If these small duties are conscientiously accomplished, the result at the end of life is a grand one, even if we have no great deeds of charity to boast of, the cheerfully performed little ones that come to us are more acceptable to Him, who gives us all our joys and sorrows, than the great ones which are given grudgingly, or "to be seen of men."

Do not wait to be brave in the time of some great trouble; be brave about the small trials that come into the lives of us all. Be brave to bear and not resent the taunt of a companion who may not know the motive which prompted you to action. An unanswered taunt is soon silenced, but one angry word leads to another, and causes the unkindness to sink deeper into the hearts of both.

If farmers were not afraid to use a little courtesy and policy towards each other, they would find co-operation easier, and neighborhoods pleasanter. Do not despise and leave the Grange because so few attend; remember the few are faithful. Do not neglect to do a little for the Grange cause because you are not able to do something grand, and make yourself famous; every little adds to the grand total. Selfishness holds many of us back from giving our "widow's mite," which will be as highly appreciated as some other's large offering.

"All the little kindnesses we receive, however trifling, stay fresh and dear in the memory; but the slights, the cruel looks, the ungracious and selfish acts, close the heart and leave the bitterest thoughts and feelings."

WHAT THE GRANGE NEEDS.—The *Farmers' Friend* says: What our Order most needs is not more talent or more money or more opportunities, but more real, upright and downright work for our own and our children's good. It takes but a few members, a little money and small culture to build up a good Grange when all have a mind to work. The greatest trouble with the Grange to-day is a lazy membership, seeking to be benefited without an effort of their own, forgetting that "faith without work is dead." What we want is not talent—it is purpose; in other words, not the power to achieve, but the will to labor.

Off for the National Grange.

Brother Daniel Flint, Master of the California State Grange, starts this week to attend the meeting of the National Grange, at Indianapolis, Indiana. Our sincere well-wishing goes with him. Bro. Flint is a representative California farmer, intelligent, earnest, active, a man who has good deeds to emphasize his good words, and we are pleased to have him enter the National Council again as California's representative. In alluding to the departure of Bro. Flint the *Patron* says: It is understood that Sister Wm. Johnson will bear them company. Bro. Boise, Worthy Master of Oregon State Grange, and lady will take passage on the same train. Their multitude of friends wish them a pleasant and profitable journey. It is the intention of the Worthy Master to be absent from the State about two months, and in order that any of his friends who may wish to communicate with him during his stay in the Eastern States, we will state that his address will be Indianapolis, Ind., from November 15th to the 24th; Lansing, Mich., between Nov. 24th and Dec. 5th; Royalton, Mass., between Dec. 5th and 15th. Place of subsequent sojourn yet to be determined.

The success of Worthy Master Flint's efforts at the last session of the National Grange in so amending the great charter of our Order as to enable a subordinate Grange to elect a representative to the State Grange in case the Master cannot attend, although defective as adopted, encourages us to believe that he will have sufficient influence in our National Grange Council to induce that august body to incorporate another amendment into its charter which will place the sisters of our Order on an exact equality in the matter of representation with the brothers. In furtherance of this end our Worthy Master carries with him a memorial bearing on this subject which passed the late session of California State Grange.

An English View of the Grange.

An English farmer, traveling in America, writes to the *London Field*, in substance, as follows, concerning the American Grange system: "We were much impressed with the great and wide-spread influence of the Grange system. We had good evidence of the successful manner in which it promoted social intercourse and moral culture among the farmers and their families. We had met with the Grange Lecturer in different parts of the Union, and we invariably found him an individual of a practical and intelligent turn, with a mind well stored with agricultural and general knowledge, and with a readiness, ease and clearness of expression almost peculiar to the class. Through the wilds of Texas we traveled with a Grange Lecturer, who was out upon an organizing as well as an educational tour. He visited all the principal settlements, gave lectures to the settlers upon improved farming and other matters interesting to them, explained the objects and advantages of the Grange system, and assisted in forming local branches. He was a middle-aged, frank, genial, intelligent, gray-haired man; he had spent his earlier manhood at farming, had served in the army, had turned back to his favorite calling, and was adding to the direction of his own farming operations the delightful task of instructing others."

All the business and ceremonial meetings are held in strict secrecy. After the business and ceremonies, such as the initiation of members, are all over, the hall or assembly-room is thrown open to friends, and here a monthly feast is held. This feast is a social affair, and has contributed largely to the success of the Order. There is no pretence at display, all being simple and homelike. The spread is entirely of home production, being the contributions of the farmers' wives and daughters. Dancing and games usually follow, and, as members have liberty to bring friends with them, these feasts are generally very successful. An important feature at each meeting is a discussion on some subject of interest, the topic and leading disputants being selected at the previous meeting. The Lecturer is always present, and he is supposed to be ready to speak for his Grange at all times and upon all topics. This institution is immensely popular among the American farmers, and I have often thought, while traveling here, that an organization similar to this would be of great service in England, and in fact all over the old world. It might be beneficial to have the same organization in the two countries. I should perhaps explain that the Grange is not a political organization; it supports no party, nor does it ever take any part in politics as an organization. But while it ignores parties and individuals, and whilst its members always vote and act according to their own free will, it is but natural to expect that its discussions and resolutions should exercise an influence—always, however, a healthy influence—upon the conduct of politicians.

PERSONAL.—We had a pleasant call the other day from Bro. N. W. Garretson, of Oregon, whose part in the establishment of the California State Grange will not be forgotten. Bro. Garretson is now devoting his attention to the insurance business, having the agency for a leading Eastern company.

AGRICULTURAL NOTES.

CALIFORNIA.

FRESNO.

RAIN NEEDED.—*Expositor*, Nov. 8: The early and heavy rains started a fine growth of grass on the Fresno plains, and led to hope that there would soon be an abundance of feed for stock, but unfortunately a long, warm, dry spell has ensued, and the result is much of the young grass has died out, and, unless rain comes soon, the most of the balance will also die. Rain is much needed now to sustain the life of the young grass, and to bring on feed for the stock.

LOS ANGELES.

FRUIT SHIPPING.—*Express*, Nov. 11: On Saturday Messrs. Woodhead & Gay shipped a mixed carload of apples and flour to New Mexico, a carload of apples and 1,000 lbs. of grapes to Arizona. They also shipped a large quantity of pomegranates to Kansas City.

MERCED.

COTTON PICKING.—*Valley Argus*, Nov. 11.—Mrs. J. M. Strong, widow of the late Col. Strong, is now gathering the best crop of cotton we believe ever raised in Merced county. The crop consists of 225 acres of Merced river bottom land, and Mrs. Strong has some 80 or 90 hands engaged in picking, ginning and baling the crop. Col. Strong commenced the cultivation of cotton in connection with H. F. Buckley and brother in 1869 or 1870, and the family have continued the business profitably ever since. We are informed that the yield on the 225 acres this season will be in the neighborhood of 100 bales of 400 lbs. each. The land upon which it is produced has been in cultivation many years, most of it having been cropped continuously since 1851.

HOPS.—In this county Horace F. Buckley, of Hopeton, we believe, is the only hop-grower, and in the past 10 years he has devoted a small portion of his farm to this industry, with only partial success, and now, upon placing the crop of 1882 in the market, finds the season's operations have yielded him a clear profit of \$20,000 upon 60 acres of land after some \$7,000 expenses of cultivation, picking, curdling, baling and transportation to San Francisco.

NAPA.

REAL ESTATE.—*St. Helena Star*: Within the past two or three weeks the real estate firm of E. W. Woodward & Co. have sold for J. S. Hay the 15-acre vineyard purchased by him last spring of C. J. Field for \$9,000. The purchaser is Harrison White, of Humboldt county, who, with his family, has already occupied his newly acquired home. The place consists of 15 to 16 acres, all out in young vines and fruit trees, and is well improved with a substantial hard-finished house, a good barn, etc. Major Hay has rented a cottage in town. A still larger sale is reported in the recent transfer of Amesbury & Davis' 73-acre tract near Rutherford Station to Messrs. Story, the well known hop men of this place, for the sum of \$23,360. This purchase includes all choice valley land, a considerable portion of which is in young vineyards. The improvements are number one, and the place to-day is one of the nicest homes in our beautiful valley. Under the judicious management of the Story Bros. it will continue to develop into a desirable and valuable residence property. Mr. W. B. Story, of the firm, who now resides at Colfax, Placer county, expects ultimately to occupy this purchase and make his permanent home in this valley.

NEVADA.

BEEF CATTLE.—*Reno Gazette*, Nov. 9: There is no danger of a glut of the beef market of the West, or indeed of the world, this winter. There are fewer cattle in Nevada than there were a year ago. Mr. Todhunter was here a day or two ago, and said not over 2,000 head will winter in Surprise; about 1,000 will winter in Quin River, 3,000 in Paradise valley, and not over 3,000 between Winnemucca and the sink.

PLUMAS.

CATTLE FEEDING.—*Reno Gazette*: The scarcity of cattle in the East and the subsequent rise in the price of beef has aroused the cattle dealers to activity, and all the cattle are being fed that hay can be found for. There are more feeding at present in Honey Lake Valley, says the *Greenville Bulletin*, than has ever been known before. There was an unusually large crop of hay raised there this year, and it is now all sold, going readily at the first for \$5.50 and soon increasing to \$6 per ton. Over 4,000 head of beef cattle are being fattened in the Tule district alone.

SACRAMENTO.

REAL ESTATE NOTES.—*Bee*: To-day, in front of the Court House, Hugh C. Jones, of Sutter county, administrator of the estate of I. H. Van Trees, had sold a ranch of 487 acres, situated 21 miles from Sacramento, on Deer creek, in this county. One hundred acres is bottom land, suitable for hop-raising. George Hanlon was the purchaser, and \$9,300 was the price paid. Another tract of 347 acres, belonging to the same estate, brought \$3,450. S. B. Moore was the purchaser. D. J. Simmons was the auctioneer. Daniel Flint, a well-known hop-grower, has purchased the Bentley ranch of 150 acres for \$9,000. It is bottom land, and has a willow thicket on it, with hop poles growing ready for use. Six years ago it sold for \$2,000, and a year ago would not have brought \$6,000. It is situated a short distance above "the English break," in Yolo county. There has been a good protecting levee built within a year or

two. A well posted resident of Yolo attributes the advance in value partly to the impetus given by the recent profits to hop-raisers, but mainly to a feeling of confidence in the preservation of the valley created by the litigation against hydraulic miners and the decision of Judge Temple. R. J. Merkeley has recently bought the Comstock ranch of 160 acres, in Yolo county, six miles above the city, paying \$12,000 for it. He will have a crop of hops there next year. The purchasers of the last two tracts made much more than enough money by this year's crop of hops to pay for their new purchases.

SAN DIEGO.

OLIVES.—*Record*, National City: Within four miles of San Diego Bay, on National ranch, there are 8,000 olive trees in bearing, which in two years will more than double their yield of fruit. The manufacture of olive oil in this locality is a most promising industry, and whoever establishes a manufactory here may be sure of making a fortune in a few years.

SANTA ROSA.

HORTICULTURAL SOCIETY.—*Mercury*, Nov. 9: The Santa Clara Horticultural Society held its regular monthly meeting at the Republican Headquarters, Martin's Block, Saturday afternoon. Dr. Chapin presided, and F. A. Taylor served as Secretary. The committee appointed to raise necessary funds for the approaching State Fruit Growers' Convention reported fair progress and were granted further time. The committee to whom had been referred the matter of interviewing hotel keepers, reported that they were assured that visitors to the Convention would be charged only regular rates. The same committee reported that after investigation they were led to believe that from 300 to 500 visitors might be expected. "The Gopher, and How to Get Rid of Him," was made the special subject for discussion at the next regular meeting, and William C. Geiger was requested to open with an essay on that topic. C. W. Childs, R. C. Stillier, H. Grenel, R. Turnbull and L. F. Sanderson were elected members, and J. H. Barbour was made an honorary member of the Society. Adjourned until the first Saturday in December.

SANTA BARBARA.

HORTICULTURAL REPORT.—We congratulate the orchardists of Santa Barbara county on their success in staying the ravages of insect pests. By continuing the thorough work from this time on till May (the non-hatching season) few will be left to molest the orchards next summer. In the meantime a word of caution to those who are about to plant out orchards may be appropriate. Be exceedingly careful about planting trees, or using slips or scions from infected districts. Procure them from nurseries where your own personal observation will satisfy you of their freedom, not only from insects and their eggs, but from diseases which sometimes affect them. The same rules apply to shrubs and flowers; and especial care should be used in examining bulbs. If the trees and plants you desire are not to be found in our home nurseries it would be well to demand a certificate of their freedom from damaging insects or diseases from the nurseryman of whom they are purchased. [Signed:] Geo. W. Coffin, Edward Harper, O. N. Cadwell, Horticultural Commissioners.

A BEAN THRESHER.—An editorial published in the *Press* about a year ago announced the great necessity for an invention to thresh Lima beans. Mr. C. S. Hall, of Rochester, read the article and entered into correspondence with the *Press* relative to a "Patent Bean Thresher and Separator," invented by himself. Partly as a result of this correspondence, C. H. Hall, Jr., has brought one of these machines to Carpen-ter, and a public test has demonstrated its practicability. These tests were made last week in the presence of a large number of people. The weather was damp during one of the days, and it would have been impossible to have threshed the beans by horse-power. One hundred and twenty bushels of beans were threshed per hour. All who were present express themselves as highly delighted with the result. Mr. Hall is satisfied that he can thresh 1,000 bushels of Lima beans per day in any kind of weather, without breaking the beans or injuring the pods.

SONOMA.

APPLES FOR CHINA.—*Petaluma Courier*: G. R. Skinner, of this city, dried fruit agent for Dalton & Gray, San Francisco, is now packing here for shipment to China 200 boxes of apples. The apples are each wrapped in paper and carefully placed in the boxes. Mr. Skinner informs us that the same firm has orders for a large shipment of apples to China this season, and he expects to dispatch many boxes from there this season packed for that market.

POTATOES.—H. Meham and other potato raisers in this section inform us that there will not be over two-thirds the usual crop this year, and only about two-thirds of the crop grown will be merchantable potatoes. Owing to the lateness of the frosts, none of any consequence having yet appeared, the vines are yet green; and should we have much rain before digging, the present prospective short crop will be much shortened by the rot. The outlook for the potato crop in this section this year is not at all promising.

FREE BOXES.—A. Cadwell, in *Courier*: The free-box system is all-important to fruit growers. There were many men who would not listen to it last spring who to-day are using them; such men in southern Sonoma as S. M.

Martin, Hugh Gaston, J. Turner, C. Woodworth, A. W. Thompson, G. W. Skinner, the undersigned and many others. Some Swiss are also sending their fruit to market in free boxes, and I think before two weeks have passed, two-thirds of all the fruit round about this section will be sent to market in free packages. I have been experimenting, and find this more profitable than the old return-box system. The loss on return boxes is 5% each trip to the city and back; and the free box being 8% smaller makes 13 cents. The cost of free boxes in shooks is 11 cents, nails and nailing 2 cents. Now, when we consider the advantage gained by the farmer in shipping his fruit in clean boxes, the danger from fruit pests which he avoids, and the great annoyance of keeping the run of his old boxes, the new system has every advantage over the old. I guarantee that I can convince any farmer or fruit raiser that the free box, all things considered, is the cheapest. Besides, the purchaser or shipper saves six pounds on the box in freight, so that he also makes by the free box even more than we do, and I hope this year will close out the return-box system.

CHINESE POTATO DIGGERS.—A large number of Chinese are now employed in this section of the county in digging potatoes. One potato grower estimates the number thus employed at 1,000. They get from the farmers from 8 to 10 cents per sack. This includes digging, sacking, and sometimes loading. The charge is made according to the abundance of marketable potatoes in the ground, and as the sacks to be filled. Were it not for the Chinamen the potato raisers and grape growers of Sonoma county would not be able to harvest their crops.

THE OUTLOOK.—The prospect for next crop is very good. Farmers are busy plowing, and say the land generally is in fine condition for working. The grass was never better or more forward at this season of the year. Dairymen tell us the outside pasture is better now than it was in February last year. All kinds of stock are consequently in fine condition for the winter. We have had no frost about here yet, and the weather has been balmy and pleasant. The rains have come just right for the country, and the season, except for a few farmers who have not threshed, could not have been more opportune.

TEHAMA.

SHEEP SALE.—Red Bluff Cause: While in Tehama Saturday night last we met E. H. Ward, of this place, who informed us that he had purchased George Hoag's sheep, 8,200 head in all, for which he paid \$2.10 each, amounting to the nice sum of \$17,200. This is one of the finest bands of sheep in Tehama county, and shears an average of about 10 lbs. per head each year. E. H. & T. R. Ward have recently purchased 18,000 acres of railroad land on the east side of the Sacramento river, between Deer and Mill creeks, where these sheep will be kept during the winter season. Ward Brothers have now about 16,000 head of sheep, and are among the heaviest wool growers in the county.

TULARE.

THE SEASON.—Delta, Nov. 10: The farmers are feeling jubilant over the prospects for good crops the coming season. The rain has been very beneficial throughout the valley, and unless cold weather should happen to give them a backset, crops will have a good start before the dry season sets in again.

YOLO.

WOOL NOTES.—Democrat, Nov. 9: The wool market remains as quiet as it has been for about a week past; prices range from 12½ to 14 cents per pound, according to quality and its freedom from grass seeds. A good many clips contain foxtail in small quantities and if but a dozen seeds are found in a sack, the entire clip is condemned. Wool growers will have to change their shearing grounds and fall ranges before shearing, after coming out of the mountains. Foxtail seeds are said to be more damaging to the wool than burs, and if our wool growers would keep Tehama county wools up to their standard of excellence they must, in the future, either shear their sheep in the mountains or procure places in the valley that are free from foxtail grass. Free wools, which simply means that they are free from grass seeds, have always commanded the highest price in this county of any wools in the State, and not only so, but Tehama and Northern California wools have commanded the highest prices in Boston and other Eastern markets. Yolo county wools have not been condemned to any great extent heretofore because of grass seeds, and if wool growers will take warning in the future by the experience of the present, no further trouble will be experienced, and there will be no more losses on fall wool on account of grass seeds.

MAGNETIC OBSERVATIONS.—A series of magnetic observations, which are to extend over a space of 14 months, have recently been commenced at Goettingen, Germany. They will take place under the supervision of the professor of the University, on the 1st and 15th of every month at the same hours as those performed by the international expeditions sent out to the North and South Poles. Their principal object is to ascertain the magnetic condition of the earth. Experiments will also be made with respect to magnetic intensity in the garden of the observatory, in a pavilion built up of wood and brick only, iron being omitted on account of the disturbing influences which it would exert, rendering the observations practically valueless.

News in Brief.

THE Duke of Newcastle is to visit Florida and California.

THE expenditures on the Brooklyn bridge to date amount to \$14,045 684.

THREE shocks of earthquake were experienced at Mendocino Saturday.

A TEN-YEAR-OLD boy was shot by a playmate at Prescott, A. T., Saturday.

GREAT distress prevails in the Nile delta, and deaths from starvation are feared.

DURING the past week 354 immigrants arrived in California by overland railroad.

NINETY sailing vessels and eight steamers were lost on the Atlantic coast during November.

THE free canal amendment to the New York Constitution was adopted Tuesday by over 200,000 majority.

DISASTROUS floods are feared in and around Paris, France, as the rivers Seine and Marne are rising rapidly.

THE steamship *Angelica*, plying between Gelfe and Hull, has foundered in the North sea. Forty persons were drowned.

THE latest advices from Chile state that peace negotiations have been renewed with Peru, it is reported, on the basis of the cession of Tacna and Arica.

THE *Ting Yeung*, the formidable ironclad that has just been built in Germany for the Chinese Government, is to be lighted by 240 Edison electric lamps.

BARON NORDENSKJOLD is getting ready for another Arctic expedition, which is to set out from Stockholm next summer under the patronage of Wilhelm Schonenck, a Berlin merchant.

THE proposal of Germany to prohibit the importation of American pork, etc., meets with general opposition, as Russian and Austrian imports remain unmolested, and the German trade will suffer.

THE Philadelphia street railroad companies, roused by the complaints of passengers, have undertaken to prohibit smoking on the cars. Smokers are not tolerated even on the front platforms.

THE construction of nine Russian war vessels has been ordered, seven for the Baltic and two for the Black Sea ports. Cronstadt is to be greatly strengthened. This is in consequence of the lessons taught by the English bombardment at Alexandria.

KING ALFONSO expresses a desire that the money which would be used to celebrate the birth of the infant Spanish princess at Havana be devoted to the relief of sufferers by the cyclone in Vuelta Abajo.

THE railroads carried a million persons into Philadelphia during the week of the Penn celebration, but trade was almost at a standstill, neither visitors nor residents buying much while the show was going on. The hotels and theaters made money out of the crowds, but the merchants lost heavily.

THE running of a railroad train on Sunday is not a violation against the law of doing business on the Sabbath day in the opinion of the Court of Appeals in the Commonwealth of Kentucky vs. the Louisville & Nashville Railroad Co. The Court said that the running of the train was a work of necessity.

A BILL has been introduced in the Vermont Legislature taxing railroads. It provides that the Governor shall appoint three appraisers to appraise all the railroad property in the State, at its actual cash value, and an amount of the same in proportion to the miles of track in each town shall be set in the list of said town for taxation.

THE Commissioners of the Garfield Monument Fund have chosen Governor Cornell as President; ex-Brigadier General James and Cyrus W. Field, Vice Presidents; Colonel D. E. Austin, Secretary; Colonel Emmons Clark, Treasurer. General Hancock, William H. Vanderbilt and Colonel E. T. Shepherd are appointed Commissioners, and General James W. R. Stewart and Edward L. Thorne a committee to solicit works of art and to arrange for their transportation for the Washington Exhibition.

CARE AND USE OF BELTS.—In lacing a belt, always begin at the center, keep the ends exactly in line, and lace both sides with equal tightness. The lacing should never be crossed on the side of the belt that runs next the pulley. Use thin but strong laces. Belts should never be oiled except when they become hard and dry, and even then the oil should be used very sparingly. Oil not only rots the leather, by its own decomposition, but also causes the belt to stretch. In oiling or greasing a belt use only a pure thin oil. A thick, pasty oil is not good. Such oil will soon enter upon a process of decomposition and rot the belt.

CEMENT TO WITHSTAND PETROLEUM.—Gelatine (glue) mixed with glycerine forms a compound which can be liquified by heating, but which solidifies on cooling, and forms a tough, elastic solution, having somewhat the appearance and character of india rubber. This compound is entirely insoluble in petroleum or benzine, and any vessel coated or painted with it becomes impervious to these liquids.

MONEY VALUE OF SCIENCE.—The Signal Service Office estimates that ships containing at least \$13,000,000 of property, besides many lives, were saved from running into the disastrous cyclone last month by the warning it gave. The money thus saved in this one storm would pay the expense of the Service for ten years.

THE FIELD.

How Much Seed Wheat to the Acre?

EDS. PRESS:—I have never seen the question satisfactorily answered. Some say 100 lbs., some 90 lbs., some 75 lbs., and a few say 60 lbs. Scarcely any say less. But when we consider how marvelously a single kernel of wheat, when deposited in suitable soil, will multiply itself in the way of reproduction, it must be conceded that even the least of the above mentioned quantities is far in excess of the exact quantity required to properly seed an acre. A single kernel of wheat, under favorable circumstances, will produce from 30 to 40 stalks, each bearing a head containing from 60 to 75 kernels (I have seed heads of wheat which contain over 100 kernels). Take, however, the least of the above multiples—30 and 60—and a bushel of wheat can be made to produce 1,800 bushels of wheat. But it will be objected that this sort of seeding for wheat could not be made practically successful. Be it so; the fact still remains, and has come under the observation of every intelligent wheat farmer, that every kernel of seed in his wheat field maturing into a crop has produced from three to eight stalks bearing heads containing from 30 to 50 kernels; say, averaging five stalks, and 50 kernels. His yield from 60 lbs. of seed ought to be 200 bushels, or from 90 lbs. 300 bushels; but, instead of such yields, he is well satisfied if he reaps 1,800 lbs. from his 90 lb. sowing. Given 90. Pro = 1800 90 = 1800 = 1-20, that is only 1-20 lb. of his 90 lbs. seed sown came to maturity and produced his 1,800 lbs. wheat; 1-20 lbs. of his seed was absolutely lost. Yet, if his land was in good order and he sowed good seed, it is safe to assume that nine-tenths of his seed sprouted and put forth blades. What, then, became of eight-tenths of it? Smothered by the remaining tenth—the fittest only surviving.

These facts coming under my observation during my long experience as a wheat farmer, both here and in the Atlantic States, led me to a series of experiments, the result of which led me to the conclusion that wheat growers used altogether too much seed—that if they prepared their lands well and took pains to properly sow the necessary quantity of seed, they would largely increase their yield per acre.

Having arrived at that conclusion, I put it to a practical test some 10 years ago, being the last year that I have farmed my lands to wheat. I selected an eight-acre lot, which had been cultivated to beans the year previous, plowed the lot, measured off three acres and harrowed it down; took a one-horse plow, for the want of a drill, and marked off the three acres into shallow rows 18 inches apart; then took a part of a sack of seed, having previously weighed the same, and distributed in the rows very sparingly till the whole three acres were thus seeded. I then weighed what was left of my sack of seed, and I found I had used 15 lbs., or a peck of seed on the three acres. I then, on the same day, sowed the remainder of the lot broadcast, using about 75 lbs. of seed to the acre, thoroughly harrowing down the whole lot both ways. After the wheat was well up, I went through the three-acre portion with a hoe to clean out the young grass and weeds starting. Now for the result. The three acres yield, 160 bushels, or 53⅓ bushels to the acre. The other 5 acres yielded 40 bushels to the acre; but whether I got the right quantity of seed on the three acres is still undetermined in my own mind. But I was satisfied 75 lbs. of seed were too much. The wheat smothered itself out to a great extent, the fittest only surviving.

WM. C. BLACKWOOD.

Haywards, Nov. 11, 1882.

THE MICROSCOPE AT HOME.—In a lecture on the use of the microscope at home, by Henry Pocklington, the following directions are given for using the instrument to detect adulterated dry goods. Most people like to be sure that they get what they pay for. The microscope, in many cases, places the possibility of certainty on this point within the reach of its owner. Suppose, for example, that the lady of the house wishes to know whether the piece of silk she has set her heart upon for a dress is all silk, or a mixture with cotton, jute, or China-grass, and, if all silk, whether it has been loaded with dye and dressing. The microscope will set her mind at rest. Take a pattern of the silk, unravel the warp and weft, and examine it under the quarter-inch objective, and you will at any rate see whether all the little fibres of which the weft and warp are comprised look alike. That, of course, will not tell you whether the material is silk; but if you procure a piece of known silk, good raw silk, and study its appearance, and compare it with the suspected specimen, you will come to a sound conclusion very soon. Then take a little cotton and examine it to find that it consists of flattened tubes, curiously twisted, quite unlike the long cylindrical tubes of silk, and different again from the long consistent tubes of flax, with their attenuated ends and marked walls. Take wool and hairs of different kinds and examine them carefully, noting their peculiarities, and you will soon be able to tell whether your coat is all wool, or, as is much more probable, not; whether your wife's sable muff or seal jacket is what it professes to be, and will not improbably learn a lesson in the department of trade morality.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR THE WEEK ENDING OCTOBER 31, 1882.

266,748.—SHIRT—D. P. Belknap, S. F.
266,753.—COMBINED LOCK AND LATCH—R. F. Bridewell, S. F.
266,678.—HAME CLIP—Charles M. Derrick, Howland Flat, Cal.
266,841.—MAGNETIC GOLD SEPARATOR—H. Kenton, Albany, Oregon.
266,701.—HEADER AND THRASHING MACHINE—A. H. Lightall, S. F.
266,702.—GRAIN SEPARATOR—A. H. Lightall, S. F.
266,858.—GRAFTING WAX—Thos. McLoughlin, Judsonville, Cal.
266,873.—CORN CRUSHER—Geo. C. Mueller, S. F.
266,885.—LUBRICATING CUP FOR STEAM ENGINE—E. L. Reese, Alameda, Cal.
266,886.—LUBRICATING OIL CUP—E. L. Reese, Alameda Co., Cal.
266,908.—BUCKLE—D. W. Smith, Port Townsend, W. T.
266,922.—WATER WHEEL—M. C. Taylor, Grass Valley, Cal.
266,662.—ORE STAMP BATTERY—A. J. Van Drake, S. F.
266,633.—BED OR CRIB—C. McWayne, Colfax, Cal.
266,630.—LEG AND FOOT REST—J. M. P. Jambers, Nevada City, Cal.

FOR WEEK ENDING NOVEMBER 7, 1882.

267,055.—CLAMP FOR ADJUSTING DOOR-KNOB ROSES—G. V. Blackman, Oakland, Cal.
267,066.—PAPER FILM—H. Blake, Chico, Cal.
267,169.—ROTARY ENGINE—John H. Darragh, S. F.
267,163.—TUCK FOLDER FOR SEWING MACHINES—Charles M. Dexter, Sacramento.
267,066.—FEEDER FOR THRASHERS—John Ducker, Santa Rosa, Cal.
267,204.—ELEVATOR—Philip Hinkle, S. F.
267,081.—LIFTING JACK—O. H. Hoag and N. B. Hervey, Santa Rosa, Cal.
267,087.—GATE AND NOZZLE FOR WATER WHEELS—S. N. Knight, Sutter Creek, Cal.
267,349.—WHEEL TIRE—Plummer & Turpin, Olympia, Wash. Ter.
267,117.—CAR COUPLING—T. A. Smith, Arbuckle, Cal.
267,121.—SAW TOOTH—A. J. Van Drake, S. F.
267,250.—BULKY HAY RAKE—W. P. Prall, Colusa, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

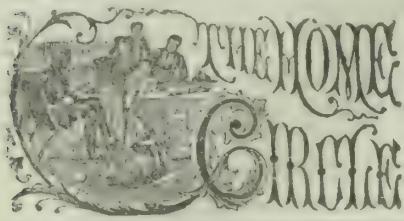
Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

GRAFTING-WAX.—Thomas McLoughlin, Judsonville, Contra Costa county, Cal. No. 266,858. Dated Oct. 31, 1882. This composition or this grafting-wax consists of certain peculiar ingredients, combined in the specified proportions. In using this wax it is applied while in liquid state, by means of a brush, to the graft. When cool it becomes hardened upon the graft. In grafting the scion is tied to its place on the stock by means of a cloth bandage, and the wax used is put over and around the bandage. There are two main requirements in the use and formation of all grafting wax. First, it must, when applied to the cut, completely exclude the air; second, it must be weather-proof to resist the action of the sun and rain. There is a composition in general use for this purpose in which the ingredients are beeswax, resin and tallow, combined in various proportions. This composition serves the purpose very well; but it has been found by experience that by adding black pitch, honey and pine-pitch to these ingredients, all in certain proportions, a better wax is obtained, more economical because of the increase in bulk caused by cheap materials, and more efficient because of greater durability. The black pitch is the ordinary pitch of commerce, and its presence adds to the bulk, makes the composition stiffer when cooled, and renders it more durable and better adapted to withstand the elements. The honey makes it more homogeneous, and the pine-pitch, which should be gathered fresh from the trees, adds its turpentine to render it more capable of being molded or pressed around the graft. The composition may be preserved indefinitely, and when about to be used has but to be melted again. When around the graft and hardened by cooling, it makes an air-tight covering and will not soften in the heat of the sun, nor be beaten off or dissolved by the rain. It is clean to handle, is not sticky, and may be packed in cans or boxes to advantage. Compositions of similar character have been made before, but this of Mr. McLoughlin is a peculiar one.

HAME-CLIP.—Charles M. Derrick, Howland Flat, Sierra Co., Cal. No. 266,678. Dated Oct. 31, 1882. This invention relates to an improved hame-clip for harness, and more particularly to a novel means for vertically adjusting and securing the tug thereon. The invention consists in a vertical pintle held between supports from the hame, and in two hooks sliding on said pintle, the ends of which are adapted to engage in a series of holes in the hame when the pintle is in place. Between the hooks the tug is held upon the pintle. The object of this invention is to provide an improved means for vertically adjusting the tug for high or low draft.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.



Don't Leave the Farm.

Come, boys, I have something to tell you;
Come near, I would whisper it low—
You are thinking of leaving the homestead
Don't be in a hurry to go.

The city has many attractions,
But think of the vices and sin;
When once in the vortex of fashion,
How soon the course downward begins.

You talk of the mines, boys—
They are wealthy in gold, no doubt;
But, ah! there is gold in the farm, boys,
If only you'll shovel it out.

The mercantile trade is a hazard—
The goods are first high and then low.
Better risk the old farm awhile longer;
Don't be in a hurry to go.

The farm is the safest and surest.
The orchards are loaded to-day;
You're as free as the air in the mountains,
And monarch of all you survey.

Better on the farm awhile longer,
Though the profits come in rather slow;
Remember, you've nothing to risk, boys,
Don't be in a hurry to go.

—C. E. M. Green

A Mountain Spring.

[Written for RURAL PRESS by E. E.]

I kneel as kneels before a shrine, a soul
All worn and burdened with such sins as roll
Deep tortures to the heart, and tremble so,
Before thy Immanuel fountain bowth low,
How gray my garments with the dust! My feet,
How burned and weary with the wayward heat!
With dust upon my brow, I cry "Unclean."
A mountain spring, cold, crystallized to the brink,
Out-finging jets of diamonds as I drink,
And circled round by green, wide, polished leaves,
And low-boughed hazels and the cedar trees.

An altar perfected in Nature's love
By unsealed fountains from the heights above.
The music of the place, in sacred tones,
Soft measures keep upon the granite stones.
Calm, holy symphonies to being start,
And make sweet pleadings to my downcast heart.
The water, shade, the scarlet flowers that grow,
Quick shafts of gladness to my being throw.
I rise, baptized with coolness and with rest,
And pluck the scarlet blossoms for my breast

Romance of House-Cleaning.

"Is she coming to visit you?" said Eric Hale, with a slight grimace, "that simpering fine lady, with the useless white hands and the shallow little society laugh? Oh, Aunt Delia, pack my portmanteau, and let me be off on a lecturing tour, until Flora Lee's visit comes to an end!"

Mrs. Dove looked a little disappointed. To confess the truth, she had especially arranged this visit with reference to her nephew, Eric.

"He's a fine young fellow," she had said to herself, with true feminine diplomacy, "with an excellent parish and fine prospects—and it's high time he was settled in life with a wife. And I think Flora Lee would suit him exactly."

And here was the young man himself upsetting this charming little castle in the air, without the least scruple of science, like the modern iconoclast that he was.

"Well, Eric," said Mrs. Dove despairingly, "I'll write to her not to come. Of course I don't want to put you out, just when you're so busy, too, with that course of lectures on the Book of Revelations. But I really thought Flora would make the house lively."

"She's a deal too lively to suit me," said Eric Hale. "Ask her to come in June, when I shall be off to Omaha and Nevada on that conference business. But as for a visitor, I should prefer little Polly Peppercorn's big wax doll with the silk black hair and staring black eyes that open and shut by machinery."

So Mrs. Dove, choking back the tears of disappointment, for she had been nursing this pet scheme in secret for a long while, sat down and wrote a letter to her friend, Miss Lee, postponing the proposed sojourn at Cedarborough farm until roses should be in bloom and strawberries beginning to ripen.

"Adonijah," said she to the hired man, "take this letter to the post office."

"Yes, um," said Adonijah, and he put it in his pocket and straightway forgot all about it.

It was a dismal, rainy morning in April, the yellow jonquils beaten to the ground, the very wild violets shutting up their eyes as if in unmitigated disgust at the unpromising state of the weather. Overhead racks of gray clouds scudded across the heavens, and the little sheet of silver lakelet under the hill was dotted and dimpled all over with the falling rain, as if pierced with a thousand tiny javelins.

"It's no use trying," said Mrs. Dove plaintively; "the fates themselves have conspired against me!"

The carpets were up, the pails of white-wash stood steaming in the middle of the parlor floor, and Mrs. Dove herself, with her gray curls tied up in a yellow damask pocket handkerchief,

which her great uncle had brought from China half a century ago, sat crouching on the lower edge of a step ladder. For Betsey, the help, had fallen down the cellar stairs and broken her leg, and Mrs. Mulrony, the charwoman, had sent a message that her eldest son had broken out "wid de maizles, sure—speckled all over like a shower of red pepper, andorra a bit of clanin!" could she undertake for until the wake's over."

"And these three days of all others," sighed Mrs. Dove, "when Eric had exchanged pulpits with Mr. Washburne! And he so dislikes house-cleaning; and—"

"Dear me, Mrs. Dove, what is the matter?" Mrs. Dove started to her feet with a little scream—for there, exactly as if she had been rained down out of the gray zenith, stood Flora Lee herself in a trim brown traveling dress,

with a neat little hand-bag, a gossamer waterproof cloak and silk umbrella. "Why, Flora!" cried she, "how came you here?"

"By the train, of course," said Miss Lee, "and I walked from the station."

"I wrote you not to come," said Mrs. Dove, in consternation. "But I never received any such letter," said Miss Lee. "Shall I go again?"

"No, you darling, you shall do nothing of the sort," said Mrs. Dove, enthusiastically. It was only because—because we were house-cleaning."

"I'm not afraid of house-cleaning," said Flora. "I see how it is," with a comprehensive glance around the scene of confusion, "and I'm going to help you through with it."

"You?" said Mrs. Dove. "Yes, I," said Flora. "Why not? Just lend me one of Betsey's old dresses. Where is Betsey, by the way?"

"Her father has just carried her home in the wagon," said Mrs. Dove. "She broke her leg."

"And your charwoman?"

"Oh, dear! oh, dear!" said Mrs. Dove. "She has got a visitation of the measles, or small-pox, or some other horrid disease in her family. And my nephew, Eric, is to be gone for three days; and I made sure I could finish the house-cleaning while he was absent."

"And we will," said Flora, cheerily. "How can we?"

"Oh, you shall see," nodded Miss Lee. And, before she said though she was, Mrs. Dove began to feel the mercury rise in her mental thermometer at once.

And Flora Lee arrayed herself in one of Betsey's cast-off calicoes, tied her rippled brown tresses up in a cambric sweeping cap, and went vigorously to work with a scrubbing-brush, while Mrs. Dove lent her attention to the window-glass, and Adonijah, with more zeal than discretion, splashed whitewash over himself and the floor, with laudable impartiality.

"Wal," said Adonijah, afterward, "I never did see no cricket work spryer than that city young lady. By gracious, she beats Betsey all holler at it! And she's got such an up-and-down, pretty way of doings, too. I declare I couldn't hardly take my eyes off her all the time I was in whitewashin'."

Mrs. Dove, however, was unused to the severe exertions incident upon house-cleaning time, and went to bed with the sick headache in the middle of the afternoon.

"Never mind, Mrs. Dove," said Flora; "I'll get tea, and I'll make some of those cream waffles, and a short-cake for Mr. Dove, and you shall see how nicely I can fry oysters."

"Indeed, indeed, I don't know what I should do without you, Flora!" said Mrs. Dove fervently. But, as it happened, Mr. Daniel Dove was unexpectedly detained on business at Whiskill, a neighboring town, and, instead of him, who should walk debonairly into the little sitting-room, flinging down his carpet bag, but Eric Hale himself, just as the rainy dusk closed in, and the delicious oysters and Mocha coffee filled the house.

"Hello!" said Eric. "So you're cleaning house—eh, Betsey?"

"Yes, sir," a demure voice responded from the kitchen. "And where's my aunt?"

"She has retired with a sick headache." "The natural consequence of cleaning house, I suppose," said Eric Hale, with a shrug of the shoulders. "Dear old Aunt Delia! Why shouldn't she be contented to leave things as they were? Tell her, Betsey, that Mr. Washburne has concluded not to exchange until next week, and that, now I'm in the midst of the melee, I'll lend a hand with the business to-morrow."

"Yes, sir." "And Betsey—"

"Sir?"

"Where did you learn to make such delicious coffee? Bring me a cup at once. Bring me a cup at once; I'm ready to drop with weariness; and it is like a dream of Arabia."

And Flora Lee, with the flapping edge of her sunbonnet concealing the amused dimples around her mouth, brought in the oysters and coffee, flanked by a pile of feather light waffles.

"I declare, Betsey," cried the Rev. Eric, facetiously, "if you were a trifle younger and prettier, I'd marry you myself, to make sure of coffee and waffles like this every night."

"Would you, sir?" said the indignant Betsey. "And we'll make a compact, Betsey," merrily went on the young clergyman, as he helped himself to butter, "to finish the house cleaning ourselves to-morrow, and save Aunt Delia the worry and work of it."

"Yes, sir," said Betsey. "But, please, sir, it's all done except the tacking down of the carpets."

"Who did it?"

"I, sir, please, and Mrs. Dove, and Adonijah. And please, sir, I'm going to finish it myself to-morrow, and please, sir," flinging back her sunbonnet and disclosing a coronal of bronzed brown braids, a pair of very rosy cheeks, and eyes full of sparkling, hazel mischief—"I'm not Betsey at all, but Flora Lee, entirely at your service."

The Rev. Eric Hale stared with round-eyed surprise, not unmixed with dismay.

"Miss Lee!" he repeated.

"Exactly," nodded the young lady.

"Did you make the coffee?"

"I did."

"And fry these brown-jacked oysters and stir up these waffles?"

"No one else, Mr. Hale."

"And scrub these rooms?" glancing around.

"Yes, sir, and dusted the cornices, and washed the window glass, and took down all the picture frames, and put the lace curtains in soak, besides other items too numerous to mention," mischievously added Flora, rather enjoying the discomfiture of the young clergyman.

"Miss Lee," said Eric, "I beg your pardon."

"What for, Mr. Hale?"

"For always having regarded you as the most useless of creatures. I recant. I own that you are equal to any emergency."

And when, later in the evening, Mrs. Dove crept out with her head tied up in eau de Cologne, she found her nephew and Flora Lee playing chess together by the fire in the most amiable manner imaginable.

"It's all right," said Mrs. Dove to herself. "I was all right. And Mrs. Eric Hale won her frank, unconventional husband, not through the medium of dress, or jewels, or waltzes, or flower-shows, but through the grim realities of house-cleaning."

"I wanted a genuine helpmeet," says the Rev. Eric, "and have got one."

Women's Work in Farming.

A certain wicked but witty jurist, whenever a culprit was brought before him for trial, invariably asked: "Who is the woman in this case?" A slight measure of truth underlies this repartee, as indeed, must be the case under all satires on weak human nature, else they would not be so keenly felt. The broader and more comprehensive truth in this connection is, that woman is really the basis of most that is good and successful. There is scarcely a leading business man in any vocation who will not gratefully acknowledge his success as being in large part due to his wife. In no occupation is this more apparent than in that of the farmer. All over the country the men who have succeeded in accumulating competency or wealth in farming have had sensible, industrious and economical wives. Because woman does not work in the fields is no reason that her services are not important. On large farms the master himself often does little of the manual labor. He can hire it performed nearly as well as he can do it himself, while his services in overseeing the proper performance of the work are worth far more than anything his own hands are capable of performing. In this labor of supervision the wife's services are quite as effective as those of her husband.

There are several leading departments which, by common consent, are relegated to the sphere of the wife. Embraced in her special department is the management of the household expenses, and, unless dairying is made the chief business of the farm, she has usually the entire care of the dairy. A story is told of one of the early pioneers in a new country, who, with his wife, commenced farming on a tract of 100 acres of wild land, only partially paid for. Year after year they prospered, the 100 acres were paid for, in large part, by the hard earned money which the wife had secured through sales of butter and cheese. Again and again the question was asked by the husband, "Shall I buy another 100 acres?" and the answer by his good wife was always ready and always the same: "Get me 15 more cows and you may safely buy the land." When, in their old age, a fine farm of 500 acres were paid for, the wife could rightfully boast that it was her labor, quite as much as that of her husband, which had paid for their broad acres. The law, which has been called the perfection of human reason, partially concedes the rights of woman in securing one-third of all real estate to the widow for her use during life, and making it impossible for a married man to alienate their home, by sale or mortgage, without his wife's free signature.

More men would have remained prosperous owners of farms, now lost through bad management or other improvidence, if they had listened to the advice of their wives. A faithful wife is in every situation the best counsellor her husband can have. In farming she is usually the conservative partner in the direction, dissuading against extravagant expenditures and doubtful experiments. It may be and doubtless is otherwise in cities, but girls born in the country and accustomed at their fathers' firesides to hear the failures and successes of their neighbors discussed, are often more economical than their husbands. The latter, associating with other men, often have their heads turned, if they are not themselves misled into questionable and extravagant habits. It may seem to the farmer, as he reluctantly counts out the dollars, which his wife has often to fairly beg

of him, that his better half is very extravagant. In nine cases out of ten, however, if he will figure up the useless and often injurious expenses incurred by himself, the sum will amount to more than his wife's allowance for necessary personal expenses. The fact that the husband is more frequently away from home than the wife perhaps gives greater occasion for the expenditure of money, yet even this does not change the importance of a mutual understanding concerning money matters.—*American Cultivator*.

Little Companies—Parlor Games and How to Play Them.

[Written for the Press by LUCY UNDERWOOD McCANN.]
[Concluded from last week's RURAL PRESS.]

"What is My Thought Like?"

The leader thinks of a certain place or thing, writes down his thought to prevent any after alterations, without telling the other players what it is of which he has thought. Then he goes around and asks each one "What is my thought like?" recording their answers also upon the same paper. When all are written down, the leader announces the subject of his thought, and asks each one why their answer was like his thought. The young German was chosen leader, and the game commenced. "What is my thought like?" "A fish," said Mr. Smith. "An old fruit can," cried Mr. Jones. "An old cat," "A spring chicken," "A spade," laughed another of the men. "A black radish," etc. Having gone all around, Karl comes back to the first, announcing to all, "My thought was of a pretty girl." "Were you ever known to think of anything else?" exclaimed Mr. Jones, which sally was highly appreciated by all, as the young German's devotion to the girls was proverbial. "What could a man think of that is nicer?" returned Karl. "But why is my thought like a fish? I should like to know."

"Because," answered the man addressed—hesitating a little—"because, a man often thinks he has caught her, when she has been only nibbling at the bait."

"Ah! Pretty good!" cried the German, "but that was because she had caught sight of the party at the other end of the pole," which turned the laugh against the unlucky fisherman. "But I have you!" cried Karl, turning to the next man. "No logic can find any likeness between my pretty girl and an old fruit can."

"Nothing easier!" exclaimed the quick-witted Mr. Jones. "They are both, at one period of their existence, the embodiment of all that's sweet."

"Ah! thanks!" cried the girls. "Ask him something else."

"Not for worlds!" said Karl. "He has scored one too many already."

"Next! Why is my pretty charmer like a spring chicken?"

"Because," came the ready answer—"she is tender—" [Cries, of "O! shame!" from all the girls] "hearted," continues the gentleman, unabashed, "generally in demand, and always sure of a good market."

"Now, that is better!" said Miss Brown. "Really, girls, this game is nicer, even, than compliments."

"Why is a pretty girl like an old coat? Next man!"

"Because," answered he, "she's such a comfortable thing to have about a man, and occupies a place so near his heart"—placing his hand sentimentally over that member.

"Very well done!" exclaimed the leader.

"But here is a tough one. Why is she like a spade?"—and the gay young fellow laughed as he remembered his former pronunciation of this word. "Ah! ha!" cried the man who had made this comparison, and who had been handled without gloves in a former game, "I'll have my revenge now for all the rough compliments you girls paid me. Of course, she is like a spade, for she can root up anything that is hidden in the community, and spread it around again to its remotest bounds."

"We dare you to play compliments again! We'll remember this!" cried the girls. "Miss Brown, make a note of it!"

"Well, why is she like a black raddish? Ah! tell me that?" said the German, triumphantly.

"Because," answered the next man, deliberately, "though they disagree with some people, they are both greatly esteemed by the Germans." This retort brought down the house, as the one representative of that nation present was a living exemplification of that fact. After several other thoughts, our hostess proposed they should wind up the games for the evening with that lively old play known as

Red Hot Handkerchief.

It will let your brains rest from the strain these deeper games have put upon them; and, simple as it is, creates a great deal of fun. You must all sit around in a circle, except the leader, who stands in the center and throws the handkerchief to any one he chooses. If he can touch that person before they take it to some one else, then they must take his place. If not, he must follow the flight of the handkerchief from one to another until he can touch some one who still has it in his possession, when that one takes his place and starts the ball anew. The fun of the game consists in the rapidity with which it is carried on, and our young folks soon entered heartily into the spirit of the play. Gay shouts of laughter and shrieks of fun rang out, as the leader made desperate rushes to the place where he felt sure that he should catch the handkerchief, but to find it

flying over his head in the opposite direction; or, when some girl, grown nervous with excitement, clutches frantically at the handkerchief she could not toss off to save her life, as she saw the leader rushing towards her with all his might. The game proved to be the jolliest romp of the evening, and all enjoyed it immensely.

When they had rested a little from their exertions our hostess begged that they would again favor her with some music. Gladly assenting to her wishes, they were soon grouped around the piano, and their happy voices rang out in unison as song after song was called for, and sang cheerily by the musicians without waiting for a special insistence as a prelude.

The clock struck 12. It was time to go home. All gathered around their hostess, expressing their indebtedness in various ways for the happy evening.

"Do invite us again soon," begged Miss Brown; "we've had such a lovely time, and thank you so much."

"Really, if you don't, we shall have to invite ourselves and come to you. We can't play games without your help!" said Miss White. "And we are bound to play games!" laughed Mr. Jones. "It rejuvenates one so! I feel as if I had a spelling book and a ginger cake in my pocket, this minute." "We always enjoy an evening with you so much, that we long to repay you in some way for contributing so greatly to our happiness," said Karl, as he took her hand in parting. The "good nights" were said, and the gay group gone. As our hostess turned out the lights, she thought to herself, "How happy they have been, and how little trouble it has cost to have made them so. I will have them all again soon."

Chaff.

A GENTLEMAN, noted for his extravagant assertions, contended that the flogging of children was morally injurious, and went on to prove it. "My father," he said, "once flogged me very severely when I was telling the truth." "Wal, now," observed another American at the other end of the table, "I have known you since you grew up, and it appears to me that your father cured you."

WHEN Cousin Mary was three years old she attended church for the first time with her aunt. During the sermon she heard the minister mention the name of God several times, and acted as if she knew he was doing something wrong. At last she could stand it no longer. The next time he said it she rose up in her seat, and pointing her chubby finger at him, said in impressive tones, "Man, 'top your swearin'!"

THERE is a story of Solomon not contained in the "Book of Kings." Two of his court damsels had a row as to precedence. Solomon looked kindly and said: "Let the oldest go first;" and the damsels embraced, and went back together with entwined arms.

At one of the stations on the Erie Railway lives a New York book-keeper, who is fond of green food. A gentleman recently presented him with a pine apple, which he gleefully took home. The next day the gentleman asked him how he liked it. "Well," said he, "we boiled it for two hours with a chunk of corned beef, but I can't say it was as good as cabbage."

A LAWYER recently lost a bride in a peculiar way. He appeared at the wedding, but on being called to the ceremony, from sheer force of habit protested that he was not ready to proceed and demanded delay. And so the bride got mad and shipped him.

ON the Rue St. Lazarre the other day a chair was seen on which lay a hat with the following notice: "Please don't forget the poor beggar, who is just taking his breakfast."

A LITTLE boy went to a shop for some eggs. Before reaching home he dropped them. In answer to his mother, who asked, "Did you break any?" he replied, "No, I didn't break any; but the shells came off from some of them."

JUST down the intervals where the brake ferns grow rank, she placed her easel and sat down by it, sketching from Nature:—"Please, ma'am is that me you're drawing milking that cow in the picture?" "Why, yes, my little man, but I didn't know you were looking." "Coz if it's me," continued the boy, unmindful of the artist's confusion, "you've put me on the wrong side of the cow, and I'll get kicked way off the lot."

Thanksgiving Day.

Governor Perkin's Proclamation.

STATE OF CALIFORNIA.)
EXECUTIVE DEPARTMENT.)

The observance of one day in the year as a day of thanks giving, rest, and recreation, is now recognized as a national custom. It is the annual Sabbath of the American nation, on which occasion all men of all beliefs and creeds may congregate around the altar of their respective faiths and render grateful thanks to the Giver of all good for the blessings he has bestowed upon us as a people, for the rights which civil liberty has given us and for our unimpaired enjoyment of religious freedom.

In accordance with the proclamation of the President of the United States, and in full harmony with his sentiments therein expressed, I, George C. Perkins, Governor of California, by authority of the power vested in me, do hereby proclaim Thursday, the 30th day of November instant, as a day of public Thanksgiving, and I do further recommend that all secular business be on that day suspended. Let the day be marked in the annals of our life as a time set apart for devotion, as each of us may desire according to our conscientious opinions, in extending our assistance and sympathies to the poor and lonely in family reunions, in friendly greetings, in charitable deeds, so that all who dwell within the land may rejoice and be glad in the season of National Thanksgiving.

In testimony whereof, I have hereunto set my hand and caused the Great Seal of the State to be affixed, at Sacramento, this, the 9th day of November, A. D. 1882.

(Seal.)
GEO. C. PERKINS, Governor.
By the Governor: D. M. BURNS, Secretary of State.
God save the Commonwealth of California.

Young Folks' Column.

Five Little Chickens.

Said the first little chicken,
With a queer little squirm,
"Oh, I wish I could find
A fat little worm!"

Said the next little chicken,
With an old little shrug,
"Oh, I wish I could find
A fat little bug!"

Said the third little chicken,
With a sharp little squeal,
"Oh, I wish I could find
Some nice yellow meal!"

Said the fourth little chicken,
With a small sigh of grief,
"Oh, I wish I could find
A green little leaf!"

Said the fifth little chicken,
With a faint little moan,
"Oh, I wish I could find
A wee gravel stone!"

"Now, see here," said the mother,
From the green garden patch,
"If you want any breakfast,
You just come and scratch!"

—American Kindergarten Magazine.

No Babies.

It was a warm summer morning. Little Nellie was busy rocking the baby's cradle. How cool and clean it looked with its white sheet and pillow; while baby Grace in her blue lawn dress looked like a sweet dolly lying there so still under the pink netting. But somehow Nellie liked her little sister better when the blue eyes were wide open, sparkling with smiles and the rosy lips prattling some new word.

"Is she a goin' to sleep all day? There—one, two, three, four, five, six, seven, eight, nine, ten, why, I thought the clock would wake her sure. Dear, dear, a whole hour yet till dinner," said Nellie.

Her mother was very busy in the kitchen preparing an early dinner for the men in the hay field, so you see Nellie was a little country girl. She kept looking out of the window, and each time she looked back the neat sitting-room looked darker and hotter than before. How cool it must be in the shade of the big beech where papa had lately made a swing for her and a rustic seat for mamma. She wished the afternoon would hurry and come, for then mamma would take her sewing and sit out there; Gracie would tumble about on the velvet grass and she would swing and swing.

Bye and bye the little fat foot slipped off the rocker, and it was very easy for it to keep slipping off after that. Still the baby slept, and soon Nellie tip-toed softly out of the room for just one swing.

"I guess mamma didn't hear!" thought Nellie, naughtily, thus showing that the careful tip-toeing was not for baby's sake alone. She climbed into the swing, but it was warm even there, and conscience whispered: "Better go back and mind the baby when mamma is so busy."

"Wish I could go where there are no babies this hot weather," she answered, angrily.

"I'll take you there," said a queer little man, who seemed to rise out of the ground at Nellie's feet.

"Where?" asked Nellie, in a frightened voice.

"Why, to 'No Babyland,' to be sure," answered the stranger.

Then he placed Nellie on his shoulder, and strode away across the sweet clover meadows and golden wheat fields and through a thick, dark woods, where he turned round and round so many times that Nellie felt that she could never find the way home again. At last he crossed some high hills and they came into an open country, where Nellie saw a great many fine houses, but somehow they did not look pretty like her father's white cottage, with its vine-wreathed windows. Here no birds were singing in cages in the long porches, no downy ducklings played in the green grass, no puffy yellow chicks followed the lonely looking old hens, no funny spotted pigs and calves nor snowy lambs frolicked in the barn-yard.

"Only grown-up people here! Don't allow no little things around. Expect they'll drive me off with you," chuckled the little man, "or throw you clear away, back over those high hills."

Nellie clung to his neck with terror as she saw some people approaching them, but the old man stroked her hair softly, until she dwindled to a tiny midget and crept down into his breast pocket.

"Now I'll take you into one of these fine houses," said her strange companion.

How stiff and cold everything looked, and everybody was so cross; she looked in vain for a woman with a lovely, smiling face and sweet eyes like mamma's. There were no dainty cribs, no little chairs nor dresses, no toys nor picture books to be seen anywhere. Then everything was so dimly quiet, not a ripple of laughter nor snatch of song broke the stillness.

"Would you rather go home and be bothered with baby than to try to live here?" asked the old man.

"Yes," whispered Nellie.

Then the old man turned his pocket wrong side out, and she fell down—down on the soft grass under the swing.

"Oh!" she cried, rubbing her eyes and looking hard at the house to make sure that it was really her home after all. Then she ran to it as fast as the chubby feet would carry her.

"You're the dearest, darlinest baby that ever was—you are," said she, as she stood on the round of Gracie's high chair and hugged and kissed her.

Mamma looked at her soberly, and said: "You did not love her so well awhile ago when you ran away to swing and left her to fall out of the cradle and bump her head."

"I've been to 'No Babyland,'" she said, "but I'll never go again—I—"

"To where?" laughed papa, and all the men at the tidy dinner table joined him.

"Never mind," said mamma, gently, as the tears rolled over Nellie's fat rosy cheeks, "my little girl's been dreaming, that's all. After dinner she may tell me about it."

Then she helped Nellie to her chair beside papa, hiding a quiet smile as she filled the little plate.—Emma Stout in *Western Rural*.

THE BOY HAD THEM!—A lad in Boston, rather small for his age, works in an office as an errand boy for four gentlemen who do business there. One day, the gentleman, chaffing him a little about being so small, said to him: "You can never amount to much, you never can do much business, you are too small."

The little fellow looked at them. "Well," said he, "as small as I am, I can do something that neither of you four men can do."

"What can you do?" "I can keep from swearing," said the little fellow.

There were some blushes on four manly faces, and there seemed to be very little anxiety for further information on the point.—*Exc.*

GOOD HEALTH.

Hot and Cold Drinks.

A correspondent of *Knowledge* calls attention to some of the disadvantages of hot drinks. Cold drinks, he says, are natural to man, though most people nowadays are so used to hot drinks that they do not feel satisfaction—really stimulation—unless they have them. Hot drinks are injurious to the tongue, for they deaden its sensation, and, after taking hot soup or drink, the tongue becomes quite numb and unable to taste the fine flavors of a dish. The teeth are greatly injured by them, and many dentists say caries (decay) is due to them alone. They crack the enamel, and thus allow caries to set in. When caries has once set in, hot drinks are a common cause of neuralgia.

Hot drinks are especially hurtful to the stomach. They cause irritation of the nerves of the stomach, and consequent mild inflammation of that organ, so that after a hot drink the stomach is red and congested. In time a debilitated condition is set up. A temperature of 100° Fahr. also destroys the active ferment of the gastric juice—pepsin—and so leads to indigestion. If the stomach is at all disordered, hot drinks give rise to much gripping pain, and in many cases to vomiting. In cases of diarrhoea, too, hot drinks only increase it, while cold ones tend to lessen it.

Thirst is not common in winter, unless sugary, or hot spiced foods have been taken. In cold weather the air contains more moisture than in hot, and in cold weather there is less perspiration. Hot drinks increase the volume of heat in the body, and if that is not required it is quickly got rid of by the skin. Water is the best thirst quencher, but if simple food be taken, the need of drinks will be small. Many vegetarians drink nothing from month to month, the only fluid they get being the juices of the fruits which they eat. But pleasant drinks, like tea, coffee, etc., may be taken lukewarm for a time with little apparent damage. The least injurious is cocoa, made with plenty of milk, and allowed to stand until nearly cool. A good test is to apply the little finger to the drink, and if it be not too hot to it, then it may safely be taken.

REMARKABLE SURGICAL OPERATION.—The Paris Academy of Medicine was recently informed by the operator that the young man on whom an operation was performed for the extraction of a spoon from his stomach has completely recovered from the effects of the hazardous operation, and is now enjoying his usual health. Interesting particulars are given of this operation, which was performed by Dr. Felizet. By the use of the Faucher tube, introduced through the mouth, the stomach was cleansed prior to the novel operation, which prevented the risk of peritonitis. An incision was then made in the epigastric region. In order to render the coat of the stomach easily accessible, M. Felizet employed the following contrivance: To the end projecting from the man's mouth he fitted a spherical vessel containing ether. This he heated by submersion in water of 60° temperature. The ether vapor rushing through the tube filled the stomach, which, becoming distended, was brought forward to the wound effected by the operator's knife. The spoon was thus readily found and extracted. It measured over nine inches. It had been accidentally swallowed by the man, a waiter at a cafe, in the attempt to imitate the feats of the famous sword swallower.—*Paris Cor. London Standard*.

DOMESTIC ECONOMY

SNOW FOR DESSERT.—A quart of rich milk, four good tablespoonfuls of corn starch, whites of four eggs, a cup of powdered sugar, a spoonful of butter, lemon or vanilla and a little salt. Bring the milk to a boil, stir in the starch, which has been wet up to a thin paste with a little cold milk, cook until it thickens, add sugar (careful not to burn bottom of dish), draw to the back of the range, stir all the time, let stand five minutes longer, turn out and beat in the butter. Stir occasionally until cold, then beat in the whites, which should be whipped to a stiff froth, flavor, turn into a wet mold and set in a cool place. Make the day before you wish it.

BONED HAM.—Soak a rather small ham in water over night; in the morning boil until perfectly tender in two waters, adding a cupful of brown sugar each water. When done let cool, then carefully remove bone. Fill the opening with cold minced chicken, veal or mutton, well seasoned. Press into shape; tie with tape if necessary; put back into the pot; just bring to a boil; remove pot from fire, and let ham remain in until liquid is cold. Skin; cover the top with the whites of two eggs beaten to a froth, and sprinkle over cracker dust. Set in the oven until nicely browned. Do not slice until cold.

COFFEE CUSTARD.—Take a large cup of fresh ground coffee, break an egg into it, mix it up well, put it into a coffee pot with a pint of boiling water. Boil it five minutes, add a cup of cold water, and let it stand ten minutes. Turn it off very clear into a saucepan, add a pint of cream, and give it one boil. Have ready eight eggs well beaten, one and a half cups of sugar. Turn the coffee and cream, boiling hot, on the eggs, stirring all the time. Put the custard into a pitcher, set it in boiling water, and stir it all the time till it thickens. Serve in cups to eat cold.

PRUNE PUDDING.—One pound of prunes, one quart of milk, six eggs, eight large tablespoonfuls of sifted flour, a little salt. Wash the prunes, and let swell in hot water until soft. Drain, take out the stones, spread on a dish and dredge with flour. Take a little of the milk and mix the flour smooth with it. Beat the eggs very light, add to the mixed flour; pour in the rest of the milk, add the prunes, stir all together, pour into a buttered dish and steam two and a half hours.

BOILED CABBAGE.—Select a firm cabbage, boil until tender and let get perfectly cold. Then chop fine, add two beaten eggs, half a cup of milk, a tablespoonful of butter, and season with pepper and salt. Mix well, press tightly into a buttered baking dish, cover, bake half an hour, uncover and bake 15 minutes longer. Turn on to a hot dish, pour over a cup of drawn butter and send to table.

GERMAN CRISPS.—Two cups of sugar, one cup of butter, the rind and juice of one lemon; mix thoroughly, either with a spoon or with the hand, adding sufficient flour to make them thick enough to roll out; roll very thin, and cut in small cakes with a cutter; after placing in a pan, rub the tops with eggs and sprinkle with white sugar; two eggs are enough for the tops of the cakes; they only require a few minutes to bake.

SQUASH PIE.—Pare, take out the seeds, and stew the squash till it is very soft and dry. Strain it through a colander. Mix milk with it till it is thin as batter, and add sugar to taste. Allow three eggs to a quart of milk, beat the eggs well and add them to the squash; season with rose water, cinnamon or nutmeg. Line a pie plate with crust, fill and bake till the center of the pie rises up, forming an oval.

CHEESE PATTIES.—Roll out puff paste quite thin; strew over it some good grated cheese, and fold it over; repeat this three times, rolling it out each time; then cut the paste into square or fancy forms, brush them over with the yolk of a well-beaten egg, and bake in a quick oven about fifteen minutes. To be served when done in a hot napkin and eaten at once.

FRIED WHOLE POTATOES.—Select those the size of an egg. Peel and boil in salted water. Take from the fire as soon as tender, so that they may remain whole. Have ready a beaten egg and some powdered cracker. First roll the potatoes in the egg and then in the cracker dust and drop into boiling lard. Cook until quite a deep brown.

FRENCH FRIED POTATOES.—This is an excellent way to use up small potatoes. Pare the little ones, cut in half, then in quarter. Put into a wire frying basket and cook in hot fat for 10 or 12 minutes. Drain, sprinkle with salt and serve.

FRUIT CAKE.—One pound of flour, one pound of sugar, one and one-eighth pounds of butter, one-half pound candied citron, four pounds of currants, four pounds of raisins stoned and chopped, nine eggs, one tablespoonful each of ground cloves, cinnamon, mace and nutmeg, and three gills new milk.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

S. H. STRONG

SAN FRANCISCO:

Saturday, November 18, 1882

TABLE OF CONTENTS.

EDITORIALS.—A Chapter in the History of Tea; How to Apply Fertilizers to Fruit Trees, 381. The Week; Treatment of Peach Orchards; The Raisin Crop; Obstructing Navigable Streams; The Dairymen's Movement; Plant Figs, 388. Oleomargarine and Butter Under the Microscope; Steam in Chinese Vats; Pacific Coast Lumber Interests; Eastern Opinions on Our Wool Industry, 389. Patents and inventions; Notices of Recent Patents, 385.

ILLUSTRATIONS.—Leaves of Different Varieties of the Tea Plant, 381. Oleomargarine and Butter as Seen with the Microscope, 389.

QUERIES AND REPLIES.—The Apricot Question; Bluestoning Seed Wheat; To Keep Hogs from Rooting, 388.

CORRESPONDENCE.—Pasadena Notes; Plowing for Beets, 382.

THE STOCK YARD.—Jersey Notes, 382.

FLORICULTURE.—California Roses—No. 1, 382-3.

THE DAIRY.—Death of A. A. Willard, 383.

THE STABLE.—The American Horse, 383.

PATRONS OF HUSBANDRY.—Grange Leaflets—No. 11; An English View of the Grange; What the Grange Means; Off for the National Grange, 384.

AGRICULTURAL NOTES, from the various counties of California, 384-85.

NEWS IN BRIEF.—On page 385 and other pages.

THE FIELD.—How Much Seed Wheat to the Acre, 386.

HOME CIRCLE.—Don't Leave the Farm; A Mountain Spring (Poetry); Romance of House-Cleaning; Women's Work in Farming, 386. Little Companies—Parlor Games and How to Play Them, 386-7. Chaff; Thanksgiving Day, 387.

YOUNG FOLKS' COLUMN.—Five Little Chickens (Po. try); No Babies; The Boy Had Them, 387.

GOOD HEALTH.—Hot and Cold Drinks, 387.

DOMESTIC ECONOMY.—Snow for Dessert; Boned Ham; Coffee Custard; Prune Pudding; Boiled Cabbage; German Crisps; Squash Pie; Cheese Patties; Fried Whole Potatoes; French Fried Potatoes; Fruit Cake, 387.

MISCELLANEOUS.—Is Flugal's Cave the Work of Man; Artificial Silk, 383.

Business Announcements.

Fairy Sewing Machine, E. G. Rideout & Co., New York. Agricultural Implements, Grangers' Union, Stockton. Sheep, J. B. Hoyt, Bird's Landing, Solano Co., Cal. Cards, Card Mills, Northford, Conn. Berkshire Pigs, I. J. Truman, San Francisco. American News Exchange, Cincinnati, Ohio.

The Week.

We have swung fairly into the area of frosts. Morning after morning the crystals have gathered on the city planking, and on the vegetation which is now thickly covering the fields. North winds have also intruded their unwelcome presence, and in some parts, where the early rain was light, the winds are struggling with the tiny plants for the possession of the moisture. But it is a season of exceedingly clear air, and of clear bright sunshine, too, during the shorter days which are granted for sunlight.

Field work is progressing rapidly, wherever the soil is moist the plow-depth. Large tracts are being worked extra deep, and stirred with the subsoiler for the trees and vines which are to come. There is great interest in land sales, and the country records of transfers are filling larger pages than usual. Land for fruit trees, land for vines, land for hops and land for other crops—there never was a time in the history of the State when so much money was going into agricultural improvements as at present. It is well, for this means development, progress, and the upbuilding of the commonwealth.

Treatment of Peach Orchards.

California fruit growers have shown a disposition to examine the maintenance of the peach tree, as shown by the recent discussions of the State Horticultural Society. Frequent allusions are made to the experience of growers on the Delaware peninsula as likely to afford data of interest to California peach growers. We have just been reading the observations made by Mr. P. M. Augur, State Pomologist of Connecticut, who recently visited the Delaware orchards. What first surprised him—familiar with the New England idea that one or two crops is about all that can reasonably be expected from the peach—was the size of the trees. For example, in the orchard of Mr. Phillips, of Milford, the average diameter of stem is 18 inches, and individual trees are from 12 to 14 inches through and evidently 15 to 20 years of age, and some of them undoubtedly older. He writes: "Nearly all the orchards in Delaware have a healthful appearance, and yet all admit that there is such a disease as yellows, and wherever they see a tree thus diseased it is torn out and destroyed. On the whole, they consider their orchards more healthful than 20 years ago."

Mr. Augur's notes on the manuring practiced by the Delaware growers are of much interest. Speaking from a New England point of view, he says: "We should regard their manuring as rather light, indeed I think too much so, and yet there is a question whether strong nitrogenous manures do not predispose the peach to an early decline. A very common practice among the best growers is to make an application of lime of 15 to 25 bushels per acre once in four or five years. Why do you do this? 'Well,' says Mr. Eccles, of Dover, 'it sweetens the land.' I have pondered that idea, and I think here is a nut with a sound kernel in it. How often does the prudent housekeeper have recourse to her soda to sweeten her sour dough, and I more than suspect that the presence of lime is oftener needed in our soils, not so much as plant food as for a corrective, or as Mr. Eccles says, to 'sweeten our soil.'

"Another idea suggested and held to very strongly by Mr. Harris, of Georgetown, was of carefully graduating the amount of lime to the condition of the soil. Thus a very rich piece of soil, says one, will bear 30 bushels of lime, while 10 or 15 bushels will be enough for a thin soil. Why? Because, says he, if you get on too much it burns the soil. Thus an overdose of lime in soil is not so unlike an overdose of soda in cookery. Again we find that a judicious use of ashes is commended by the best growers, while others assert that ground bone or a good superphosphate would be productive of good results.

"Again the moderate use of salt is spoken of as beneficial; two and one-half bushels per acre is considered enough for one application. J. L. Haverline, of Dover, who has 170 acres of peach orchard, has one orchard which some years since was considerably overflowed by a great tidal wave; the effect of the overflow was highly beneficial to the orchard, hence we conclude that a light application of salt occasionally is desirable. The thought has occurred to us whether Delaware peninsula, lying between these two great arms of the sea, may not in consequence have just about the right amount of calcareous and saline matter to make it the natural soil for the peach.

The question of varieties is of great importance, and as California growers are now testing all the varieties named, we give the following notes of their characteristics and comparative values:

"The Alexander, Wilder and Amsden are about the same. The first is considerably planted for very early shipments. Hales rot badly in a wet season. Beatrice too small. Early Rivers rot nearly as badly as Hales. But none are as good as Troth's Early, except in time of ripening. Red Rariphe bears well, but driers and canners don't like its clinging habit. Early York is nearly superseded by Mountain Rose. Old Mixon is very hardy, healthy, a good bearer and a good peach, but comes in the glut of the season. Stumps, as good, closely following Moore's Early, very good, resembles Old Mixon. Ward's Late is good, following the Stumps. Among yellow peaches Crawford's Early has had a great run, and still has, but the impression is that Foster is going to prove better. Crawford's Early is rather tender and a little inclined to deceive. Reeves' Favorite is one of the choicest peaches, following Crawford's Early, is considered not quite productive enough, but this year the trees are literally breaking with their load; quality best. Crawford's Late is perhaps the most important peach in Delaware, has held, does hold, and will hold a prominent place for a long time to come. Susquehanna is perhaps the very best peach, but not productive enough to be much planted. Mary's Choice is very good or very poor, depending upon the amount of fruit it is allowed to carry. When overloaded it is poor, when thinned it is superb. It is productive to a fault, and needs thinning. Salway at its best is superb, inclines in Delaware to ripen one-sided; does better on the Hudson. Smock is the late peach, fine for canning, and will yield to the basket one pound more dried fruit than any other sort. Many say that in planting a large orchard the Smock should have one-third the

ground. What is imperatively needed now is a better early shipping peach."

Delaware peach growers are going extensively into evaporators. Mr. Augur found 80 at work within a radius of eight miles, working night and day. There are also many canneries, and thus the surplus of soft fruit is turned to good account.

The Raisin Crop.

The raisin crop this year has been frightfully overestimated by nearly all who have lent their pens toward raisin figures. The entire crop will probably not exceed a third to a half of the amounts fixed in the estimates. Mr. Blowers has been credited with a yield of about 9,000 boxes. We saw him the other day, and he said his crop was 3,800 boxes. Mr. Briggs, of Davisville, if we mistake not, will not market over 10,000 boxes. There have been large losses by the heavy rains, and many grapes sold to the wine makers which were intended for raisins.

We asked Mr. Blowers about his Sultanas, and he assured us that he had Sultana vines five years old which yielded him this year 17 tons to the acre, which he thinks is the head of the grape yields yet reported. There are few localities where the vine would do nearly so well as with Mr. Blowers, so the yield he reports must be looked upon as an exception, and not to be generally expected. His vines are 8x10 feet apart, and cover the ground completely with their foliage.

The Sultana is being tried experimentally by many wine-makers this season. Mr. Blowers received twice as much per ton for Sultanas as for Muscatellas from the wine-makers.

Raisin-making will be one of the subjects for discussion at the next meeting of the State Horticultural Society in this city, November 24th, and it is expected that a large attendance of those interested in this branch of industry will attend.

Obstructing Navigable Streams.

A decision has just been rendered by J. F. Cowdery, City and County Attorney of San Francisco, on the obstructions in Islais creek which is of interest because of its wide bearings upon the preservation of other navigable streams. The obstructions have been ordered removed by the Board of Supervisors, thus acknowledging the truth of the position taken by Mr. Cowdery. The whole point of the matter is that by the organic act of California admitting the State to the Union, there is provision that no power shall rest in the State to obstruct navigable streams, but the same must be kept open as naturally found. This point has, of course, a direct bearing upon the debris question, and was used with good effect by Attorney-General Hart in his argument on the Gold Run case. Credit for bringing forward this important point is due to Peter T. Seculovich, President of the Islais creek property owners' association. City Attorney Cowdery in his opinion says: "It is doubtful if I would have been able to arrive at a satisfactory solution of the questions involved were it not for the assistance of Peter T. Seculovich," etc. The service of this gentleman in aiding to place the preservation of our navigable streams and our grand harbor on an irrefragable basis is worthy of general recognition.

The Dairymen's Movement.

There was a meeting of dairymen at Watsonville last week, according to announcement, but as yet but meager reports of the proceedings have been received. Mr. Baldwin was chosen President, and F. W. Moore Secretary. The organization was named "The Dairymen's Protective Association of Santa Cruz County," and the members have issued a call to all the dairy counties in this State to meet on the 25th inst., to elect three delegates to meet in San Francisco on December 12, 1882, for the purpose of organizing a State association. At the meeting in this county they passed a resolution pledging themselves not to consign any butter or cheese to firms that deal in oleomargarine. It was also decided to issue a letter of appeal, and urge its publication in all the papers, calling upon all dairymen to assist in the work and make the general meeting in this city December 12th representative in its character and membership. We commend the subject to our dairy readers.

PLANT FIGS.—Let us urge the planting of figs in variety and plentifully in all homesteads in California where the fig will mature. Children seven years old can plant outtings of fig trees that will bless them and the older members of their families bountifully when 10 and 12 years of age. It pains us to ride over one of God's most fruitful countries in the dry and thirsty season and find only one place in many where people have blessed themselves with tree of any kind. Thousands are shadeless and without fruit in our great valleys who can in three to five years have plenty of bearing fig trees by sticking a few cuttings in the ground this fall and taking a little pains only with these sources of healthy food. Plant fig trees!

QUERIES AND REPLIES.

The Apricot Question.

EDS. PRESS.—Mr. Edward Berwick asks for a recipe for making "sugarless jam." Here it is: Cook ripe pitted Petite d'Agen prunes to a pulp, with nothing added but a little water. Mrs. C. has sent him a small can as a sample.

I must still adhere to my former statement, that the market in England for apricot and other jams is practically unlimited. I do not remember saying anything about paying four or five cents a pound for apricots, and 12½ cents for sugar, or any other figures. Apricots will pay the producer well at very much less than four cents; and although I am always strongly opposed to any monopoly which shall endeavor to rule the price of fruits to the disadvantage of the raiser, yet the sooner the idea that our people have that they are going to make a fortune in a year or two, as some are doing, by fruit growing, is dispelled, the better it will be.

California fruits are unknown in England, whatever Cross & Blackwell may advertise, and what I said about the market being unlimited I gathered chiefly from a large horticulturist in Oxfordshire, and from leading merchants and others. I have but recently forwarded a sample case of our canned and dried goods (put up for me by San Francisco dealer) to a gentleman living near London, who is now retired from business, and who has always taken great interest in fruits. Extracts from the English press at different times prove the profound ignorance that exists with regard to California or her products. It is much too early yet to say what figures our best fruits will sell at in the English market. Apricot jam was the only article I had particular reference to, but we shall find before many years that California dried and canned goods will also find ready sale there. There is much more that I would like to say referring to Mr. Berwick's article, which is very entertaining, but it would hardly interest the readers of the RURAL, and, also, I am much pressed for want of time.—LEONARD COATES, Napa, Cal.

Bluestoning Seed Wheat.

EDITORS PRESS.—Much has been printed from time to time in your paper on the efficacy of bluestone as a preventive of smut, some affirming and some denying its efficacy. I was for many years a successful wheat grower in this State, and as a preventive of smut I have always found bluestone root effectual. The reason why some have found it ineffectual, I apprehend, was, that some portion of the seed was not thoroughly permeated with the dissolved bluestone. My method of preparing my seed was as follows: I dissolved as many pounds of bluestone in water as I intended to prepare 100 pound sacks of wheat. I took a trough or cask large enough to hold two or three 100-pound sacks of wheat, and emptied the wheat in the same; then turned in enough of the dissolved bluestone to completely cover the wheat. I then drew off the bluestone water, and immediately resacked the wheat thus treated, and set it away for use the next day or the day after that. The wheat in the sack by the following morning will have completely absorbed the dissolved bluestone, and to the touch will only feel a little damp, and will scatter as readily from the hand or seeding machine as though it had never been wet. I never found a head of smut in my fields of wheat where the seed had been treated in that manner.

Of course the process in the trough may be repeated till the whole lot of seed wheat proposed to be used during the next day or two is prepared, using the drawn off bluestone water over and over—occasionally adding a little to keep up a sufficient quantity to wet all the wheat to be sown.—WM. C. BLACKWOOD, Haywards, Nov. 11, 1882.

To Keep Hogs from Rooting.

EDITORS PRESS.—Have any readers of the PRESS tried the "Eureka Anti-rooter and Animal Conqueror" sufficiently to know if it is a perfect success in keeping hogs from rooting? If they have, they will confer a favor upon a number of hog raisers in this valley by making it known through the PRESS.—J. L. BOURLAND, West Bishop, Inyo Co., Cal.

READ FARM PAPERS.—The reading of agricultural papers will afford information on questions of the farm and household, and in many minor matters ideas will be caught, and may be improved upon. Through this channel farmers and their families, however remotely separated, are brought together and become mutually sympathetic. They divide trouble, and all learn the best means for avoiding it. What one does and thinks is read of by all, and thus information is imparted and received. Farmers, no more than men of other professions, can afford to rely upon the knowledge which their own brains can give them. They must, to a great extent, learn of others, and this must be done by reading. So that an agricultural paper is one of the best of farming tools.—Southern Planter.

THE sale by Vanderbilt of \$10,000,000 of four per cents at \$1.17 and \$1.71½ nets a very large profit to him, he having paid only a little over par value for the same, and has since collected interest at the rate of four per cent, per annum. The sale was also opportune for the institutions which purchased the bonds.

Oleomargarine and Butter Under the Microscope.

[Read before the San Francisco Microscopical Society by Edward J. Wickson, Editor PACIFIC RURAL PRESS.]

The appearance of the imitation butter, commonly termed "oleomargarine," upon the San Francisco market makes it timely to call up the microscopical history of this compound, which is made by churning the softer fats of the slaughtered animal with sour milk, and adding thereto coloring matter and salt, producing an article which has a semblance to butter, but lacking the aroma and flavor of the choice product of the butter maker.

Soon after oleomargarine appeared at the East the question of tests to distinguish it from the genuine article arose. Both the chemist and microscopist attacked the problem, and both soon announced distinguishing reactions and appearances between the fat derived from the milk and that from the tallow. The chemists vary in their methods of distinguishing the false from the true, some relying upon detecting the absence of the finer butter fats which give the well-known aroma and flavor, others employing the specific gravity test, others making use of the different colors produced by the addition of proper reagents to the two articles in question. These tests are duly recorded in the chemical journals.

The microscopist rests his case upon the discovery in the oleomargarine of traces of the crystalline fats found in the tallow, but not in the milk fats, the latter always existing in globular form, no matter in what condition the butter may be at the time of observation. The first announcement of this discovery in this country was made by John Michels, of New York, in a communication to the *American Dairyman*, dated June 1, 1878, in which he gave drawings of the microscopic appearance of oleomargarine and butter, which I have the pleasure of showing you this evening. Accompanying the drawings was this description:

I procured a small sample of oleomargarine, placed a fragment on a glass slide, covered it with a thin glass, and pressed it out to a thin film. A sample of butter was treated in the same manner. Both were then examined with a four-tenths objective and drawings made with the camera lucida. It will be noticed that the large, feathery crystals are characteristic of oleomargarine, and that the general appearance of the sample is different from that of butter, which merely shows the fat globules observed in milk, with here and there a crystal of common salt.

The announcement was met by contradictions by others who examined the materials microscopically in the interest of the oleomargarine makers, but that the appearances claimed by Mr. Michels do exist, I shall have the pleasure of showing you from a sample procured in this city.

The experts who examined oleomargarine in the interest of the makers were handled without gloves by other well-known microscopists, who examined the material in the public interest. It will not be worth while to go at length into the controversy, but rather to cite the announcements made by men whose authority as microscopists needs no affirmation.

The *Scientific American* of June 15, 1878, contained the following:

Mr. Thomas Taylor, the microscopist of the Department of Agriculture, at Washington, has been examining under the microscope and comparing different specimens of butter obtained in the markets of that city, with the view of determining the difference between pure butter and that made from oleomargarine, or butter made by churning fat with cream. He finds that, when viewed under the microscope, pure dairy butter presents a uniform appearance as far as color is concerned. The forms seen consist of oil globules and the crystals of common salt. When viewed by polarized light very little change of color is observed; but when a specimen of oleomargarine is examined in the same manner, the field is speckled all over with shining particles, which change color with every quarter turn of the analyzer, and Mr. Taylor has demonstrated that these glistening points consist of crystallized fat. In using a power of about 250 diameters, animal tissue is also seen more or less over the whole field, and a thin sheet of the fat placed under a power of about 75 diameters exhibits the polarized light beautifully, each solid fat cell showing all the colors of the rainbow; and, on turning the analyzer or polarizer, the changing complementary colors are exhibited. The process of grinding the fat by means of rollers destroys the solid crystalline cell contents; but the glistening appearance remains the same under polarized light, only subdivided, as a natural consequence.

One specimen of the oleomargarine butter examined by Mr. Taylor was highly charged with animal tissue and the urate of magnesia, the crystals of which were well defined, showing that the fat used in this case was impure, and probably that of a diseased animal, which would seem to prove that the assertions made by the oleomargarine manufacturers as to the perfect purity of the fats used by them are not altogether correct.

From this it would appear that oleomargarine may be easily known from butter by the aid of the microscope, and that any impurities in the fats of which it is composed may be readily detected; and that it would pay large consumers of butter to microscopically examine their purchases so as to be certain of the quality or purity of the article they buy for butter.

With reference to the advice to consumers of butter to test their purchases by the microscope, I would remark that the observer must have some skill in manipulation, must secure a very thin film and use a moderately high power, or else he will fail to discover the distinguished characteristics of oleomargarine, and to this fact I think are due the statements of some who claim to have examined the materials, that the distinction pointed out could not be found.

To continue the review of authority on the microscopical examination of oleomargarine, I will present the results reported by Prof. J. Edwards Smith, of Cleveland, Ohio, as published in the *American Journal of Microscopy* for 1878:

I obtained three samples of oleomargarine from the manufacturers, and one sample of pure dairy butter from

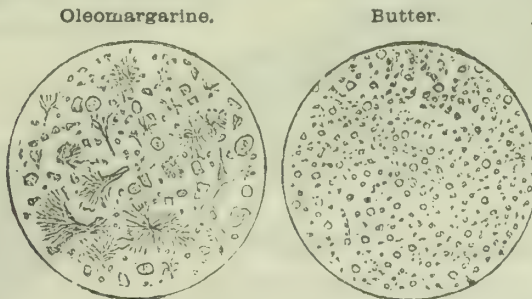
a farmer. The four samples were subjected to examination under the microscope; the objectives used were a $\frac{1}{2}$ inch of 100" by Tolles, and Spencer's late duplex, $\frac{1}{2}$ of 180". The oleomargarine samples were marked Nos. 1, 2 and 3. Nos. 1 and 2 were tolerable fair imitations of butter, No. 3 was a poor counterfeit. In samples 1 and 2 the microscope displayed the feathery crystals (oleomargarine) described by Prof. Michels, although these were not constantly present in every field examined. By moving the slide, other fields were brought into view in which these crystals were much more prominent than those given in the cut accompanying Prof. Michels' paper. * * * Besides the crystals named, the samples gave "suspicious cells" in large numbers, accompanied by shreds and tissue fibers, many in a broken-down condition, while others appeared to be in a tolerably normal state, sufficient almost to establish the presence of voluntary muscle. * * * Sample No. 3 displayed fewer feathery crystals, but was the most suspicious specimen of the three. There were multitudes of suspicious cells, shreds and patches of tissue. * * * The sample of pure dairy butter gave fields just as represented by Prof. Michels, with the exception that crystals of salt were almost constantly present.

Another observer, Rev. Mr. Huber, describes in the *Southern Clinic* for 1880 the results of his examination of oleomargarine and butter, using Zentmeyer's grand stand and a Tolles quarter-inch objective. During the preceding two years he had examined several hundred samples of oleomargarine and butter. His results are described as follows:

The difference between natural and artificial butter under the microscope is a most marked one, as every one can see who will look at the two accompanying wood cuts. Oleomargarine shows over the whole field feathery and stellate crystals, which are never seen in genuine butter. I did not find one single sample of oleomargarine free from them. While not every field of the same preparation showed as many as our illustration, and some few fields were nearly free from them, others showed a great many more, besides a number of suspicious looking things—shreds of tissue, muscular fiber, etc.—giving a rather irregular appearance to the whole, while the appearance of natural butter is very regular, showing of foreign substances only the cubical crystals of common salt. In oleomargarine the essential oil globules are of much less frequent occurrence than in butter, which consists almost entirely of them.

These feathery and stellate masses are margarine crystals. They are formed by the separation of solid fat from the natural fatty masses of the body in the cooling of the latter after death. Some very high authorities look upon these crystals as the incipient stage of decomposition, while their continual presence in oleomargarine, and their total absence in butter, show conclusively that there is an important difference between the two articles, and that the fat of natural butter is a different thing from that of oleomargarine.

I have treated the microscopical appearance of oleomargarine from the single point of distinguishing it from butter. The observers I have



OLEOMARGARINE AND BUTTER, AS SEEN WITH THE MICROSCOPE.

cited go much farther, and denounce the material as dangerous, inasmuch as the heat used in the process is not high enough to kill germs of organisms which may exist in the fats used, and which it is dangerous to introduce into the stomach. This branch of the subject it may be important to take up at another time, but the present purpose is to announce a test which one skilled with the microscope may easily apply, and thus free himself and his friends from the consumption of oleomargarine under the guise of dairy butter.

THE SORGHUM PRIZES.—It will be remembered that the U. S. Commissioner of Agriculture early last summer made an offer to the farmers of the country of liberal prizes for essays upon the cultivation of sorghum and sugar beet and the production of sugar from the same. The Department has recently received notice of more than a hundred competitors for the several prizes, but it appears that the accounting officers have raised a point as to the power of the Commissioner of Agriculture to make such expenditure of money, and the office of the First Controller, Judge Lawrence, has intimated to the Department of Agriculture that it would be wise to make no awards as proposed until the First Controller shall have definitely reached his conclusion. The terms of the appropriation act are held by the Treasury accounting officers, it is said, to authorize payment of money from this fund for no other purpose than "continuing experiments in sorghum culture." Commissioner Loring's idea was to advance the interests of this particular branch of his department's work by increasing the stock of knowledge respecting it, and it was with this view that the prizes were offered. The essays which have been called forth by this offer contain a great deal of valuable information, and it would be very embarrassing if, owing to the construction of a Treasury official, he shall have to return them without the promised prizes. It is to be hoped that current reports are incorrect.

STEAM ROAD CARRIAGES.—The principal cause of the lack of success in building a practical steam road carriage is the difficulty experienced in the efforts to so "hang" the engine and boiler that the carriage may run in any direction, or over ordinary obstacles, without seriously affecting the joint and machinery connections. So says an eminent mechanical writer. Even the English acknowledge this in their efforts to run steam road carriages over the exceptionally good roads of England.

Pacific Coast Lumber Interest.

Later announcements have been issued from the census bureau giving the statistics of forestry of the State of California and Oregon and of Washington Territory. With regard to California the bulletin says: The principal trees of the State are redwood, red fir, tide water spruce, chestnut and oak on the Coast Range, and sugar pine, yellow pine and red fir on the Sierra Nevada. Any estimate of the actual amount of lumber standing in the State, except redwood, is not possible with the existing knowledge of the country. The principal lumber industry is confined to the redwood belt, on the line of the Central Pacific Railroad on both slopes of the Sierra Nevada, to points in Butte, Tehama and Mono counties, and in the San Bernardino mountains. The total product of the State for the census year was 304,795,000 ft. of lumber, 242,400,000 laths, 138,718,000 shingles, 2,063,000 staves and 1,203,000 sets of barrel headings.

In Oregon the most valuable trees are in the order as set down; red fir, tide water spruce, red cedar, hemlock, Port Orford cedar, white oak, sugar pine, chestnut, oak, larch and scrub pine. The principal lumber industry centers near Portland and Empire City. The product of the coast regions for the census year was 151,443,000 ft. of lumber, 17,950,000 laths and 2,745,000 shingles. The product of the State east of the Cascade Range was 25,798,000 ft. of lumber, 295,000 laths and 2,295,000 shingles.

Washington Territory, according to the bulletin, is covered west of the Cascade mountains by the heaviest belt of forest growth in the United States. The most valuable trees of this region are red and yellow fir (covering about seven-tenths of the forest growth), red cedar, hemlock and water tide spruce. East of the Cascade mountains the most valuable trees are red fir, yellow and white pine larch, red cedar and hemlock. The principal lumber region is confined to the shores of Puget Sound. The product of this region for the census year was 144,387,000 ft. of lumber, 6,550,000 laths, 710,000 shingles and 2,366,000 staves. The product of the coast outside of the Puget Sound re-

gion was 9,599,000 ft. of lumber and 200,000 shingles, and of the Territory east of the Cascade Range, 6,190,006 ft. of lumber and 2,700,000 shingles.

PREPARING WOOD PULP.—A pulp manufactory in Somerset county, Pa., consuming spruce and hemlock timber, instead of chopping down trees and sawing them up, in order to get the wood into the pulp mill, blows them to splinters with dynamite. An eye witness thus describes the process: "A fine large spruce was selected, and a hole was driven in about 10 inches, the chips were removed, and a dynamite cartridge was inserted. The dynamite comes in sticks like a candle, and resembles moist brown sugar. A fuse was attached, and the men sought a place of safety. In a few seconds there was a mighty roar, and the great tree was lifted up in the air about 10 feet, and then with a swoop and a crash it came to the earth, splintered half way up the trunk. Dynamite is not cheap, but taking into consideration the time, labor, and wear and tear of tools saved, is not as expensive as might be supposed." It is questionable, however, whether some standing timber not demanded by the manufactory is not seriously injured by this process.

SEWING MACHINES IN GERMANY.—Germany is producing sewing machines more cheaply than any other country on the globe, and the quality of German machines has been greatly improved in the last ten years. German machines are provided with all the modern improvements, such as loose pulley, automatic bobbin winder, shuttle ejector, tension, liberator, etc.; while most of the old American companies refuse to introduce those essential improvements on their machines. In consequence of this fact, German machines are very often preferred. For instance, the Wheeler and Wilson machines still have the bobbin winder on the stand under the table. For this reason some dealers do not want them. German machines of the Singer pattern are sold in Berlin at from \$10 to \$12 wholesale, complete with all the improvements. A Berlin correspondent of the *American Sewing Machine Journal* says that the only way to introduce American machines in Germany is for American manufacturers to "branch out" as the Singer Company has done. The only competitor who has made himself felt by the German manufacturers is the general agent of this company, whose success is attributed to their method of disposing of machines in a way to create a demand among consumers, thus compelling local dealers to supply them.

Steam in Cheese Vats.

All our cheese makers who are using steam vats will be interested in the announcement that a claimant of a patent has appeared at the last, and is proceeding to levy royalty upon all who are using steam in their vats. The New York cheese makers are alarmed, and it is a matter of great importance to them, for nearly all the factories use steam vats rather than the "self-heaters." The Utica Dairyman's Board of Trade has taken up the matter, and is urging united effort among the factory men to resist the attempts at collection. At a recent meeting the President, Dr. Wight, said: Factory men don't seem to understand when their pockets are touched. The patent which has come up this season is being pushed by the lawyers, who are determined to make us pay in this case the same as they have done in others. The patent is on the introduction of steam into cheese vats, between the wood and tin vats. Everyone has used this device ever since factories were started, and I am told it was used long before that in numerous private dairies. Now we must unite in earnest. Let the dairy-men of central New York combine, and call on dairymen in other parts of the State and in other States to join them, and form a large and powerful organization to defend themselves successfully. The trouble is that you all see the sham of the patent, and say: "Why, they can't enforce anything like that;" but it makes no difference if it is a sham; the lawyers see money in it for all that, and will surely make us pay if we don't unite to defeat them. Robert McAdam believed that the only safety was in union, and moved that a meeting of dairymen be called. Mr. Wheeler was in favor of combining and fighting for all time—not for a month or six months. He seconded the motion.

At a subsequent date a meeting was held and organization effected. B. D. Gilbert, of Utica, was elected Secretary and Treasurer, and parties who desire to join can send their names to him. Each one should state how many vats he has in his factory or factories. It should be stated that no money is needed at present, and that, while the agreement is to pay \$5 a vat if necessary, it will not be called for all at a time, but only as needed, and possibly only a small part will ever be needed. Factorymen all over this State and in other States are also urged to join the association. The larger it is made, the smaller will be the individual expense, and in this lies the advantage of having one great association for the whole country.

Eastern Opinions on Our Wool Industry.

A dispatch from New York, dated November 10th, gives an outline of interviews with Eastern wool dealers on the production of wool in this State. It is stated that many of the importers of California wool readily admit that the supply from that State will gradually grow less, and that the adjacent Territories will take away much of her trade in this respect. Conversation with some of the brokers and reporters sustains the belief that the California wool trade has been at its best.

James Lynch, whose knowledge of the wool business is conceded by the trade generally, said: "I think this coarse California crop will be 1,500,000 pounds less than last year. Trade is being driven away from there into the Territories, where better pasturage can be found and where they can make more money by wool growing. All wools from that State are fine. California, however, has done a magnificent business, and figures give some idea. The shipments overland East, those to the interior and by sea during the last month, amounted to 25,403,913 pounds. I might say, however, that the character of the wool is dirtier this year, and, in my judgment, contains about two-thirds of dirt. This, as you see, is a considerable item of freight."

Mr. Mason, of the firm of Samuel Thompson, Son & Nephew, said: "The wools from California have been growing finer every year, and are consequently much heavier this fall. The crop, in my judgment, will turn out a third less than last year, but I should think that in all probability the total year's clip will amount to not far short of 40,000,000 lbs. Last year's production was 43,204,769 lbs. From loss of sheep and driving from California into the neighboring Territories, I estimate that the amount mentioned, 40,000,000 lbs., would be an outside calculation of the production of 1882. There will probably be 1,000,000 to 1,500,000 lbs. short in southern California. The falling off was caused by the drouth a year ago. Many sheep were then driven to better pasture. This, of course, applies to southern California. In the north they were more fortunate. It is important to observe that even last spring wools in some of the northern sections, where they have been in the habit of giving us excellent grades, have been found scabby. From 50% to 80% of dirt comes in this production. It is my firm opinion that California wool raising has seen its day. The plow is driving it out. The demand this season has been principally for fine wools and for manufacturing purposes. Better classes of goods have been sought for."

COTTON SEED OIL.—A factory has been opened at New Orleans to make illuminating and lubricating oil out of cotton seed oil.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County, Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPFEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

M. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. E. R. Game Bantams. Eggs and fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5. **B. F. WEL-LINGTON**, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

H. S. SARGENT, Stockton, Cal. Importer, Breeder and Shipper of Poland China Pigs, and Bronze Turkeys.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

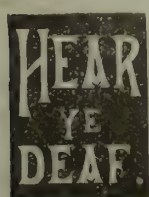
JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

LADIES Why pay such enormous prices for Sewing Machines when you can buy as good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. **H. P. ANDREW**, Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hairs' Asthma Cure, proves most conclusively that it is all that it is represented to be. Dr. Hairs' Treatise on Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. B. W. HAIR & SON, Cincinnati, Ohio.



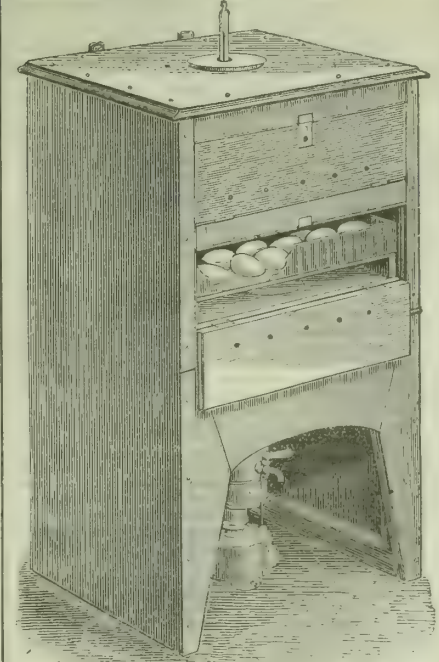
Artificial Garmore Sear Drum. As invented and worn by him perfectly restoring the hearing. Entirely dead for thirty years, he hears with them, even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. **CAUTION**: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured. **JOHN GARMORE**, 11th & Race Sts., Cincinnati, O.

Silos, Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE. **RANSOME**, 402 Montgomery St., S. F. Send for circular.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. **LICK HOUSE**, San Francisco, Cal., October 22, 1881. **PETER SAXE & HOMER P. SAXE.**

GEORGE B. BAYLEY, Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR, WHICH IS MADE IN THREE SIZES.
No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.
Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to **GEORGE B. BAYLEY**, Box 1771, San Francisco.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.
For further particulars address as above.

LANGSHANS.

My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.
MRS. J. RAYNOR, 1416 Folsom St., S. F.

JERSEY BULL FOR SALE.

A thoroughbred. Year and half old. Ready for service. Good color. Well broke to lead. Took a prize at San Mateo and Santa Clara Agricultural Fair this year. Enquire of **J. T. HOYT**, San Mateo, Cal.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. **T. W. JACKSON**, S. F., Sole Agent for Pacific Coast.

CANCER Scientifically Treated and Radically Cured. No knife, no caut-ty, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, **DR. J. MCLEISH**, No. 215 West Fourth Street, Cincinnati, O.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872 in lots to suit. Address **J. A. POPPE**, Sonoma, Cal.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address **G. G. WICKSON**, 319 Market St., S. F.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black B ss, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to **CHAS. DUISENBERG & CO.**, Sole Agents, 314 Sacramento Street, San Francisco

LITTLE'S SHEEP DIP.



Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FALKNER, BELL & CO.**, San Francisco

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors

Office—318 California Street, Room 9

AXFORD'S INCUBATOR.

For hatching chickens. Self regulating, durable, practical and easily understood. This is not a Toy, but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As Builders, Amateurs and others are ready to use a good, reliable, self-regulating Incubator, that can be produced cheap, we now offer one that holds 150 eggs. The Easy Price, \$28. Send for Circular.

J. P. CLARK.

Sole Agent for the Pacific Coast.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTPELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co.
J. H. GARDINER, Rio Vista
T. E. TYNAN, Stanislaus Co.
URIAH WOOD, Santa Clara Co.
J. C. MERYFIELD, Yolo Co.
H. M. LARUE, Solano Co.
I. O. STEELE, San Mateo Co.
THOS. MCCONNELL, Sacramento Co.
O. J. CRESSEY, Merced Co.
SENECA EWER, Napa Co.
A. D. LOGAN, Colusa Co.

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

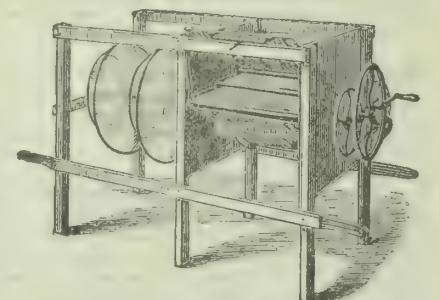
ALBERT MONTPELLIER
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and price.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

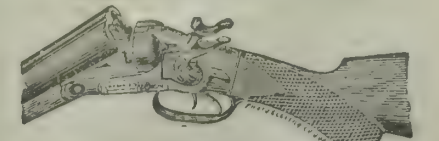
MECHANICS' FAIR, 1882.

Best Truck.....Silver Medal.
Best Hose Cart.....Silver Medal.
4-Spring Wagon, With Top.....Silver Medal.
Best Milk Wagon.....Silver Medal.

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - SAN FRANCISCO.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader is a record of its shooting. 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. **E. T. ALLEN**, Sole Agent, Importer of Fire arms and Sporting Goods, 418 Market Street, San Francisco, Cal.

Are Toads Poisonous?

In answer to this query, propounded by Mr. Herbert Brown in a recent number of *Knowledge*, a decided affirmative may be returned. The toad is venomous, though not in the way that is implied by the general acceptance of that term as is commonly believed. Nothing can be more harmless than the bite of a common toad—if it can be said to bite, for it has no teeth. But the glands contained in the papillae and rugosities of the skin covering the back, secrete a milky, highly acrid fluid, which is exuded profusely on irritation. Indeed, if it were not for this poisonous secretion, the poor toad would fall an easy victim to many enemies, having neither the agility of the frog or lizard to enable it to make its escape, nor the teeth and claws of other reptiles wherewith to defend itself. Cate, which are eager hunters of frogs for food, spit and foam at the mouth when they pick up the wrong batrachian by mistake; frog-eating snakes, too, detect the difference, and will not take toads as a rule. When a snake, greatly pressed by hunger, swallows one, it usually rejects it again immediately afterward, and not unrequently dies. Those frogs which prey upon their own kind (as most frogs do) despise their ugly relative from an alimentary point of view; and, curiously enough, certain toads which devour frogs share the same antipathy to their race. Except with very small animals the poison appears to act rather as a local irritant than a toxic agent; it has no effect upon the sound skin, but will cause any abraded surface to inflame to extensive ulceration, while great pain results from its application to the internal mucus membranes.

Any one who can overcome his repugnance to the creature sufficiently to put his lips or tongue against the skin of an angry toad will experience an intensely acrid taste; he should shut his eyes in making such an experiment, as the glands sometimes emit their secretion in a jet. Mr. Frank Backland quotes a case which occurred in Oxfordshire, where a drunken brute bit a toad's head off. Happily, his teeth went right through these glands, and his mouth and throat immediately became swollen and inflamed to such an extent that his life was in jeopardy for some hours. These characteristics are much more strongly marked in many of the tropical toads. My giant toads used to swell venom when they were taken in the hands in such abundance that it would pour off their backs and drip from them, before they became tame; and I was thus enabled to collect a large amount. This species feeds on rats, and it is possible that this copious exudation may serve to prevent their prey from biting them when seized by the leg or otherwise awkwardly caught. I once put a "cribo" snake (*Dromicus fugitivus*) into a box with three of these toads for a single night, for lack of other accommodation; it was a fine, active specimen, five or six feet long, and its movements during the night so disturbed them that in the morning I found the floor of the box all awash with fluid. The snake was lying on its back, apparently dead; and, though it recovered somewhat on being plunged into a bath, it survived only a few days.—*Arthur Stradling in Knowledge.*

ALBUMEN IN COWS' MILK.—Dr. Schmidt, Mulheim, has been investigating the nitrogenous bodies in cows' milk, about which so much diversity of opinion has hitherto prevailed. He says that three albuminoid substances are regularly present in the milk, viz.: casein, albumen, and pepton. The average of seven analysis gave 2.43% of casein, .38% of albumen, and .13% of pepton. Under certain circumstances the amount of albumen may increase until it equals that of the casein. The pepton is formed from the casein by a fermentative process; this ferment is destroyed by a boiling temperature, but its activity is not destroyed by salicylic or carbolic acid, so that in this respect it resembles the ferment that digests albuminoids. Since milk, on long standing, may lose 10% or more of its casein by its conversion into pepton, it should be made use of as fresh as possible when employed for making cheese.

PNEUMATIC TUBE FOR PHILADELPHIA.—The Post Office Department is considering the feasibility of putting in very large pneumatic tubes for the Philadelphia Post Office, connecting it with the mail depots in the city. The object is to avoid the slow transference of mails from trains by coaches to the central office. No steps as yet have been taken in regard to actually putting the plan in operation.

Signal Service Meteorological Report.

SAN FRANCISCO.—Week ending Nov. 14, 1882.							
HIGHEST AND LOWEST BAROMETER.							
Nov. 8	Nov. 9	Nov. 10	Nov. 11	Nov. 12	Nov. 13	Nov. 14	
29.988	30.044	30.038	30.236	30.414	30.425	30.318	30.318
29.933	29.932	29.939	30.036	30.253	30.318	30.318	30.318
MAXIMUM AND MINIMUM THERMOMETER.							
50.5	56	54	55	55	55	57.5	57.5
51	41	45.5	47	47	45	45	46
MEAN DAILY HUMIDITY.							
52.3	75.3	78.0	81.7	80.7	67.0	72.7	
PREVAILING WIND.							
W	W	W	N E	E	NW	NW	
WIND—MILES TRAVELED.							
201	185	139	143	130	126	109	
STATE OF WEATHER.							
Cloudy	Fair	Fair.	Fair.	Fair.	Clear.	Clear	
RAINFALL IN TWENTY-FOUR HOURS.							
.18	.00	.00	.00	.00	.00	.00	.00
Total rain during the season from July 1, 1882, 6.90 inches.							

"It saved my wife from the grave or an asylum," writes a gentleman whose wife had been a fearfully sufferer from neurasthenia. She had used Compound Oxygen for a few weeks. All information about this new agent of cure will be sent free by DR. STARKY & PALEN, 1109 Girard St., Philadelphia.

All orders for the Compound Oxygen Home Treatment directed to H. E. Mathews, 606 Montgomery street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

Knows from Experience.

S. Richey, an extensive horse-dealer of Brooklyn, N. Y., who handles all kinds of draft horses, says: "The prevailing color of the Norman horses is gray, and a matched pair of grays will bring more money than any other color. The Normans are better selling horses and give the best satisfaction of any of the breeds to customers. If I were buying for my own use I would have nothing but Normans. I would advise the farmers and breeders to breed Norman horses in preference to any others with a view to selling on this market."—*Chicago Tribune.* Percheron-Norman horses, in their purity, are imported from France and bred in large numbers by M. W. Dunham, Wayne, Ill., who has some 400 on hand. He has imported and bred nearly 1,000 in all.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

A Word to Subscribers.

Prompt renewal of subscriptions is the strongest support that newspaper publishers feel. It is, so to speak, "the most sustaining part" of a newspaper diet. We have much to be pleased at in connection with our large list of subscribers, yet there are some whom we trust can favor us more promptly in forwarding the renewal of their subscriptions, and we feel the necessity of soliciting all who like our paper, and are pleased to support us in our efforts to produce a worthy and progressive journal, to do the best possible in forwarding their subscriptions promptly and aid us in securing new ones.

Successful Patent Solicitors.

As Dewey & Co. have been in the patent soliciting business on this coast now for so many years, the firm's name is a well-known one. Another reason for its popularity is that a great proportion of the Pacific coast patents issued by the Government have been procured through their agency. They are, therefore, well and thoroughly posted on the needs of the progressive industrial classes of this coast. They are the best posted firm on what has been done in all branches of industry, and are able to judge of what is new and patentable. In this they have a great advantage, which is of practical dollar and cent value to their clients. That is this understood and appreciated is evidenced by the number of patents issued through their agency from week to week and year to year.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
L. L. WOODMANSE—Nevada State.
B. W. CROWELL—Los Angeles county.
L. WALKER—Butte, Tehama and Shasta counties.
E. A. WILLIAMS—San Francisco.
JAMES McDONALD.
S. E. BARBER—Eastern States.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

SAMPLE COPIES—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus, terms of subscription, etc., and request that they circulate the copy sent.

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

\$4.00 FAIRY SEWING MACHINES, practical, cheap, durable; greatest bargains; every one warranted. Secure one ere it is too late, or the supply is exhausted. Read carefully the announcement of Messrs. E. G. Rideout & Co. in this issue.

If you want to become a telegraph operator send 25 cents to C. E. Jones & Bro., Cincinnati, Ohio, for the best illustrated instruction book.

A CORN SHELLER can be obtained for \$5 of Webster & Co., S. F.

S. F. MARKET REPORT.

NOTE—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 15, 1882.

There has been rather more spirit in the wheat trade, and values have improved, the market being strong at \$1.70 for good Shipping Wheat and a shade better for millers' samples. The strength comes from local conditions, for the foreign market still holds off a little. The latest by cable is the following:

LIVERPOOL, Nov. 14.—Wheat: California spot lots are dull at 9s to 9s 3d. Cargo lots, 44s for just shipped, 44s for nearly due and 44s 6d for off coast.

The Foreign Review.

LONDON, Nov. 13.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: "The progress of wheat sowing has been almost, owing to disastrous floods and violent storms of hail and snow, accompanied by destructive lightning. Trade is very quiet. Country Flour is coming forward freely. Foreign Wheat was in better demand on Friday. The supply offering on spot is moderate and off coast very meager. Nevertheless, stocks are increasing and the quantity afloat increases. Flour, slow of sale; prices unchanged. Malze, continually dearer. The scarcity on spot must continue until early in 1883. There is scarcely any business in off-coast Wheat. Cargoes of California are about 6d dearer. There are 7 fresh arrivals and 3 cargoes sold; 6 were withdrawn and 5 remain. All the latter are No. 2 Red Winter. About 12 Wheat cargoes are due the present week. Sales of English Wheat during the past week were 44,232 quarters, at 40s 11d, against 49,130 quarters, at 40s 3d, during the corresponding period last year.

Eastern Wool Markets.

BOSTON, Nov. 10.—The wool market is unchanged. The sales of the week amounted to 190,000 lbs. of all kinds. Fine fleeces are held with considerable firmness, but the market is weak for nearly all other kinds. California Wool has been selling at 20¢ to 22¢, as to quality.

BOSTON, Nov. 14.—The demand for Wool is moderate and prices unchanged. California Wool is quiet, at 25¢ to 32¢, as to quality.

PHILADELPHIA, Nov. 14.—Wool quiet. Demand fair. Ohio, Pennsylvania and West Virginia XX and above, 41¢ to 44¢; New York, Michigan, Indiana and Western fine X and XX, 27¢ to 40¢; coarse, 33¢ to 34¢; tub-washed, 33¢ to 35¢; dark, earthy, unwashed, clothing, coarse, 21¢ to 22¢; pulled super, 33¢ to 35¢. Other grades unchanged.

New York Hop Market

NEW YORK, Nov. 14.—The markets are generally quiet, except in a few commodities, including Hops, which are held at \$1.20 per lb for choice.

BAGS—Bags are still quiet and little doing, the current wholesale rates for grain sacks being \$8.85 for O. kland; \$8.85 for Calcutta.

BARLEY—Feed Barley is about the same, although transactions have not been so brisk as last week. Brewing has been active and values have advanced; White Chevalier, for the time being, has dropped back a little. We note sales: 100 tons No. 1 Brewing, December, \$1.50; 100 do, \$1.51; 200 do No. 1 Feed, December, \$1.45; 100 do, \$1.43; 100 do, January, \$1.43; 100 do, \$1.43; 100 do, buyer the season, \$1.54; 5¢ cpl.

BEANS—Beans hold values quite well, although some sales are low, owing to the fact that many Beans are discolored by the rains.

CORN—Corn is quiet and unchanged.

DAIRY PRODUCE—Fresh roll, choice, is doing a little better, owing to the shortage of supplies. Vigorous efforts are being made to work off the oleomargarine, and it is being put forward in handsome fats, well calculated to deceive. Some retailers are selling it under its own name, publicly posted, and claim the people take to it. Cheese is about the same as a week ago, being in good demand at fair prices where the quality will pass.

EGGS—Eggs are about the same as last week.

FEED—Hay has shaded off 50 cents per ton for the best wheat. The schedule is as follows: Alfalfa, \$12¢ to \$13.50; Wheat, \$16¢ to \$17; Wild Oat, \$15.50¢ to \$16; Mixed, \$12¢ to \$14 per ton.

FRESH MEAT—There is no change, except a decline in veal, owing to the larger supply of calves now arriving.

FRUIT—Some belated raspberries, at 60 cents per drawer, were the sensation of the fruit market this week. Other fruits are unchanged.

HOPS—Dealers declare that \$1 per pound is the top notch, but \$1.05 and \$1.07 is quoted by some acquainted with the trade. Buyers are reported holding off a little. It takes a long purse to buy many hops now.

OATS—Oats are quiet and unchanged.

ONIONS—The best lots are doing a little better, but there are many poor lots still in sight. Choice are 60¢ to 70¢.

POTATOES—Potatoes have shaded off a little. Supplies are still quite large.

PROVISIONS—Provisions are still active, and recent advances are maintained.

VEGETABLES—There is no change this week in green vegetables.

WHEAT—Wheat, as stated above, is feeling a little better, but there is but little bought, and ships are quite neglected for the time being.

WOOL—There is plenty of wool here, but buyers are not in sight at present, and quotations are wholly nominal.

Lumber.

WEDNESDAY M., Nov. 15, 1882.

Redwood.		Shingles.	
Rough.	— @ 21.00	Shingles.	— @ 2.50
Su faced.	— @ 24.00	Posts, each.	— @ 1.75
Floor and step.	— @ 27.50	Pine.	
RAIL.		CARGOES.	
Merchandise.	— @ 22.50	Rough.	— @ 13.00
Surfaced, No. 1.	— @ 37.50	Surfaced.	— @ 20.00
Tongue & Groove.	— @ 37.50	Flooring.	— @ 22.50
Pickets, rough.	— @ 20.00	Floor and step.	— @ 37.50
do, fancy.	— @ 30.00	Laths.	— @ 3.75
do, square.	— @ 17.50		

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, Nov. 15, 3 P. M.

SILVER. 1.
Gold Bars, \$80 to \$90. SILVER Bars, 10¢ to 11¢ cent. dis. court.
Exchange on New York, 30 premium; London, 49¢ to 49½; Paris, 5.13 francs \$ dollar; Mexican dollars, 85¢ to 90¢.
New York (4 per cent), 119¢.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Nov. 15, 1882.

BEANS & PEAS.		POTATOES.	
Bayo, chl.	3.75 @ 4.00	New, chl.	— @ —
Butter.	3.25 @ 3.50	Early Rose.	1.00 @ 1.20
Cashew.	3.50 @ 4.00	California, chl.	87 @ 91.05
Pea.	2.75 @ 3.25	Romano.	87 @ 91.05
Red.	2.75 @ 3.25	Humboldt.	90 @ 91.00
Pink.	2.75 @ 3.25	"Kidney."	— @ —
Large White.	2.50 @ 2.75	"Peachblow."	— @ —
Small White.	2.87 @ 3.25	Jersey Blue.	— @ —
Lima.	3.75 @ 4.00	Gussey Cote.	1.10 @ 1.15
Flour, 50 lbs. bbl.	00 @ 3.50	River, red.	67 @ 80
do, green.	3.00 @ 3.50	do, Oregon.	— @ —
		Peerless.	1.00 @ 1.10
		6 Salt Lake.	— @ —
		Sweet.	1.12 @ 1.25

CHICKEN.		POULTRY & GAME.	
German.	4 @ 4	Hens, do.	5.50 @ 6.50
DAIRY PRODUCE, ETC.		Roosters.	5.00 @ 6.00
BUTTER.		Broilers.	5.00 @ 6.00
Cal. Fresh Roll, D.	30 @ 35	Ducks, tame, doz.	07 @ 50
do, Fancy Branda.	— @ 37.00	do, Mallard.	3.50 @ 4.00
Pickle Roll.	27 @ 28	do, Teal.	1.25 @ 1.50
Pork, new.	27 @ 28	do, Spring.	1.75 @ 2.50
Eastern, 44s.	30 @ 32	do, Geese, doz.	1.25 @ 1.50
New York.	— @ —	do, young.	50 @ 60
OLEOMARGARINE.		Wild Gray, doz.	5.00 @ 6.00
Roll.	— @ 28	White do.	50 @ 60
Porkina.	— @ 28	Turkey.	15 @ 17
		do, Dressed.	18 @ 18
CHEESE.		Turkey Feathers.	10 @ 20
Chesse, Cal., D.	14 @ 14	tail and wing, B.	10 @ 10
do, boxed.	15 @ 15	Snipe, Eng.	1.75 @ 2.00
		do, Common.	50 @ 75
Cal. Fresh, doz.	40 @ 48	Quail, doz.	1.25 @ 1.37
Ducks.	— @ —	Rabbit, doz.	1.50 @ 2.00
Oregon.	— @ —	Hare.	2.00 @ 2.25
Eastern, by exprs.	30 @ 32	do, Venison.	3 @ 4
Pickled here.	27 @ 35		
Utah.	— @ —		

FEED.		CALF, BACON, EXTRA.	
Bran, ton.	— @ 18.00	clear, D.	16¢ @ 17
Corn Meal.	— @ 38.00	Medium.	17 @ 18
Hay.	— @ 13.00	Light.	17 @ 18
Middlings.	— @ 27.00	Lard.	15 @ 17
Oil Cake Meal.	— @ 25.00	Shoulder Beef.	14¢ @ 15
Straw, bala.	— @ 5 @ 1.00	Hams, Cal.	18 @ 19
		do, Eastern.	18 @ 20

FLOUR.		SEEDS.	
Extra, City Mills.	5.25 @ 5.50	Alfalfa.	11¢ @ 12
do, Country Mills.	4.75 @ 5.25	do, Chile.	— @ —
do, Oregon.	4.75 @ 5.25	Canary.	52 @ 58
do, Walla Walla.	4.50 @ 5.00	Clover, Red.	14 @ 15
		White.	45 @ 50

FRESH BEAT.		GRAIN, ETC.	
Beef, 1st qual., lb.	6 @ 8	Barley, feed, chl.	1.40 @ 1.42
Second.	6 @ 8	do, Brewing.	1.51 @ 1.60
Third.	5 @ 5	Chevalier.	50 @ 52
Mutton.	3 @ 3	Buckwheat.	1.35 @ 1.50
Spring Lamb.	6 @ 6	Corn, White.	— @ 20
Pork, undressed.	8 @ 8	Yellow.	1.62 @ 1.65
Dressed.	10 @ 10	Small Round.	— @ 17.25
Veal.	7 @ 8	Oats.	1.70 @ 1.80
Milk Calves.	— @ 9	Milling.	1.85 @ 1.90
do, choice.	— @ 9	Rye.	1.75 @ 1.80
		Wheat, No. 1.	1.65 @ 1.70
		do, No. 2.	1.62 @ 1.65
		do, No. 3.	1.50 @ 1.55
		Choice Milling.	— @ 1.72

HIDES.		HONEY, ETC.	
Hides, dry.	20 @ 21	Beeeswax.	23 @ 25
Wet salted.	9 @ 11	Honey in comb.	12 @ 20
		Extracted, light.	10 @ 11
		do, dark.	6 @ 9

HOPS.		NITS—Jobbing.
-------	--	---------------

J. P. SWEENEY & CO.,**Seedsman,**

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

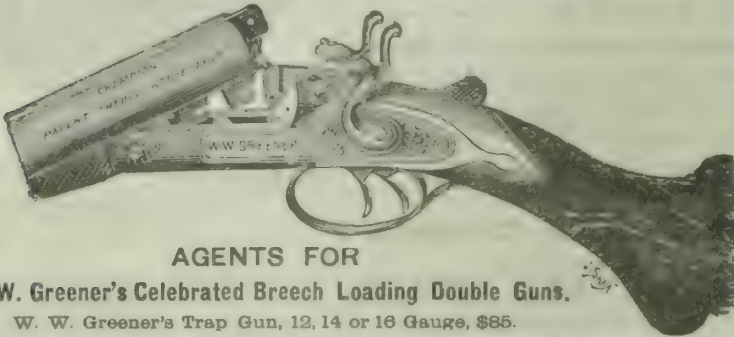
Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

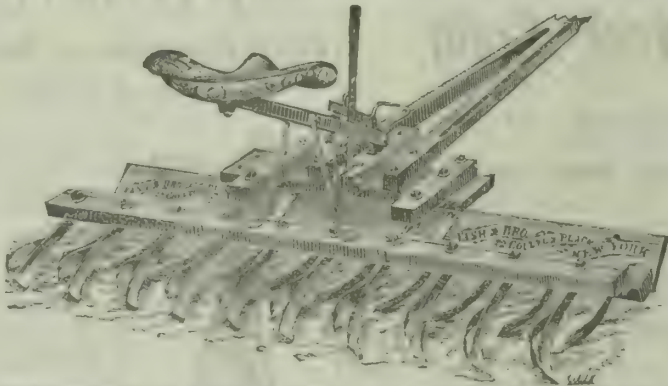
W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt, Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles. Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

"ACME"**PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.**

For the Orchard, Vineyard, Nursery and Grain Field.

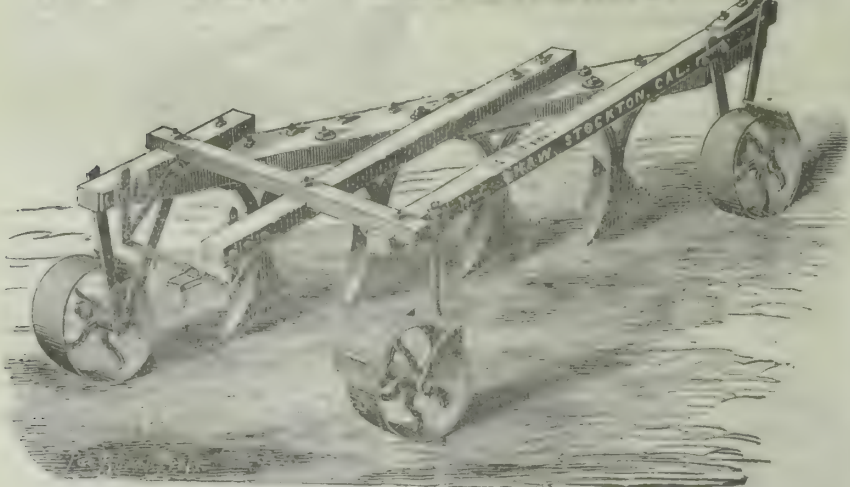


Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,
22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.

H. C. SHAW PLOW WORKS.**THE H. C. SHAW STOCKTON GANG PLOWS.**

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

Illustrated Catalogue, Photograph and Lecture, 10c. Automatic Cabinet. Play any Tune.

MAGIC LANTERNS AND VIEWS ORGANS ONLY \$5.
Magic Lanterns and Slides WANTED. Musical Wonder Catalogue FREE.
HARBACH ORGAN CO., 309 FILBERT STREET, PHILADELPHIA, PA.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Eureka Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete Agricultural Works on the Coast.

The buildings are over 1,600 ft. in length, and have a floor surface of 105,492 square feet, or nearly 2 1/2 acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and perfect testing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipment, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel, all of the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

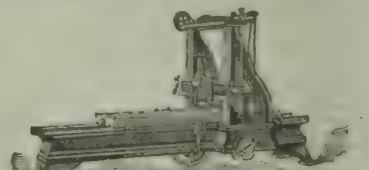
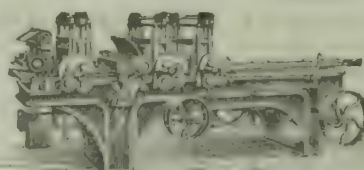
WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Gillie's Improved Horse Powers. Cultivators. Plows. Side Hill Gang. Gen. Seed Sowers. Improved Granger Gang. Double Deep Tiller. Hill's Improved Headers. Inverted Single and Tule Plow. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Messrs. BAKER & HAMILTON, Agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

**Berry & Place Machine Company,**

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - San Francisco, Cal.

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds, Mice, Etc.

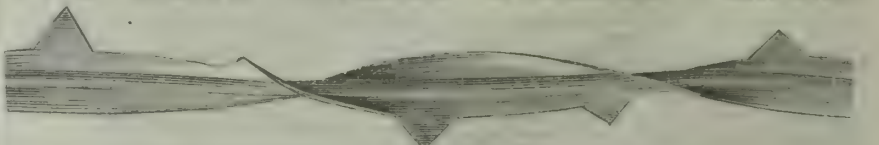


Endorsed by the Grange and all others who have used it.
INFALLIBLE SQUIRREL and GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS

THE BUCK THORN BARBED FENCE.

One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., Drumm Street, S. F.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDS

Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
607 Sansome Street, S. F.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD

For sale at low prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES.

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at \$1.00 each. Send for Catalogue and prices to

C. W. REED & CO.,
Sacramento, Cal.

HOLLAND BULBS

ROSES AND
PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO
SEEDSMEN,
Rochester, N.Y. & Chicago, Ill.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.,

Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. B. PEPPER, Petaluma, Sonoma County, Cal.

FRUIT TREES FOR SALE

Bellevue Nursery.

25,000 Pear Trees, mostly Bartlett; 20,000 Apricot; 15,000 Apple. Also Peach, Plum, Prune, Nectarine, English Walnut and Orange Trees. The above Trees have made a good growth, and are free from disease or any scale or other parasites. For further particulars address P. O. Box 304, Los Angeles, Cal. MILTON THOMAS.

JAMES HANNAY'S NURSERIES.

East San Jose, Cal.

For sale, a large and general assortment of healthy well grown Fruit Trees, comprising Apple, Pear, Peach, Plum, Prune, Apricot, Cherry, etc., of all the leading varieties now mostly in demand. Address,

JAMES HANNAY, San Jose, Cal.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nolis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also,

TREES IN THE DORMANT BUD.

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

THE NURSERY OF

C. M. SILVA & SON

Is the Pacific Coast

HEADQUARTERS FOR THE "HANSELL"

New Extra Early Red) Raspberry, James Vick, Manchester and Finch's Prolific,

And other Valuable New Strawberries, and all other good small fruits, new and old. A large stock of fine

PLUM AND PRUNE TREES.

First Quality of Everything, Free from Scale.

Will issue New Illustrated Catalogue of Small Fruits about November 15th. Send for it. Address,

C. M. SILVA & SON,
Newcastle, - - - CALIFORNIA.

W. R. STRONG & CO.,

WHOLESALE SEED MERCHANTS.

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc., can be obtained at our establishment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Dealers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,
Sacramento, Cal.ORANGE HILL NURSERIES,
Penryn, Placer Co., Cal.W. R. STRONG & CO., Proprietors,
Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Priced catalogue on application. Address,

W. R. STRONG & CO., - - - Sacramento, Cal.

GEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

WAREHOUSES:
113, 117 & 119 Kinzie St.
104, 106, 108 & 110 Michigan St.Office, 115 Kinzie St.,
CHICAGO, ILL.**SEEDS**

JOHN ELLIS,

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically. Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. - - - STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

SANTA CLARA NURSERIES,

San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet
Laurel.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Repluopsis orata.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Monterey Cypress.....	2 to 3 "
Balsam Fir.....	2 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of

Miscellaneous Fruit Trees, Small Fruits,
Ornamental Shade Trees, Evergreens,
Roses, Bulbs, Greenhouse Plants,
Etc., etc.

RICHARD D. FOX,

San Jose, Cal.

THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.

ROCK'S NURSERIES.

TREES!

For Sale,

A LARGE ASSORTMENT OF

Thrifty, Well-grown Fruit, Shade and
Ornamental Trees.

NEW AND RARE EVERGREENS.

Palms, Bamboos, Shrubs, Roses, etc. Small Fruits, including a large variety of Grapevines, for table, for wine and for raisins.

STRAWBERRIES

Of newest and best varieties for market and for profit

Descriptive Catalogues will be sent as follows:

No. 1. Fruits, Grapevines, Berries, etc. 3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc. 3 cts.

JOHN ROCK,

San Jose, - - - California.

GILL'S NURSERIES.

Special Offer of

Blue and Red Gums. Also Monterey Pines and Cypress 1, 2 and 3 years old, in large lots at low rates. Prices on application. Address

B. GILL, Nurseryman,

28th St., near San Pablo Ave., Oakland, Cal.

LOS GATOS NURSERIES.

I offer the trade this season a large and general assortment of Fruit and Ornamental Trees, and Small Fruits. My Trees are healthy, stalky and well grown. Address,

S. NEWHALL, San Jose, Cal.

WILD GRAPE SEED.

I have a small quantity of Wild Grape Seed for sale, and can furnish Wild Grape Roots for grafting. Seed is worth \$8 per pound, and the Roots \$20 per thousand. Send to JAMES M. HUTCHINS, Kelseyville, Lake Co., Cal. Terms cash in advance.

1838-1863. POMONA NURSERY.

5,000 KIEFFER'S HYBRID PEARS in orchard, 5,000 in nursery propagated exclusively from healthy STANDARDS. NO BUDS or SCIONS taken from DWARFS. APRICOTS in dormant buds, by mail or express. Catalogue free WML PARRY, Parry P. O., N. J.

TREES AND SEEDS TRUE TO NAME

APPLES—4 to 20. Anjou, Harvest, Laxey, Pearmain, Ribston, etc. PEACHES—2 to 4. Elberta, Alexander, Briggs, etc. ORCHARD SEEDS—1 to 4. Elberta, Alexander, Briggs, etc. APRICOTS—1 to 4. Elberta, Alexander, Briggs, etc. NECTARINES—1 to 4. Elberta, Alexander, Briggs, etc. PLUMS—1 to 4. Elberta, Alexander, Briggs, etc. PRUNES—1 to 4. Elberta, Alexander, Briggs, etc. BULBS—1 to 4. Elberta, Alexander, Briggs, etc. FLOWERS—1 to 4. Elberta, Alexander, Briggs, etc. SEEDS—1 to 4. Elberta, Alexander, Briggs, etc.

Send for Catalogue free WML PARRY, Parry P. O., N. J.

W. A. SANDERS, SAN JOSE, CALIF.

Napa Valley Nurseries.

FRUIT TREES, GRAPE CUTTINGS, \$3.50 per 1,000. Rooted Vines, Riparia and other stock. Unirrigated and healthy. For particulars and prices, address, LEONARD COATES, Napa City, Cal.

M. COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOK & SONS, Successors to COOK & GREGORY

PACIFIC RURAL PRESS

TWENTY-FOUR PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, NOVEMBER 25, 1882,

Number 22

San Jose and Vicinity.

The holding of the Fruit Growers' Convention in San Jose last week, and the beginning of the full report thereof in this week's RURAL PRESS, makes timely a remark on the town and its rich outlying agricultural districts. We do not attempt an extended sketch because our readers are continually kept pretty well informed on the district and its doings. San Jose is the gathering and distributing point for the chief portion of the Santa Clara valley, which is the name commonly applied to the valley,

eight miles—much attention is paid to orcharding, to vegetable gardening and to the culture of strawberries and other small fruits—for the sale of which the producer finds in San Francisco an excellent market. The facility for irrigation afforded by numerous flowing wells of this section gives the gardener superior advantages in these matters; hence in the culture of strawberries, especially, he has acquired a monopoly of the business—shipping in the season from 40 to 60 tons of berries a day.

The soil of the valley is varied—in some places it is rich adobe, many feet in depth; in others a gravelly loam; in others still, a reddish loam and clay, mixed with decomposed rock. The

glean the following statistics in regard to Santa Clara county: Land inclosed, 421,359 acres; cultivated, 243,276 acres; wheat, 110,240 acres; do., 2,240,019 bushels; barley, 31,211 acres; do., 763,372 bushels; oats, 672 acres; do., 17,229 bushels; rye, 167 acres; do., 3,514 bushels; corn, 125 acres; do., 5,497 bushels; butter, 238,773 lbs.; cheese, 453,703 lbs.; wool, 429,620 lbs.; wine, 218,329 gals.; brandy, 72,417 gals.; beer, 2,417,550 gals.; value of fruit crop 1881, \$1,047,295; wool, 460,000 lbs.; cotton, 37,000 lbs.

The engraving on this page gives the reader a glimpse of a portion of the country about San Jose, the fine vineyard of Gen. Naglee being in the foreground. The grounds of Gen. Naglee

For 1883.

We are determined to make the PACIFIC RURAL PRESS for 1883 superior in excellence to all previous years, and shall endeavor soon to offer our patrons extra inducements to continue their own subscriptions and secure for us many new readers. California agriculture is now advancing at a most gratifying rate in all directions, and only a progressive journal can fitly serve it and minister to its progress. We have always endeavored to give our journal such quality, and have been nobly seconded by our many friends. But we must take farther steps



VIEW OF THE OUTSKIRTS OF SAN JOSE AND THE VALLEY, FROM GEN. NAGLEE'S VINEYARD.

although the original Santa Clara valley is away at the south in Ventura county. San Jose is a town of rare beauty, and is a favorite resort for those delighting in quiet homes, surrounded by gardens and bordering on well kept streets and avenues. It is also a city of schools, the center or the educational system being the State Normal school, a splendid institution. As a business point San Jose is of growing importance, as the needs of the large community of agriculturalists call for much local manufacturing; and the shipping and preservation of orchard and vineyard products and other productions of the region have resulted in an extensive traffic.

Santa Clara county contains an area of about 1,300 square miles. The population in 1870 was 26,246, but has probably doubled during the last decade. Wheat and barley are the staple products, although in the vicinity of San Jose and Santa Clara and thence northward towards the bay—a distance of from seven to

latter is regarded as the natural soil for the grape, the choicest and tenderest foreign varieties of which here grow in perfection. The grape belt stretches for many miles along the western foothills, and is from two to five miles in width. The country in its native state was covered with scrub oak, with scattering white and live oaks, and occasional patches of chaparral. It is now mostly subdued and brought under cultivation—producing fine wheat and barley. There are several large vineyards in this belt, whence are produced large quantities of excellent grape and wine. It is known as the Foothills Wine District. The hills also produce the finest grapes and fruits. Near San Jose are some of the finest orchards in the State, and two of the largest nurseries are here, besides many others of smaller area. The horticulturalists of San Jose and vicinity are among the most enterprising and energetic in the State.

From the books of the County Assessor we

afford the visitor many scenes of beauty and show a host of fine trees and shrubs well advanced in growth. A sight of the grounds near his residence may be found on another page of this issue.

GIANT COXCOMBS.—Mr. R. J. Trumbull has shown us a specimen of coxcomb grown by Major Robert Barton, at Fresno, which grows over all the coxcombs we ever saw. The combs from a single branch formed a mass one foot in diameter and of the most beautiful color and luster, like a bunch of the finest silk chenille. Major Barton's coxcombs were the admiration of the country around, and people came from near and far to see them.

SHEEP.—A correspondent has sent us some notes on sheep, without sending his name. We must insist on knowing who writes any manuscript which is submitted for publication.

forward, and to this end we invite the continued support of the interests to which our work is devoted. Every renewed mark of esteem which comes to us in the substantial form of prompt payment and additions to our lists of subscribers enables us to carry out the plans we have for the extension and improvement of our work. Hence we invite all to co-operate with us; to do their share by prompt remission of money due, and by words in our behalf to those who might be cheered and assisted in their work and lives by the visits of the RURAL PRESS. The ranks of California agriculturalists are being constantly recruited from beyond our borders, and by the enlistment of men from other pursuits. To all of these the facts and counsel which is put upon record by our hosts of practical contributors will be found of immediate and lasting benefit. If you know such a one, tell him so. Tell him that in the recording of useful agricultural truth the RURAL PRESS leads the van.

ENTOMOLOGICAL.

Appendix to Dr. Chapin's Scale Insect Report.

The following is an appendix to the report of DR. CHAPIN on the Scale Insects, which was published in the RURAL PRESS, 25th and 26th Nov., 1882.

I take the opportunity to add in this appendix several important matters which have been ascertained since the first printing of this report. In regard to the *Lecanium oleae*, mentioned as so seriously infesting an orchard of deciduous fruit trees, I have just visited that orchard, and now cannot find even a specimen of the scale of the present season. The trees were all washed the past winter with concentrated lye—1 lb. to 1 gallon water—and with the result of completely destroying this scale. The strength of the lye, however, destroyed part of the fruit buds on the French prune trees, lessening the crop for this season, but that obtained being of the first quality. The *Aspidiotus perniciosus* has lately been found infesting the blackberry bushes, in company with the white scale, *Diaspis rosae*, which has long troubled the blackberry and raspberry. I have also just discovered its presence upon rose bushes, which it has killed, as it does everything it attacks. At the same place it was also found infesting the Japan quince, fruit and branch. Thus it is seen that our ornamental shrubs are almost all liable to its attacks.

The *Icerya* scale has within the past few months been spreading to localities which were last year free from its presence. One of the most serious matters concerning it has just come to my knowledge. The following communication from Mr. A. Kamp, sexton of Oak Hill cemetery, was read at the last meeting (November 10th) of the San Jose Common Council:

WHEREAS, A certain scale insect, known as the "cottony cushion scale," (*Aspidiotus perniciosus*) having attacked certain trees and plants in Oak Hill cemetery and are threatening, with certainty, the destruction of every tree and plant therein; now, therefore, being in doubt as to my authority in entering the lot of anyone and removing infected trees without their permission; and whereas, each deed bears upon its face a condition subjecting it to such rules and regulations as may be adopted from time to time by the Mayor and Common Council for the better government of said cemetery, I now, therefore, do petition and ask your honorable body to pass an ordinance authorizing the Sexton, on the approval of the Cemetery committee, to remove all infected trees in Oak Hill cemetery.

To ascertain the condition of this beautiful city of the dead, I visited it, and by the kindness of Mr. Kamp, was shown the work which has been done by this pest. It is fast taking possession of almost every variety of ornamental tree and shrub there, as well as invading the domain of the floriculturist. The scale is so abundant in places that it covers almost entire many trees and bushes, and can be seen continuously dropping down to the ground, and the young and partially grown ones literally covering the fences like patches of red paint, and also lying upon the ground in masses of thousands upon thousands, so thick and so deep in places of several inches square that the ground cannot be seen. In a short walk around the cemetery Mr. Kamp collected for me to bring to the Fruit Growers' Convention the following infested specimens, all of which are in the exhibition hall for the inspection of horticulturists and the public. These comprise some deciduous fruit trees, many evergreen trees, shrubs and vines, flowers, etc. Pear trees, apple trees, the forest trees, the white oak, *Quercus Alba* and the California laurel; the English laurel, *Larus Cerasus*, the beautiful shade trees, the black locust and the cork elm, the different varieties of acacia, magnolia, grandiflora, dwarf flowering almond, wild greasewood, bridal wreath, rose bushes of various kinds, (though it is here to be noted that the Banksia rose, which was among the infested varieties was not at all troubled), the dwarf box, *Kittisporum*, *Tobria*, English ivy, clematis, verbenas, veronica, variegated sage and strawberry plants. Also specimens of the oleander, which were completely covered with the black scale, *Lecanium oleae*. Many more varieties might have been secured, but these will indicate that almost everything is subject to the attack of the *Icerya*. There is, however, one of our most beautiful trees that is free from all scale pests, viz: the pepper tree. The great danger of visitors to our cemetery carrying away this scale to their homes is of the gravest character.

The application of coal oil shows such peculiar results upon trees that the danger attending its use is daily becoming more and more apparent. I have just visited an orchard belonging to Mr. P., who in the latter part of December, 1881, washed 160 Newtown pippin apple trees, 10 years old, with the coal oil branded "Tree Wash." These trees were not harmed, although the scale was killed. On the same day the pippins were finished he washed 34 White Winter pearmain trees right with the others from the same barrel and in precisely the same manner, the same person also doing the work. The result was that all the pearmain trees were killed. On an adjoining place men were washing with the same "Tree Wash" at the same time. In this case many pippin trees were badly injured and some killed, while the pearmain were not apparently harmed. Here were shown exactly opposite results in adjoining properties. With these uncertainties attending the application of

a particular agent, it is best to abandon it altogether.

With the use of lye there is not such danger existing. I have been many times asked the question, "Can concentrated lye be used on the roots of trees without injury?" I think this can now be safely answered with regard to peach roots, at least, and anything on that stock. In February, 1882, Mr. H. C. Morrell, of Wrights, Santa Cruz mountains, purchased 213 Galway peach trees from a lot brought from the East. They being poor trees, he feared some disease attended them, and he decided to wash them entire. Before planting he dipped the trees entire, root and top, in concentrated lye, one pound to one gallon water. He tells me, on Nov. 9th, that the trees have all lived, except two, which perished from other causes. The trees are healthy, and have made the same growth that his other trees have done. At my request he will dig up one of those trees and bring it to the convention for the inspection of the members.

An excellent method of dissolving concentrated lye in cold water is by placing the finely broken up lye in a wire basket, and suspending it in cold water near the surface. The lye will readily dissolve, and, by its greater specific gravity, saturate the bottom first, gradually reaching the top. In this way 300 lbs. may be dissolved in 100 gallons of cold water in from 12 to 15 hours. The great object here gained is the saving of fuel and labor.

Further inquiries relating to caustic soda have enabled me to state that it will be used to a considerable extent this coming winter. It can be supplied in drums of 600 lbs., Runcorn Alkali Co. brand, for 4 cents per pound. Caustic potash can be obtained in like drums of 300 lbs. for 6½ cents per pound. The analysis showing the relative quantities of each of these articles in concentrated lye enables orchardists to mix to suit themselves. At the cost of each given alone, 90% of soda and 10% of potash would give, at the strength of 1 lb. to 1 gallon water, 4½ cents per pound or gallon. Probably no effectual wash could be made any cheaper than this. To save weighing or measuring, the lyeometer, or lye tester, is used. This may be purchased for 75 cents. By dissolving one pound of the lye in one gallon of water the degree marked on the lyeometer will show the density of the fluid, and in future preparations it may be made to suit. An illustration of relative strengths and combinations of these salts is shown in the exhibition hall. The degrees shown by the lyeometer are as follows, each in the strength one pound to one gallon water:

	Settled.	Agitated
1. Concentrated Lye, American Lye Co.	13°	16°
2. Caustic Soda.....	15°	16°
3. Caustic Potash.....	11°	12°
4. Caustic Soda 90%.....	21°	26°
Caustic Potash 10%.....	21°	26°
Pure Water.....	0	0

It is very important that a proper selection of caustic soda be made, as many cheap brands do not possess caustic properties, but are worthless salts with acids. The brand of A. G. Kurtz is good, and can be furnished for four and one-quarter cents per pound. A more costly article and the purest, being also of greater strength, is that made by Greenbanks. This is the best, and costs six cents per pound. I apprehend that the main difficulty with the cheap brands of concentrated lye is that they are made of worthless soda. We should be careful in our efforts always to secure a valuable article if we would succeed.

THE STABLE.

The Horse in California.

In the report of the Arid Lands Commission to the Commissioner of Agriculture, which has just been issued, we find favorable mention of California horses which we reproduce. This part of the report was written by Hon. T. C. Jones, of Ohio, who is a well known expert on live stock matters. We quote as follows:

The department report puts the number of horses in California, in January, 1880, at 273,000, valued at \$46.18 per head; total value, \$12,607,140.

The writer hereof does not know by what means the department ascertained the value of farm stock in the different States; whether from the reports of local tax assessors or its own correspondents. This value seems low, as compared with the value of horses in other States. For example, Oregon reports the average price at \$51.93 per head, and Nebraska and Minnesota each at over \$64 per head.

If the horses in and about the principal towns and cities of California, as we saw them, are to be taken as average specimens of the horses of the State (and from our observations in the farming districts we should say that they were not much above the average), the horses of California are certainly not inferior in excellence to those of other great breeding States. Indeed, we are inclined to the opinion that, as roadsters and stock for general purposes, the horses seen about San Francisco, Oakland, Sacramento, &c., are superior in average excellence to any we have seen in any other part of the country.

High Excellence of the Horses.

This excellence was so striking that special efforts were made to obtain, by observation and the opinions of the most intelligent breeders, the particulars of their breeding. When the immigration consequent upon the gold discovery

began, the best stock to be found in the East were always selected by the enterprising adventurers. Many of these were of superior blood, and all were selected with a view to secure the spirit and endurance required to withstand the hardships of the long and tedious overland journey. Of these a due proportion, of course, were mares, and it is the concurrent testimony of all the parties with whom we conversed that these animals were of large size and of fine form for roadsters, and generally possessed unmistakable indications of good breeding.

As early as 1860 thoroughbred and trotting stallions of the best class had been brought over the mountains and were advertised in the California papers, as we were shown by Mr. J. C. Simpson, of Oakland, who had collected and preserved these old advertisements, and who is, by the way, a gentleman who ranks very high as an authority on all questions relating to blooded horses.

Still it occurred to us that the infusion of superior blood of the East, as above set forth, was hardly sufficient to account for the uniform excellence of the horse stock as now seen in Central California. It seemed to us clear that the stock of mares in the State at the time this infusion began must have been very far above the average of the Spanish horses seen in New Mexico and Texas at that time, and this opinion was corroborated by the testimony of Mr. Simpson, based upon very extensive observation and inquiry. But in addition to much information from the best posted horse fanciers who have been familiar with the history of breeding in the State for the last 20 or 30 years, we conversed with many gentlemen connected with old Spanish families that had been extensively engaged in breeding horses before the country was acquired by the United States. Among these may be mentioned Judge Sepulveda, of the Superior Court at Los Angeles, whose father was born there in 1804, and was as early as 1826 largely engaged in breeding horses and cattle.

Early History of Breeding in California.

All the horses at this period were Spanish, brought here from Mexico, by way of Lower California, and were selected with a view of securing the highest excellence.

Horses were kept in immense numbers; every proprietor of a hacienda was a breeder of horses. The father of Judge Sepulveda kept from 2,000 to 3,000 head, and was especially careful in the selection of stallions and breeding mares. The mares were divided into bands, called *manadas*, of, say, 40 to 70, of uniform characteristics and frequently of uniform colors, with stallions selected to match. Bay, chestnut and gray were the most approved colors. The mares of a newly formed band were kept together for a few days with the appointed stallion, called *saranon*. After that the stallion would keep them together and keep out all intruders. The grazing land was of every variety of character—hills, valleys and plains—some high and hard, gravelly soil, and some low and boggy. In winter, while the ground was moist, care was taken to herd the horses on high and dry ground, to keep their feet hard and sound. In the dry weather of summer they were allowed to run where they pleased. Colts were castrated at the age of two years. The breeding mares, as well as the stallions, were allowed to run perfectly wild, it being supposed that breaking them impaired their vigor and spirit. In each band, however, there was a lead mare that had been handled and could be led. The best breeders had their vaqueros constantly looking after their stock, arranging the bands and seeing that they did not get off the proper range, etc.

The horses of that period, we were assured, were of fine form and good size, frequently from 15 to 16 hands high, and always of wonderful spirit and endurance, with exceedingly sound legs and feet. Shoeing was never thought of in those days, and it was a very rare thing to find a horse lame from any cause.

These horses were, of course, like all the best Spanish stock, descended from Arabian or Turkish ancestry, and had the general characteristics of that blood.

When the tide of immigration set in from the East, after the discovery of gold, there sprang up a brisk demand for horses about the mines, trading points and cities. Purchasers came to the great breeding districts about Los Angeles, Santa Barbara, etc., in search of stock, and invariably selected the largest and best animals, and as a consequence the horses in this part of the State began to deteriorate, especially in size; while about the cities and the mines the quality of this stock showed a corresponding improvement, as these choice mares were crossed by the fine stallions imported from the East.

The climate of the Pacific coast, doubtless, has much to do in producing this high excellence observed in California horses. Atmosphere so dry, so pure, and so exhilarating is certainly favorable to the development of the high spirit and energetic action so generally observed here.

As to the methods practiced by California breeders in general, they are simple enough. The mares and foals are out summer and winter, and have but little grain, except what they pick up on the stubble. This refers, of course, to the mares owned by ordinary farmers. There are many stables of highly-bred horses, one at least (that of Governor Stanford), equal in the number and excellence of its stock, and the amount of money expended in its management, to any in the United States. At stables of this character horses are fed oats, with mill

feed, chopped straw, etc., with hay. But the hay is always oats, wheat or barley, or wild oats, cut a little green, while the grain is in the dough. But as upon the farms (or ranches, as the people here, in defiance of the usages of civilization, persist in calling their farms), horses are seldom kept in stables. There is, therefore, from this branch of stock breeding but little manure made to aid in maintaining the fertility of the soil.

We add in reference to this department of animal industry of California that we are convinced that in average excellence for general use, the saddle and road and the farm, the horses about the cities and in the central part of this State are not surpassed by those of any country with which we are acquainted.

In Great Britain the coach horse and the hunter, that were found in such excellence 40 years ago, are now sadly depreciated in size and character. Breeding in that country is now chiefly confined to two classes of horses, to-wit: the race-horse, for short distances and light weights, and the heavy draft horse. It is the same in many parts of our own country, with the addition of a strain of trotting horses, bred almost exclusively with the view to mere speed, in an unnatural and unprofitable pace, for the race-course. We were, therefore, glad to see on the Pacific coast such a grand class of useful and stylish general-purpose horses, when horses of this sort are so generally deteriorating elsewhere.

FORESTRY.

Forest Trees of California—No. 18.*

Merten's Pacific Hemlock Spruce.

(*Tsuga Albida*, Merteniana.)

Hemlock tree! O hemlock tree! how faithful are thy branches;
Green, not alone in summer time,
But in winter's frost and time!
O hemlock tree! O hemlock tree! how faithful are thy branches!"

Vast forests of this Pacific hemlock extend along the coast from California to Alaska. Farther north it constitutes the main characteristic feature of the Pacific Sylva. This most charming tree of all the evergreens, from youth to prime, is of softened conic outline from dense, broad ground-base, to light and airy leading tip; later on in life of spire, steeple-top attenuation of branch and stem, throughout richly mantled with the finest feminine delicacy of foliage, yet beaut fully infilled with the most exquisite variety and grace by numerous hairy, slender and pliant tiny little twiglets, feathered, here in California, with the briefest leaf and thinnest of all the fan form horizontal expanse of spray known to these trees. This is even more spirey than the Eastern Canadian, and only rounded conic when broken off by storms or far advanced in old age. These tall spruces, farther north, are clad in denser masses of darker green verdure—twigs of no longer, strictly two-rowed foliage, but semi-plumed with longer and more varying leaves clothe them from the base to from 100 to 200 ft. or more; body two to six, or seldom eight ft. in diameter; but here only 60 to 75 ft., and rarely over two ft. through, and in sheltered, twilight shades altogether more open, lighter green, and delicate, soft gray green or glaucous hue, most manifest below or shimmering in the breeze, such sensitive forms and foliage in the play of lights and shadows is spirit like, fairy and sportive in the highest degree. And then behold the bright enlivening contrast of lighter vivid citrine-green verdure of new and tender leaf, fringing the new-born spring tip, her dark mantle now adorned, as it were, with new floral ornaments, or rather apart from all illustration—infantile sprays of exquisite beauty; delicate and drooping, confiding and reliant as the innocent babe on the breast of the mother—never yet excelled by any object of decorative art, nor even surpassed in the exhilarating and refreshing odors they exhale—the delight and gladness of youth, the joy of age—rejuvenating ethers to the enfeebled, traditional restorer of the invalid, grace of the grove, beauty of the lawn! The scattered branches, long and slender, of about equal diameter three-fourths their length, horizontal, or the lower drooping with the easy upward sweep and spring awaiting the wintry snows and storms north; here, perfectly level, and free as the toss of the zephyr itself. Bark of young trees and branches nearly smooth, gray, bloomed with lichens; old trees, coarse, rough-furrowed, inclined to a dark shade of red, a very slight bruise, or the scarf removed, reveals a very brilliant, bright pink-purple color. Cones pendant from the tips of very numerous slender hairy twiglets; scales about 30, roundish and thin, slightly furred, included bract on the back of the scale, blunt; cones an inch or more in length, oblong cylinder-like, somewhat pointed; seeds (about two-sixteenths of an inch long), about as long as width of the wing, and this three and one-half times longer—a few nit-like glands on the lower side of the seed. The northern form has the usual decided spruce drooping habit, as before suggested; leaves more densely set, and even crowded, and so distributed more promiscuously on the upper side of twigs—or less strictly observant of the two-rowed character, for although spirally set, upon a short raised base, and this still left on when the leaves fall away—they

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau. State Printing Office, Sacramento, 1882.

usually so twist at the base as to appear two-rowed; line-like leaves, though variable, are often three-quarters of an inch long, blunt, saggreen above, two lines of bloomy-gray beneath; usually preserves the dense, low bowing branches from little above the ground, so on aloft, inclosing a neat, warm, open canopy within by the lap and overlying boughs closing at their tops; this greatly serves to keep the brooded soil warm, for the roots are shallow, and in Alaska rest on and cling to rocks with scarcely any appreciable soil at all, simply slop-holes of living and dead sphagnum—but here, altogether dry, only the roots reaching moisture—the sharply conic top at the same time serves to let in the sunlight and air to sweeten these woods.

The thickened lower branches often so abound that much radiation and loss of heat is prevented in winter and heat excluded in summer—tempering the climate—besides her foliage precipitates little moisture, unlike redwoods and their like, and as the snow melts soonest on her boughs, they bend down in the lean-to-style of branch or center-pole and circle-tinted. Viewed all round, it is manifest they shed their drip afar round about; this elegant sheltering foliage thickens deeper in or farther back, and multiplies itself amazingly. It not only divides and conquers the wind at the tips, but by successive subdividing sprigs, continually diverges and multifariously mingles the elemental strife, until all its force is fritted away, and the calmed air nestles quietly beneath her peaceful wings; therefore a lodge under these boughs is both warm and dry, fragrant and sweetly ventilated—indeed, constitutes that unsurpassed and ever-living sanitarium for the invalid to which we previously alluded. Camping out and sleeping on these boughs has a north continental reputation for restoring and rejuvenating, accordant with Norwegian and Swedish traditions and customs, where, once a week, the floor must needs be strewn with twigs of spruce or juniper tops. Is it any wonder these refreshing odors inspire the social home circles with all the rural virtues that adorn these—

"Lovely bowers of innocence and ease,
Seats of my youth, when every sport could please;
How oft I've listened o'er thy green,
Where humble happiness endear'd each scene!"

And where this old *salix* nurse reached her long arms out and took us by the hand, and we self-sufficiently climbed her arms, and, with loud echoing glee, sported among the entanglements; or, with dignified importance of great business in hand, selected the choice bough for the cross-bow, or more primeval bow and arrow of the native. It is noteworthy how admirably this tree rallies and thickens in the top when broken off by the tempest—which full oft takes the conceit out of its too ardent aspirations—nature's testimony that it bears training to any reasonable extent, responsive to the bidding of the master; one of the best shelter trees known, wherever it will flourish at all, whether for the orchard, garden, yards, or for game of all sorts.

In our native wild woods, the cattle and beasts of the forest and field, and the fowls of heaven, find shelter under her shadow; the grouse, the squirrel, the jay and their like, find a constant home in the more darkened head—genial tent-house when storm and tempest roar, secure hiding place from alarm and danger, and ever present night retreat to hosts unnumbered, with the sweetest songsters of the grove.

To dwell on the vast and varied uses at length would carry us too far in detail—a final word on the California form, its timber products, economic, and few other uses must suffice. Contrary to experience and observation relative to most other timbers, the old matured heart-wood is more perishable than the young and sappy poles and branches where they are exposed to the seasons—perhaps because less interstitial separation of annual growths or "shaky" texture with such ready absorption and retention of water, etc.; hence its almost sole devotion to internal work, securely sheltered from alternate storms and burning suns; for rude rafters, etc., duly seasoned with the bark on, they are singularly lasting and very elastic, with much of the snap and spring of the yew and cedar, combined with a due degree of strength.

Only in the coast forests of California, contiguous to rivers or cold creek banks at the southern limit of its growth, is the Pacific Hemlock Spruce ever found much over two feet in diameter and about 60 or 80 feet high. Up to extreme age it preserves the perfect, symmetrical spire-form, and is altogether less marred by unsightly dead limbs, than its kindred of the East—the same observation applies to Alaska. Perhaps if this tree in our forests, or cultivated in this climate, were more exposed, a somewhat broader conic style would supervene; however, in its native haunts the horizontal, open, and airy branches, subdivided branchlets, and final feathery sprays have the utmost strictly two-rowed leafy plan, the tiny line-leaves about half shorter—certainly the most delicately gauzy, chaste, and beautiful tree it is possible to imagine. In the young state, say from 10 to 40 feet high or more, the bark is relatively smooth and even, branches exactly level, thin, fan-like, long and slender, with cherry-brown bark. These free hearted boughs from the breast are wont to lose entirely the peaked Italian brigand-hat or Alpine style so common elsewhere, not even pending like tassels at the tips save when in young springtime, but toss their entire limbs as lightly and freely to the breeze as the wild deer leaps on the mountains; or, stirred by the gentler zephyr off some sunset shore, vibrating the softest silvery emerald

sheen, like a celestial thrill, close along the confines of the invisible, or dimly seen, so enervated are the tiny leaves of this tree of our earthly paradise that no artistic grace of pencil, or power of pen, can express the charm of every exquisite form and enlivened motion.

SHEEP AND WOOL.

The Mohair Industry.

"I wish he would explain his explanation."—Byron.

EDITORS PRESS:—The "Midsummer Night's Dream," one of Shakespeare's plays, is in reality a play within a play. To compare small things with great, I will here indite an article between two articles; for I had an article written and ready for the PRESS (and do not wish to alter it), when I observed the editorial appendix to my article in your issue of November 4th. In the article of November 4th are two misprints. The word "Arizona" should read Angola; the word "derive" should read deride.

I trust the editor will excuse me from giving an immediate answer to his question. I gratefully acknowledge the information that science is truth, and in the same kindly spirit return the compliment. Concise means brief; yet, upon thinking twice, we know a "brief" is not always concise.

In the PACIFIC RURAL PRESS of February 11, 1882, the opening paragraph, under the head of "The Mohair Industry," reads thus: "Aware that my views of the mohair industry were unique." Again, further on: "Under what-ever obligations other branches of business may be to the so-called schools and colleges of science, the goat business is under none." True, it is so seldom that a confirmed skeptic trenches on the columns of a leading agricultural journal, that it was easy enough to fall into the error. In the PACIFIC RURAL PRESS, April 1, 1882, I wrote:

"I appear upon the scene as the advocate of the mohair producing industry of America, and the purpose that I design is to subvert the present system of goat breeding on this continent, whether I plant the banner of success on the summit of my 'Utopia,' or am obliged to retire to that obscurity from which I so abruptly emerged."

No compromise! I either have to plant the banner of success or retire. Against who? Against the scientist and the professional. These are the phylloxera who for 30 years have imbibed the vital juices of the mohair industry of America. The time has at length arrived when a remedy must be furnished or the vine must die. The first and immediate remedy that I propose is to cut off their alliance with the Government printing office. That printing press belongs to the people, and I hereby protest, in the name of the mohair producers of California, against its further prostitution to the vicious instincts of professional goat breeders. As quoted in the Virginia Angora Co.'s pamphlet, what is the language of the distinguished professional whose recent importation has been engraved at such an expense by the Government? "I am holding back my customers to know the result of the Virginia enterprise. If we succeed in starting it, I shall advocate charging much higher prices." No use in waiting for it to be a success, for it is never within the reach of it at all. Just merely start it, and up go the prices at once. Is this philosophy? Is this philanthropy? Is this science? We have nothing in common with them whatever. In order for the mohair producers of California to have profit, we must have cheap breeding stock, and it must be bred upon the soil.

In another part of the pamphlet we are told that "He has maintained the purity of his flock with occasional importations." From the regions of skepticism the questions re-echo: Where did the importations come from? Has the Colonel been using "graded bucks?"

If my memory serves me rightly, it was shortly after the introduction of the mohair goat into California that the first pamphlet on goat breeding was issued. The authors of it are wallowing in wealth; those who followed its instructions are existing in penury. If you were to read it to-day in a stable of horses, they would kick your brains out. Next comes the prospectus of the Guadalupe Toland Company. This scientific maelstrom engulfed \$2,000,000.

After a respite, the Virginia Angora Company's pamphlet was promulgated. All these, though enjoying a brief career of prosperity, are now no more. Consequently they can have no reference to the qualified statements of Mr. Grove in the dialogue, viz: "Whenever the obstructions of science shall be removed. She cannot annihilate the industry, and she has no right to retard it." Enclosed with this you will find a copy of the Brooklyn Evening Gazette, August 17, 1882, which will throw light upon the subject. Perhaps I might add that you can from it also deduce the answer to your question:

The Angora Goat.

There can be no question but that the goat of Asia Minor, generally known as the Angora, is the most valuable of the dangerous animals. Its flesh is not inferior to the best mutton. A cross of this species with the Maltese goat shows extraordinary milking qualities. Its skin, tanned, gives the famous Turkey morocco of ancient commerce, or cured with the hair on and used white or in colors, makes beautiful robes, rugs, etc. Its hair is one of the four or five raw fibers of first-class value.

England, France, Germany and Russia have each spent large sums in efforts to acclimate and successfully rear flocks of these goats in their territories, but without success. The farmers of Cape Colony, South Africa, have alone been successful in establishing the husbandry away from the native habitat of the animal; but even here success has only been achieved within the past 20 years. The Angora is hardy and healthy, is easily managed, and

can be profitably bred and pastured when even sheep will not thrive. Flocks of graded goats—at the fourth cross giving excellent mohair—can be built up from the common Mexican goat with ease, certainty and rapidity by the use of the thoroughbred Angora buck. With all these advantages, the natural query is, why the husbandry is so little known and fostered in this country.

In a volume just issued, under the imprint of the Orange Judd Co., of New York, we have a full explanation of the matter. Its author, Hon. John L. Hayes, LL.D., now the President of the Tariff Commission, has long been known to the public as the Secretary of the National Association of Wool Manufacturers, and as one of the most readable and reliable writers and authorities upon wool and wool fabrics, and also as a writer upon topics of interest and value, especially of an industrial character. The volume we notice is exhaustive in its scientific as well as practical treatment of the subject. In its pages are extensive contributions from the best of breeders and shepherds in Europe and America, with suggestions of value from dealers in and manufacturers from the Angora fleece. Industries recently established in the United States, creating a demand for both the hair and skins of the goat, are described at length, with assurances from the manufacturers themselves that they stand ready to purchase at paying prices to the grower all of either material, and all qualities, which the country can produce. A beautiful colored engraving of a group of Angoras, selected especially from Col. Peters' flock in Georgia for illustration to this volume, faces the title page, and the arrangement, printing, paper, indexing, etc., are of the first order of excellence.

We heartily commend the treatise to the public notice. It is worthy of careful and extensive reading and circulation. There are in its teachings and suggestions fore-shadowed results, for the capitalist and the nation, which are of the highest industrial and pecuniary value and importance.

C. W. J.

The crying evil of the age is the venality of the press. He says, "The volume we notice is very exhaustive in its scientific as well as practical treatment of the subject." As I write, this "scientific and practical" volume lays at my elbow. I did not purchase it; it was sent me by a friend, with the following spicy epistle:

FRIEND KIRBY:—I send you, through the mails, Hayes' treatise on goats. I have read him carefully, and pronounce him a scientific humbug.

Very Respectfully,

My friend had been breeding goats 11 years for their fleece. This laconic note, of course, was not intended for publication, but if not altogether inconsistent with the dignity of your journal, I ask its insertion as defining exactly the relative position of the scientist and his dupe. How, in the name of goodness, I ask, is the industry to make progress when such scientific garbage as this is scattered broadcast over the country at \$1.50 a copy? No, no, Mr. Editor; if you were out, as I am (?) nine years' time and several thousand dollars in gold on the "white elephant," with this volume before you, you would not tell me that "science is truth."

The language of Mr. Grove, as addressed to the *Alta-California*, in the dialogue (RURAL PRESS, Nov. 4th), reads thus:

Although we have groped our way in darkness, and under an expense that has been actually corrosive, there is nothing in our experience to cause solicitude for the ultimate success of the enterprise, whenever the obstructions of science shall be removed. She cannot annihilate the industry, and she has no right to retard it.

I now propose to the mohair producers of California that if we cannot rid ourselves of the scientist and professional in any other way, that we petition Congress to pension them off. It will be infinitely cheaper and more preferable than to run a line of steamers between the United States and Asia Minor to "maintain the purity of their flocks." They were dead beat when this treatise was launched. This could run them another five years. Let no one, however, imagine that their resources, either "scientific" or "practical," would be exhausted even then, for as long as you will find a million of dollars, they will find a maelstrom to absorb it.

MARTIN KIRBY (73).

Darrah, Mariposa Co.

[Very well. It matters not what men claim or their friends claim for them, if they are not promulgating truth, it is not science, and they are not scientific. There are pretenders to science, and if you wish to describe them, do not call them scientists. Why give up the name and turn it into a term of reproach when it is properly a term signifying the highest appreciation? If a man claiming to be honest robs you, you do not at once give him up the good word and try to make it a term of reproach. You have proper words for that idea; you call him "dishonest" or a "thief." So if you wish to announce that a man is promulgating ideas, from any motive, which are calculated to deceive and mislead, call him a false theorist, but do not call his statements "science" nor him "scientific," because these words belong to you yourself if you are demonstrating truth.—Eds. PRESS.]

PHOSPHORUS IN CHARCOAL.—According to the *Engineering and Mining Journal*, Swedish engineers have noticed that the quantity of phosphorus in the pig manufactured with charcoal is larger than that in the ore and fluxes, even assuming that all of it had gone into the pig. Jansen found that when he melted ore in crucibles, the metal obtained ran lower in phosphorus than the pig obtained from the same ores. Sarnstrom, in 1881, made some analysis of charcoal, the results of which seem to lead to the conclusion that the excess is due to that fuel. Two general samples were carefully analyzed, from the ashes of which were obtained respectively, 1.64% and 0.65% of phosphorus. This percentage represented respectively 0.0167% and 0.0054% of phosphorus in the coal. This is quite a new and unexpected fact, and one very important in the manufacture of iron.

HORTICULTURE.

Preparing the Soil for Tree Planting.

The future welfare of trees of all kinds depends much on the preparation of the soil for planting, how it is pulverized, and to what depth it be loosened. People who plant trees just about the same as planting a post, with just a hole large enough for its reception, need never look for good results. Orchards of many acres should be plowed, and how? Be planted with fruit or ornamental trees. Supposing a proper soil has been selected, start a four-horse plow and put a sub-soil plow after it in the same furrow. Continue this work until the whole ground be completed. Then start with the same plows, in the same manner, and cross-plow the whole. This mode will bring the soil to the depth of two ft. If it be still lumpy, put the harrow or cultivator over it; it will soon reduce the soil from lumpiness. Then mark off for the trees, and do not put them too close, for there is nothing gained by close planting where fruit is required. Having determined the distance of the trees, proceed to get the holes out. These may be made as large as you please, four ft. deep by six ft. wide, or larger in the same proportion.

The country has hardly grown to drainage yet; still, of all the mechanical operations applied to land, there is none of greater benefit; for in wet soils it is made to rapidly take off surplus water, and in dry, sandy soil the latter is benefited by the condensation from the atmosphere in passing through the pipes. But do not bury the drain-tile. Let the atmosphere communicate at the upper end with the tile, by bringing a right angle up to the surface of the soil and out of the way of plows. This can be done at a fence line; for the importance of atmospheric pressure upon water running down the inside of drains causes the latter to run much quicker than if the drains were without it. This is how not to bury drains up; and we hope it will be remembered, and not allow the mouths of the drain in question to be grown over and choked up with grass or other matter, and thereby prevent the effects of atmospheric pressure. We have seen drains laid very scientifically, thought to be so, but without one-half the effect of its capacity through not being properly done. The mechanical action of drains on soil is wonderful, for the action of water and air in passing from the surface down to the tile breaks away the soil, bit by bit, until the whole soil between the tile, whatever be the depth of the tiles, becomes, so to speak, thoroughly trenched, and better done in time than if done by the spade, because done finer, and the result a much better integrated soil.

We should all know the object of working the soil, for it is not merely to kill seeds that we run the plow and harrows through, but to disintegrate all particles of soil, and the finer we get it the more food it presents to the roots of plants and everything of the vegetable kingdom. The day is coming, and now is, in many places, when manures, deep plowing and constant cultivation of the soil will be of common necessity, plowing a little deeper every season, and by this means bringing fresh soil up to the surface to be thoroughly aerated, and made to present fresh food for plants of all kinds. Thorough drainage of all lands, by its mechanical action, will achieve this, and consequently save much of extra labor spoken of.

How much we wish the people of this country knew how and possessed the means of draining the land, knew its benefits and its importance. How many crops that could be grown that are now deficient in many properties. How much alkali could be drawn away from our soil by placing draw-tiles to depth of four feet from the surface of the ground, and hence we may continue to eulogize the advantage of draining by tile; we are exhausted, and then cannot speak one-thousandth part enough for the system of drainage.

We think we hear you say, "Our lands do not require drainage." We answer that there is no land in creation but what is benefited by drainage because of reasons heretofore given. You may not be able to secure with this practical result through inconvenient circumstances, but don't say it's no use. Do not say it is an advocacy of spending useless money. Properly drained land is early land, and the value of early land you know as well as we can tell you. It's no use in planting early fruits or early crops of any kind on lands that are late. It is the earliest crops that pay best; the earliest fruits that pay best. Add this drainage to land that is naturally early, and what will be the profits? Immense! What becomes of light frosts on drained land? It ceases to be; and why? Because the soil is dry. Wet land is one cause of frost as well as being late.

If you cannot get tile for drainage use brush. Cut your drains a little wider and put in the brush a foot deep, and never mind what the brush is composed of, for we have used the most frail, and after 15 years an examination proved it to be better than it was when first put in, almost in a state of petrification. Brush drains are for swampy lands, or all lands that are not solid. The drains on such lands are of little use. Brush is much better, and will last for years. Redwood brush is the best of all.

JOHN ELLIS.

San Francisco, Cal.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Grange Leaflets.—No. 12.

Written for the RURAL PRESS by CLARA DREWING.
The Pleasures of Memory

Memory is one of the chief joys of our existence; we often enjoy living over in our minds scenes and pleasures which may have been our delight days, months and even years ago. We sometimes find old people enjoying in their latter days the pastimes of their childhood; and persons who have been deprived in after life of the wonderful power of sight have found great pleasure in recalling poetry and portions of Scripture committed in early life. Thus the work well done in life's morning becomes the laborer's chief solace at eventime, as the ebbing tide is fast bearing him to realms on the bright shore beyond.

Many of us are careless about our memories, and allow them to become inactive through neglect. We read hastily and without reflection, thus retaining but a confused idea of what we have read, and then, some day, when we demand of memory the idea, that we may express it in language, we can find but a confused portion and our memories are like "Aunt Dillie's table," "it is there somewhere," and we, like the little thread and needle woman, turn over and give the things on memory's table a general stirring up, nearly give up the search, when out comes a straggling portion, of little use without the remainder. This precious power should not be abused in this way, but the habit of careless reading is easily acquired in the busy turmoil of living, and should be guarded against by paying careful attention to the important facts and reflecting upon the subject.

Few of us appreciate the comfort we have, or know how much we enjoy the bountiful supply of good reading matter provided for our entertainment in this progressive century, until we are deprived of it by being placed in some out-of-the-way place where it cannot be obtained. It is then we begin to exercise this wonderful faculty of the mind, and many things which we had thought were forgotten come back to us with a vividness that astonishes us, and we find

"Lulled in the countless chambers of the brain,
Our thoughts are linked by many a hidden chain.
Awake but one, and lo, what myriads rise!
Each stamps its image as the other flies."

As we journey onward through the coming years, October, 1882, will be the mystic link in the hidden chain of thought that will cause to rise before us many scenes in the State Grange, landscapes that will bear a great resemblance to the scenes about Stockton, studded with the grand old oaks, "the mighty monarchs of the forest," that enhance the beauty of the pleasant valley of the San Joaquin, portraits of the many brothers and sisters who were there assembled, and especially of those good Patrons whose Grange home is in Stockton, and who did so much toward making our visit a pleasant one. Of these last we have very pleasant recollections, and as we wash dishes, sweep, dust, etc., our thoughts will wander away, and we find ourselves feeding the fish, riding on horseback, taking long drives, talking artesian wells and mesmerism, or enjoying the hospitality of a cozy, new-made home. Day dreaming cannot be indulged in too long, and we console ourselves with the thought that some day we hope to have a chance to return some of their kindness.

At another time we are living over the scenes in the Grange room as we read the essays and reports, and a smile will creep over our countenance at the words "Trials and Grievance Committee," and we have felt several times as though we would like to have them solve the problem of help for us when our efforts to obtain have proven unsuccessful.

Among the prominent new portraits now hanging on memory's wall is the remembrance of the bright face of Mrs. Jeanne C. Carr, whom we had learned to love in the perusal of her valuable articles. Another is that of the noble editor of the *Patron*, Flora M. Kimball, who was loved by us before we were members of the Order. Another is that of Mrs. Flint, our Worthy Master's elegant wife, who commands admiration and love from all who meet her; we place it beside that of the noble Master, whose kindness and good deeds are known to many. These representatives, of whom we are proud, are now attending the National Grange and gracing it with their presence. There are many other new portraits, and we love to look at them as each image passes before us and claims our attention. The State Grange has given to the members of the Order food for reflection for years to come, and the friendships there formed are lasting pleasures treasured in memory.

Resolutions of Respect.

Bennett Valley Grange, No. 16, of Sonoma county, has adopted resolutions of respect to the memory of Sister Calista Lynean, who was a charter member of the Grange, an efficient officer and active member, always foremost in every good work.—Committee, Sister F. Talbot, Sister M. Brenner and Bro. D. Mills.

Meeting of the National Grange.

The National Grange convened in due form in Indianapolis, Indiana, last week. As yet but little has reached us of the meeting, although the associated press telegrams gave notice of the opening of the meetings as follows:

Thirty-two States are represented in convention. Among the delegates present are Gov. Frederick Roble, of Maine, and Congressman Aiken, of South Carolina. Sessions are secret, and will continue till next week. A public meeting was held at the Court House Nov. 15th, at which addresses of welcome were delivered by Gov. Porter and Mayor Grubbs, and responses made by prominent members. The Treasurer reported the finances in good order, the receipts more than equaling the expenditures, and the Lecturer reported the reorganization of the Louisiana State Grange in September. Grand Master Woodman's report was a lengthy document, and was largely devoted to the discussion of the objects of the Grange, and urging members to avail themselves of all the benefits accruing from membership. He recommends the organization of co-operative stores, nearly 100 of which are in successful operation in Texas alone; that steps be taken to secure the elevation of the Bureau of Agriculture into an executive department; that Congress be petitioned to pass Burrows' bill for the relief of the purchasers of patent right articles; that just statutory laws be passed relating to transportation. He shows that 20 States have an increase in membership. In the year ending October 1, 1881, 77 new Granges were organized in the United States, and 14 more since then.

We trust by next week to have a fuller account of the meeting.

Grange Notes.

Enterprise Grange in Los Angeles county has reorganized and revived, with Bro. T. C. Alexander as M., and Bro. F. R. Slaughter as Secretary.

San Jose Grange will have an important meeting on Saturday, Nov. 25th.

Watsonville Grange has decided to celebrate the 4th of December next, the Grange natal day, in a becoming manner. The session will be opened at 10 o'clock A. M. At 12 M. Harvest Feast. The afternoon will be devoted to speech-making. A general invitation to all Patrons is extended, and a good time is anticipated.

CO-OPERATION IN GRANGE WORK.—Brother Henry Eshbaugh, elected for the fourth term Master of Missouri State Grange, closes a recent address to the Patrons of that State in the following language: Will you, as members of our great fraternity, pledge me your hearty co-operation and your earnest prayers in the work? You have a right to expect—yes, to demand of me—a faithful performance of every duty devolving upon me. Have I not the right to expect of each and every member such assistance in every effort calculated to advance our interests and lead our Order to greater prosperity, so that our elevation, as a class, may become a triumphant success? Give me your hearty support in the work. Let us all lay aside selfishness and contention, and unite our efforts strictly upon true co-operative principles and work harmoniously together. We have been groping along in darkness and in isolation long enough. We have trusted others too long already; we have cared too little for ourselves. Let us now, at the beginning of a new term, rise in our manhood and unite in the effort to accomplish the objects for which the Order of Patrons of Husbandry was instituted.

THE GRANGE.—Our organizations, National, State and Subordinate, are gradually getting into the hands of their natural custodians, the honest, patriotic, unpurchasable farmers. The professional politicians and their like have been mostly weeded out, and there is only here and there a broken-down lawyer to be seen figuring in Grange work. These latter will remain only so long as they find it to pay or there is a prospect of getting office with the help of the Grange vote. When they do leave, it will be well for the Order.—*Mississippi Patron*.

CANNING GRAIN.—A new method of storing grain is proposed, in air tight bins or cylinders of sheet iron, to be sealed after a partial exhaustion of the air. It is said that wheat, flour and bread so stored for seven months have been found in excellent condition (as might have been expected), and that taking into account the security of the grain against dampness, fermentation, attacks of insects and large vermin, fire and other risks, when sealed up in a partial vacuum the new plan is more economical than ordinary storage in a granary.

DRYING THE HAIR.—Ladies dislike to wash their hair because it is so difficult to dry it, but there is need of its being cleansed with water at least once or twice a week. The best way to dry hair is with a soft, thick linen towel. Throw this over the head and rub the hair briskly for some time. If dried by the fire its vitality is injured, but the aid of the sun may be called in, after rubbing with the towel till most of the water is absorbed.

AGRICULTURAL NOTES.

CALIFORNIA.

CONTRA COSTA.

THE SILVERTOWN'S CARGO.—*Martinez Gazette*, Nov. 18: Although the cable steamer *Silvertown* has not taken so large a cargo by 2,000 tons as was reported she would, it is still the largest by about 2,000 tons ever taken from this coast; but the same ship has carried upwards of 20 larger cargoes (they were in bulk) from Boston to England. The cargo she takes from here will be about equal to 7,000 short tons, most of which is stowed in the three circular iron chambers, or tanks, constructed for carrying the marine telegraph cables, each of which are 60 ft. in diameter, and extends from the main deck to within 80 ft. of the keelson.

BUTTE.

MOUNTAIN BUTTER.—*Chico Record*, Nov. 18: A wagon containing 3,500 lb. of butter, belonging to L. W. Bunnell, of Big Meadows, and Mrs. Lee, of Butte valley, arrived in town today. The butter is to be stored in this city until the price stiffens up a little more. Some of our merchants have already put in a bid for it. This cargo comes from a region where butter is pure and sweet, and it is worth a good sum.

PERSIMMONS.—In Mr. Ballard's yard, in this city, is a tree just one inch and a half in diameter, which now bears 75 fine Japanese persimmons, and it wouldn't take a very long pole to knock them off, either. To-day Mr. Ballard picked four of the largest specimens from his trees and shipped them to Prof. Gans, of Red Bluff, who has been boasting that he raised the finest specimens in the land. The frost we have had for several days past has thoroughly ripened this fruit, and it is most delicious.

LIMES.—Judge Dunston, of Wyandotte, came in town on Tuesday and sold Mr. Boynton nearly 500 limes, which he had taken from three trees growing on his place, and being about one-quarter of the number which the trees contained. The fruit is in every respect equal to the Mexican lime. The trees from which the limes were gathered were raised from the seed, and the fruit is natural. The Judge has orange and lemon trees bearing natural fruit which is equal to any grafted. In conversation with our reporter Mr. Dunston said that while he raised the fruit on his place, he did not think that everybody would be able to accomplish what he had done, although that on every quarter section of the foothill country bordering the valley spots could be found where all three of the mentioned fruits could be grown, if special attention is paid to selecting the right spot to set the trees.

LOS ANGELES.

VITALITY OF THE ORANGE.—*Times*, Nov. 10: The orange tree one would naturally infer to be very tender and requiring very careful treatment and handling. The fact is, however, that it is one of the most hardy of trees, and will often live through the most trying ordeals and survive the most careless handling, to which almost any other tree would succumb. Dr. A. F. White's fine orchard, on Main street, affords two striking instances of its surviving hard treatment; of the careless treatment you will have to go further to learn, for you can find no instance of it there. One of his trees, some two years ago, was stripped of its bark, just under the surface of the ground, for several inches around the entire circumference of the tree, leaving not a shred remaining. The damage could not be seen from the surface, and it was not discovered until the tree showed signs of disease. Investigating for a cause, the wound was discovered. It was bound up and the top pruned back so as not to strain its energies, and now that tree has a good crop of oranges, almost as fine as can be found in the orchard. Another case of hardihood in the same orchard is where a mischievous boy, some four or five years ago, perhaps more, as it was long before the Doctor came into possession of the property, completely girdled a limb of an orange tree with a new knife he was testing. The limb still lives, and is now full of oranges, and has borne every year since it was girdled, though the wound has not healed, and a space of two inches of that limb is apparently as dead as it ever can be; and not only that, but it is cracked almost entirely through at the same place, caused by the weight of the fruit it has borne.

THE ADVANCE IN PORK VALUES.—*Herald*, Nov. 18: The Ramsaur Bros., of Florence, sold carloads of live hogs, within or about the year 1879, at the rate of \$150 per carload of 10,000 lb. The same weight of porkers would to-day bring \$650. Now, every stock-grower knows that hogs cannot be produced at \$15 per 1,000 lb., or \$150 per carload, without serious loss. However, the Ramsaur Bros. went on raising hogs upon a large scale, with implicit faith in coming and remunerative prices. The reward of perseverance is now theirs. There arises here a practical lesson to those who shift and shift again with the shifting times. The shifter's bucket is apt to be bottom upwards when it does rain.

THE RAISIN CROP.—*Santa Ana Herald*, Nov. 18: The raisin crop of this valley is now beyond all danger. In fact, the packing is going forward as rapidly as possible, and thousands of boxes have already been sent to market. As the raisin makers of the upper portion of the State have lost heavily by early and drenching rains, it is probable that the crop of this valley, which is an exceptionally fine one this year, will rule high in the market. The

greater portion of the raisin crop of the Santa valley is usually contracted for sometime in advance of its manufacture. McParson Bros., of Orange, shipped another carload of raisins this week, making the fourth full carload and a total shipment so far of 4,000 boxes. They will probably pack and ship 6,000 boxes more. They have suffered no damage from the recent rains, by the exercise of constant watchfulness.

THE VINTAGE.—*Anaheim Gazette*, Nov. 18: The vintage is about over, and the wine-growers have reason to be thankful for the abundant harvest. Although in some instances the yield of grapes was not as large as last year, as a rule it was much larger, and at least one-third more wine was made this season than in 1881. It is the best vintage in 12 years, not alone in quantity, but also in quality. We are informed by Mr. B. Dreyfus that the port wine he has made this year has more saccharine matter, and has a better flavor and color than during any year in his experience as a wine-maker.

DUARTE.—*Cor. Los Angeles Times*: The people of Duarte contemplate going into the apricot business heavily. If all the apricot trees are planted that are spoken of, it will necessitate a cannery here within a few years. In this connection I will state that our enterprising citizen, Mr. A. T. Taylor, has succeeded in raising in nursery 25,000 thirty young seedling peach trees, and this autumn had them budded into apricots and French prunes. Mr. Moses Mitchell's place next to the foothills is remarkable for its freedom from the frost. Tomatoes have been produced here in large quantities for the winter and early spring market. Mr. Mitchell is now growing coffee and tea on his place, and the plants are in a fine, healthy condition. He obtained a half-dozen plants of each from the Agricultural Department, and they all lived, excepting three of the tea plants. The leaves of the coffee look much like those of the wild coffee tree of southern California. Mr. Mitchell is taking great pains with his young plants and intends to give them every chance to grow up out of their more tender years. He believes he can succeed in raising coffee and perhaps in producing tea.

MONTREY.

STOCKRAISERS' PROTECTIVE ASSOCIATION.—*Monterey Argus*, Nov. 18: The stockraisers of Carmel valley met on Nov. 4th and agreed to form a protective association. The object of the association is to deter those persons who are tempted to trespass the law by misappropriating live stock. The members pledge themselves in purse and person in bringing to justice all such trespassers. A temporary chairman and secretary were appointed, the roll signed and a meeting called to assemble in Monterey on Saturday, Nov. 25th, at 1 P. M., at which all the stockraisers in the vicinity are expected to be present to complete a permanent organization.

NAPA.

FROST AND GRAPES.—*Reporter*: A St. Helena dispatch of Wednesday says: Severe frosts the past two nights have wound up grape picking here for this season. The second crop was badly injured by the rain, but the season's grape product has, on the whole, been very satisfactory, prices averaging more than \$30 to the ton. Vineyard men are well satisfied, and are going in heavy for another season.

EARLY SEEDING.—*Napa Register*: Farmers in this part of the valley are very busy at present in plowing and seeding, making the most of the fair weather. One rancher living near town has already about 100 acres seeded to wheat. Some farmers had large crops of corn which did not ripen before the rains came, and the loss on these fields will be considerable. The aggregate of this cereal in this valley seriously damaged by rain is large. Some is yet in the field.

SAN BERNARDINO.

RAISIN PACKING.—*Press*: The Riverside Fruit Co. are running a large force now packing their raisins. A brief visit to the cannery this week found all busy as bees, and the work moving swiftly and systematically. They are now packing about 650 boxes a day, and have already put up about 8,000 boxes. They have some of the most experienced raisin packers in the valley at work, and they are grading the fruit very carefully. This is as it should be, as it will give their products a reputation in the markets which will be of great benefit in the future.

SAN DIEGO.

CROP PROSPECTS.—*Sun*: The farmers of this county, especially along the route of the California Southern, have reserved a large amount of their grain for seed. The largest crop ever harvested may be looked for next season if the weather is propitious. It is estimated that between 9,000 and 10,000 acres of the San Marcos and Wolfkill ranches will be put in cultivation this year and sown with wheat. These ranches have never been cultivated, as it cost too much to bring the produce to market, but the close proximity of the railroad has produced this change.

SAN LUIS OBISPO.

WORKING STOCK SCARCE.—*Editors Press*: Mr. Miller, of Miller & Lix, paid us a visit here the last few days, and purchased all the ranch teams—14 head, including two mules—available here. A short time previous a party from Mexico purchased all the pack animals that could be had, so horse flesh is a scarce commodity here just now for farming purposes. Lots of settlers are coming and either buying

squatters' titles, or settling on some of the thousands of available Government lands, and some few are buying through the real estate offices here and at Santa Maria.—M. J. O. B.

SANTA CRUZ.

HOPS.—Watsonville *Pojaronian*: Hops continue to move upward in price. They are now quoted at from \$1.05 to \$1.10. Guess friend Tuttle wishes he had held on to his crop. If he had he would have nearly doubled his returns. From Al. Sanborn we learn that he is daily receiving orders for material suitable for hop poles, the orders being larger and more numerous than he has ever before received. With such a condition of affairs prevailing, so many farmers going into the hop business, it would be a good investment to keep out of hops for a time.

THE SEASON.—Farmers feel quite hopeful of good crops for the coming season. The rains have put the ground in good condition for plowing, and it is but natural to expect, with such heavy early rains, that the rainfall for the season will be abundant.

SAN JOAQUIN.

NOTES.—*Independent*: On the West Side there has not been rain enough to start the feed, and the sheep ranges in the foothills are yet unfit for grazing. On the "Sand Plains" the farmers have been very busy, and a large acreage has been plowed and seeded. Now that the

Mr. C. Sawtell's ranch, east of town, there is a Japanese persimmons tree four years old, seven feet high and bearing about 50 large and beautiful persimmons.

HOPS.—We stated last week that J. D. Grant has sold one car load of hops or five tons, at 85 cents per pound. He has since disposed of the balance of his crop, nine tons, at \$1.05 per pound; total for his crop from about 20 acres, \$17,400, or over \$1,300 per acre.

GIANT QUINCE.—*Cloverdale Sentinel*: Mr. W. H. Block has left at our office a quince which turns the scales at two pounds. It measures 15 inches in circumference one way and 16 inches the other. This giant specimen was raised on Bart Davis' farm across the river, and several horticulturists in this vicinity pronounce it the largest quince they have ever seen.

CORN.—*Petaluma Courier*: N. Wiswell, of Vallejo township, has brought to the *Courier* office a sample of 500 bushels of corn on the cob that beats any grain in the shape of corn we ever saw. It is of the white flint variety, was planted since the 10th of May last, is fully matured, was raised without irrigation and produces about 40 bushels to the acre. Says he can do better with it another year. The ears are the handsomest we ever saw. Mr. Wiswell raised on same farm 215 sacks of good merchantable Early Peerless and Indian Premium potatoes on three acres of land.

NEW BOXES.—*Petaluma Argus*, Nov. 17:

their location. They were planted on the inner edge of a new levee on Last Chance ditch, and had a very deep soil to burrow in. The roots ran an unusual distance to the water's edge, making a long, slim, yellow potato. Forty or 50 of these were produced that varied in length from 12 to 36 inches, and were not more than two inches through at any point. The longest and most peculiarly looking one was from one to two inches in diameter in its largest part, and 33 inches long, while more slender potatoes appended to each end gave this remarkable root a total length of 62 inches before the slender ends were broken off. Not the least remarkable fact is that from other slips from the same seed, planted in the usual way some distance from the levee, the potatoes produced were of the usual form and size. This is clear proof that the place where the long potatoes grew and that part of a plant's nature which makes its roots seek water caused their uncommon length.

NEVADA.

A NEW CEREAL.—*Reno Gazette*: The Munsury barley is a new variety and likely to become popular. It is six-rowed, and was sent out by the Department of Agriculture four or five years ago. It originated in Canada, and has long, heavy heads which hang down when filling; but its straw is so strong that it does not fall down, even on the richest land. It has

Brain Food.

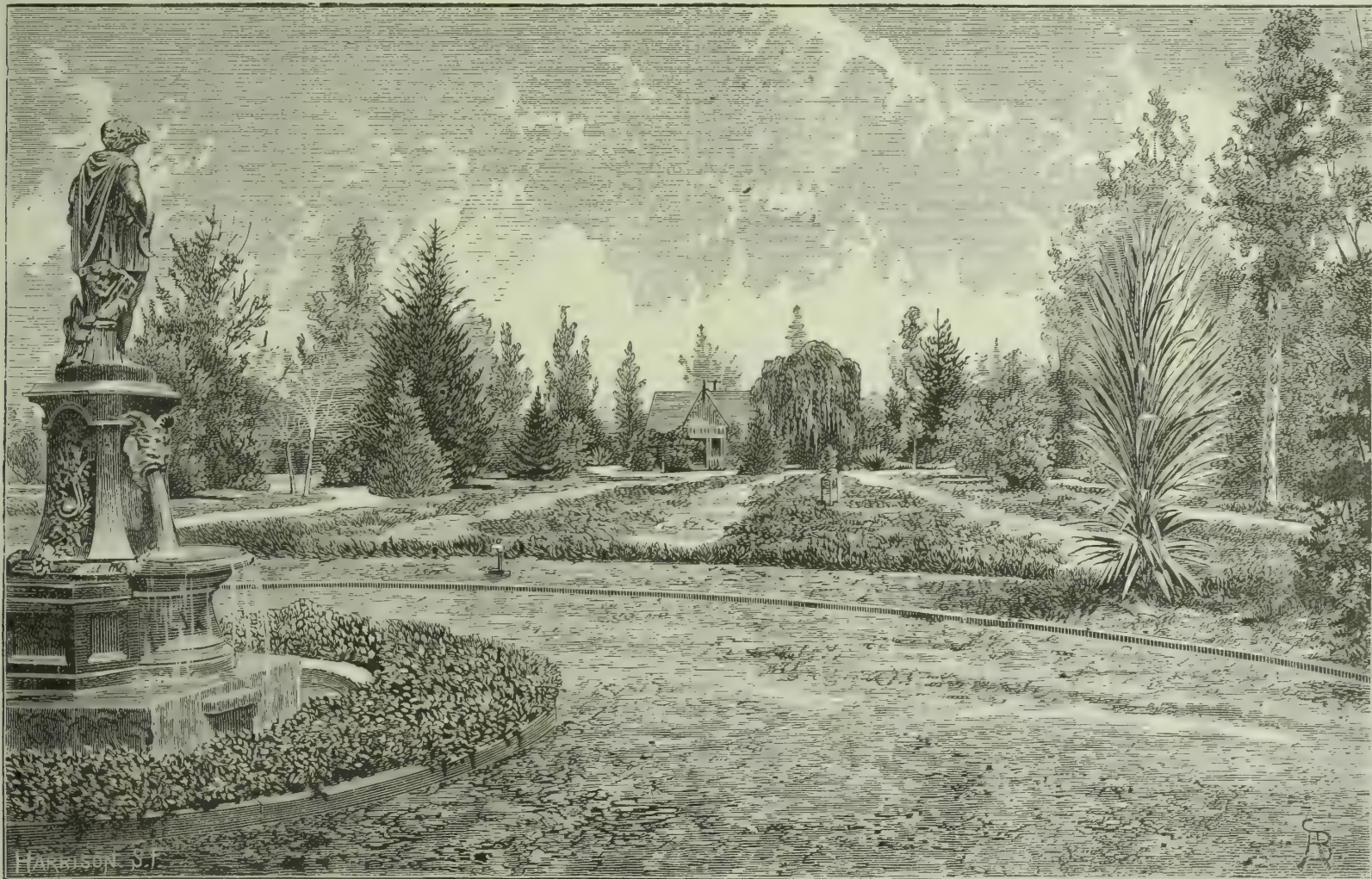
You can no more crowd intellectual food into people's minds in quality and quantity, and at times of your own choosing, than you can make the child or the animal eat whatever you desire when not hungry.

You may make a newspaper of elaborate dimensions, and fill it up with a mass of reading that but few people want, and sell it at almost any price, and but few people will take it continuously.

Again, you may fill it up with a good deal of good information, without going to the care and expense of having it nicely prepared as to variety, arrangement, seasonable news, propositions clothed in good language and prepared to good taste, and your literary duty will not be appropriated or made useful to the community if too cheaply or recklessly set forth.

Again, it is easy enough to prepare a dish that is inviting at the first taste, when one does not care a fig about what they say, except to make their paper attractive for the time being, or until the fallacy of their spicy and mis-called "enterprising" articles come to their true color in the light of true information.

He who buys his literature by the yard or pound, instead of by its true standard of real



GEN. NAGLEE'S GROUNDS, SAN JOSE—THE RESIDENCE AND ITS SURROUNDINGS.

"green stuff" has attained a growth sufficient to warrant its destruction by turning it under, every available plow is in motion, for the land was never in better condition for cultivation. In the vicinity of Ripon the green feed has got such a start on farmers that instead of selling their stubble fields for sheep range, they have been giving the fields to sheep men who would bring their flocks there. The plows are running behind the sheep as fast as these useful animals destroy the feed enough to permit the plows to run. Sheep men through the county class this as the best season they have encountered for several years, when feed and prospects for future pasturage are considered. They say their sheep are in prime condition, and are steadily gaining, owing to the abundance of feed now to be had on the east side grain fields. The cold weather, if it comes, will find the animals fat and able to withstand any ordinary storm. Heretofore the cold weather has generally caught them when the feed was gone, and naturally their flocks suffered severely. Between here and French Camp the farmers are very busy in putting in their summer-fallow and turning the ground for winter planting. Old farmers say that thus far this has been one of the best seasons for putting grain in in good shape ever known. The land lying along the public road is classed as "low land," and subject to inundation during extreme high water. Last winter the crops on this class of lands were uninjured by floods, and perhaps that fact inspires the owners to plant an increased acreage this season. Be that as it may, if this favorable weather continues a few days longer there will be but few acres of the low black lands left unseeded.

SONOMA.

JAPAN PERSIMMONS.—*Healdsburg Flag*: At

Orchardists seem to be taking a new departure in reference to the best method of guarding against the spread of scale bugs and other fruit pests through the medium of returned fruit boxes. The plan is to allow the boxes to go with the fruit. Heretofore the wheat-growers were laboring under the impression that by having their boxes returned to them they were saving much expense, but it has been discovered that this is but poor economy, especially when taking into account the great risk of sowing broadcast through the orchards the larvae of orchard pests, by the means of the use of the old boxes returned from the San Francisco markets. An exchange, speaking in advocacy of shipping fruit in none but boxes, says: "The orchardist is told that boxes are returned free, but that it is a fallacy which must be seen at a glance. Railroad and steamboat companies cannot afford to handle boxes by the thousands free of cost. Instead of charging, say six cents for full and four cents for empty boxes, they charge 10 cents one way and return free. Truckmen in the city charge enough for the full boxes to cover the expense of the empties, and as quite a percentage is never returned, they are that much ahead. The commission merchant can afford to handle the goods at less figures if he does not have the worry about gathering the boxes in, sorting and nailing into packages. So it will be seen that the full price of new boxes is paid out for the return of the old and battered and oftentimes worthless ones."

TULARE.

PECULIAR POTATOES.—*Visalia Delta*, Nov. 17: H. S. Hand, whose place is between Hanford and Lemoore, has raised this year some very peculiarly formed sweet potatoes. Their shape seems to have been determined chiefly by

been tested for malting and pronounced superior for that purpose. In ripening it is a little later than the common six rowed, and is easily distinguished from that when growing by a slightly reddish tinge to the beard when the heads appear.

WALL PAPER should not, in the opinion of Dr. Baker, who read a paper on the subject at the recent gathering of scientists at Montreal, be manufactured in a manner to be air tight. He says that, hygienically considered, the walls of a house should be porous like our clothing, having free intercourse with the open air. He thinks that waterproof paper causes increased dampness of the walls, as the stoppage of circulation of air prevents their drying. This prolonged dampness of the walls he considers unhealthy and productive of other evils. Dr. Baker advocates the old-fashioned white-wash walls, instead of wall paper or their substitute.

L. J. Rose, a well-known grape-grower of southern California, reports to the State Viticultural Association that his observation convinces him that Californians are going into the wine grape business too largely; that the product of wine grapes is certain to exceed the demand, and that the result must be disastrous.

It is said that Secretary Chandler, in his forthcoming annual report, will recommend the Life Saving, Revenue Marine and Coast Survey bureaus of the Treasury Department be transferred to the control of the Navy Department. It is thought that, should Chandler make the attempt and succeed, he will follow it next year by asking for the transfer of the Marine Hospital Service, another branch of the Treasury.

worth, regardless of bulky quantity, not only deceives himself badly, but in the most important of all considerations, for a man who cheats his heart and brain, does himself the greatest of wrongs, for it is irreparable; it is perpetual; its injury goes down the ages, multiplying its important results in its influence from individual to individual.

A man has but one life to live. If he fills his mind with poor trash, there is no means by which he can cleanse it and begin anew, for the injury mars his thought or pollutes his character forever.

It is but little, at most, that is expended for literary food compared with other expenditures for human existence. Then why should people foster second quality literature, when the saving at most can be but a few dollars a year between that and buying the best.

Why will not people take more pains to inform themselves as to which publications are the best and most suitable for advancing their minds and their material interests as well than they ordinarily do? They are often careful (yet seldom careful enough) as to what seed they sow upon their land, and why should they not be equally careful and select of the intellectual seed they secure for themselves and others in their care?

TO CLEAN KID GLOVES.—Mix dry potter's clay into a thin paste, with "deodorized" benzine; mount the gloves on suitable dummy forms, and go over every part with this paste. Then plunge the gloves into a quantity of pure benzine for half an hour; press out excess of liquid, dry in the air, and then rub into every part as much of a mixture of equal parts of the yolk of eggs and flour as the material will absorb. For white leather substitute half glycerine and white of egg for the yolk.



Nothing is Lost.

Nothing is lost; the drop of dew
Which trembles on the leaf or flower;
Is but exhaled, to fall, anew,
In summer's thunder shower—
Perchance to shine within the bow
That fronts the sun at close of day.
Perchance to sparkle in the flow
Of fountain far away.

Nothing is lost; the tiniest seed,
By wild birds borne or breezes blown,
Finds something suited to its need,
Wherein 'tis sown or grown.
The language of some household song,
The perfume of some cherished flower,
Though gone from outward sense, belong
To memory's after hour.

So with our words; or harsh or kind,
Uttered, they are not forgot;
They leave their influence on the mind,
Pass on, but perish not.
So with our deeds, for good or ill,
They have their power scarce understood;
They let us use our better will
To make them rise with good.

A Seed.

A wonderful thing is a seed!
The one thing deathless forever—
Forever old and forever new,
Utterly faithful, utterly true—
Fickle and faithless never.
Plant lilies and lilies will bloom;
Plant roses and roses will grow;
Plant hate and hate to life will spring;
Plant love and love to you will bring
The fruit of the seed you sow.

A Chapter of our Civil War History.

(Prepared for the Press by Mrs. CLARINA H. NICHOLS.)

Anna Ella Carroll

Was a daughter of a former Governor of Maryland—kindred to Chas. Carroll, of Carrollton, a signer of the Declaration of Independence. She was an intimate friend of Gov. Hicks, and during the war of the rebellion a member of his family, devoting her ready pen and extensive social influence to the cause of the Union. To this end she freed her slaves and generally applied her time and means to the study of the situation. In the fall of '61 she visited St. Louis to inspect the prospects of the war in the West, to which the hopes of the nation—dashed by a long series of scarcely broken misfortunes—were anxiously directed. A gunboat fleet—first suggested by Hon. Edward Bates, member of Mr. Lincoln's cabinet, and under the special authority of the latter—was then prepared to take possession of the Mississippi river and its defenses. Miss Carroll, satisfied on examination that the campaign would result in disaster to the national arms, wrote Nov. 12th to Mr. Bates at Washington, giving her reasons for believing it would prove a failure, and urging him to have the expedition sent up the Tennessee river, as the true line for successful military operations. She also sent a similar statement and appeal to Hon. Thos. Scott, Assistant Secretary of War, and on the 30th of the same month submitted to the War Department a plan—accompanied by explanatory maps—of her proposed campaign of the Tennessee. Col. Scott, whose personal acquaintance with the facilities and connections of the railroads of the South was unequalled by that of any other Northerner, saw at once the merits of the plan, and declared it "the first clear solution of the difficult problem." He was subsequently sent to arrange the details of its prosecution.

The Mississippi expedition was abandoned and the Tennessee campaign vindicated by the capture—Feb. 6, 1862—of Fort Henry, the Confederate post which protected railroad communications between Memphis and Bowling Green. With the fall of Fort Henry the enemy's center was pierced; the Tennessee river opened, the nation's final success assured. The evacuation of Columbus and Bowling Green soon followed. Fort Donelson was surrendered, its 14,000 troops marched out as prisoners of war, and hope buoyed the hearts of the Government and people. It was here that General Grant won the laurels that placed him in the line of national and international honors. Pittsburg Landing and Corinth soon followed the preceding successes. North and South the influence of this campaign was alike felt. It rendered foreign intervention impossible. Missouri stayed her outgoing, and Tennessee and Kentucky drew back to the Union, and the national armies were enabled to push forward to the Gulf States, and secure possession of all the great rivers and routes of international communication through the heart of the Confederate territory.

On the 10th of April, 1862, President Lincoln issued the following proclamation:

"It has pleased Almighty God to vouchsafe signal victories to the land and naval forces engaged in suppressing an internal rebellion, and at the same time to avert from our country the damages of foreign intervention and invasion."

During all this time the author of this plan remained unknown except to the President and his cabinet, who feared to reveal the fact that the Government was acting under the advice and plan of a civilian, and that civilian a woman. In a discussion of the Senate as to the originator of the plan, March 13, 1862, it was variously ascribed to the President, to the Secretary of War, and to the different naval and land commanders—Halleck, Foote, Grant, Smith and Fremont. The historians of the war disagreed as to its authorship. Draper's "History of the Civil War" gives it as Gen. Halleck; Boynton's "History of the Navy" to Commodore Foote; Lossing's "Civil War" to the combined wisdom of Grant, Halleck and Foote; Badeau's "History of the Civil War" credits it to Gen. C. F. Smith; and Abbot's "Civil War" to Gen. Fremont.

What an opportunity for a national sensation was lost there! Suppose an announcement had accompanied the President's proclamation revealing the fact that behind all these large-brained men—Generals, Commanders, Military Committees, the President and his Cabinet—was the small brain of a woman, planning and directing strategy, the execution of which made world-wide reputations for men incompetent to formulate the work, and marked her as the greatest military genius of the nation and one of the greatest military strategists of the century. What a consternation among military commanders, whose names were being borne aloft by national acclamation; what astonishment throughout male Christendom, and what grateful, half-suppressed exultation among women, that "a woman had done it!" I doubt if the women of the Confederacy could have suppressed a mitigating satisfaction that a woman's hand had plucked the laurels from the brows of their Northern conquerors. With grand old Ben Wade, "I am sorry" that he "did not publicly declare the author," Anna Ella Carroll, and give us this splendid episode to the decisive success of the war. It might have been accepted as a "bedrock fact" in the establishment of woman's intellectual equality and fitness for suffrage. But, says the history from which, and reports of military committees of Congress, my facts are compiled: "It was not through her plan of the Tennessee campaign alone that Miss C. proved her military genius. Throughout the conflict she continued to send plans and suggestions to the War Department. The events of history prove the wisdom of those plans, and that, had they been strictly followed, the war would have been brought to a speedy close, and millions of men and money saved to the country." The operations against Vicksburg is a case in point. In June, 1862, the combined fleet of Farragut, Porter and Gen. C. H. Davis attacked Vicksburg from the river front, and, after a month of costly effort, abandoned their purpose. In the following October Miss Carroll, learning that preparations were making to renew the attempt, addressed the Secretary of War, inclosing a map showing the obstacles to be overcome; the impracticability of an assault in front, which had been the cause of Farragut's failure, and indicating a line of approach from the rear, with a small auxiliary force and gunboats at Vicksburg to co-operate—a course which subsequent successes of Gen. Grant—in command of the forces from New Orleans to Vicksburg, under the name of "the Department of Tennessee," fully justified. Her wise thoughtfulness is suggested in her remark touching the famous canal, commenced and left in an unfinished state, and which would have destroyed the uses of the post for both armies. She says: "With regard to the canal, Vicksburg can be rendered useless to the Confederate army (by the canal) on the first rise of the river; but I do not advise this, because Vicksburg belongs to the United States, and we desire to hold and fortify it; for the Mississippi river at Vicksburg and the Vicksburg and Jackson railroad will become necessary as a base for our future operations. Vicksburg might have been reduced eight months ago as I advised, after the fall of Fort Henry, with much more ease than it can be done to-day."

The Testimony.

Premising that Hon. E. M. Stanton was tendered and accepted his appointment as Secretary of War, pledged to carry out Miss Carroll's plan—I have prepared a verbatim synopsis of the report of the House Committee on Military Affairs, as submitted by Hon. Mr. Bragg at the third session of the Forty-sixth Congress—a short time before her death, in 1881. Omitting the multitude of references to testimony accompanying the memorial before it, I have copied from said testimony the statement of Hon. B. F. Wade entire, with extracts from his correspondence, not because of their greater interest, but as giving a comprehensive view of the subject from an official standpoint of unrivaled opportunity.

Report.

In the Autumn of 1861 the great question, whether the Union could be saved, or whether it was hopelessly subverted, depended on the ability of the Government to open the Mississippi and deliver a fatal blow upon the resources of the confederated power. The original plan was to reduce the formidable fortifications by descending this river, aided by the gunboat

Miss Carroll's plans of the campaigns, mentioned in this abbreviated sketch, are to be found in an interesting chapter, "Women in the War," in the second volume of the recently published "History of Woman Suffrage," edited by Mrs. E. Cady Stanton, Mrs. M. Joelyn Gage and Susan B. Anthony; Fowlers and Wells, publishers; for sale by Bancroft & Co., San Francisco.—C. I. H. N.

fleet then in preparation for that object. President Lincoln had reserved to himself the special direction of this expedition, but before it was prepared to move he became convinced that the obstacles to be encountered were too grave and serious for the success which the exigencies of the crisis demanded, and the plan was abandoned, and the armies diverted up the Tennessee river, and thence southward to the center of the Confederate power. The evidence before this committee completely establishes that Miss Anna Ella Carroll was the author of this change of plan; that she devoted time and money in the autumn of '61 to the investigation of its feasibility; that, after that investigation, she submitted her plan in writing to the War Department at Washington, placing it in the hands of Col. Thos. A. Scott, Assistant Secretary of War, etc. That this campaign prevented the recognition of Southern independence by its fatal effects on the Confederate States, is shown by letters from Hon. C. M. Clay, and by his letters from St. Petersburg; also those of Mr. Adams and Mr. Dayton from London and Paris. That the campaign defeated national bankruptcy then imminent, and opened the way for the system of finance to defend the Federal cause, is shown by the debates of the period in both houses of Congress. The wisdom of the plan was proven, not only by the absolute advantages which resulted, giving the mastery of the conflict to the national arms and evermore assuring their success, even against the powers of all Europe, should they have combined, but it was likewise proven by the failures to open the Mississippi, or win any decided success on the plan first devised by the Government. It is further conclusively shown that no plan, order, letter, telegram or suggestion of the Tennessee river, as the line of invasion, has ever been produced except in the paper submitted by Miss Carroll, on the 30th of November, 1861, and her subsequent letters to the Government as the campaign progressed. It is further shown to this committee that the able and patriotic publications of this memorialist, in pamphlets and newspapers, with her high social influence, not only largely contributed to the cause of the Union in her own State—Maryland—but exerted a wide and salutary influence on all the border States (see Gov. Hicks' letters, and Howard's report, third session, 41st Congress). These publications were used by the Government as war measures, and the debate in Congress shows that she was the first writer on the war powers of the Government. Leading statesmen and jurists bore testimony to their value, including President Lincoln, Secretaries Chase, Stanton, Seward, Wells, Smith, Attorney-General Bates, Senators Cowan, Reverdy Johnson and Hicks, Honorable Horace Binney, Benj. H. Brewster, Wm. M. Meredith, Robt. J. Walker, Chas. O'Connor, Edwards Pierrepont, Edward Everett, Thos. Corwin, Francis Thomas, of Maryland, and others.

[TO BE CONTINUED.]

From the Farm House.

[Written for the RURAL PRESS by MAID-OF-ALL-WORK.]

And so it rains, and rains hard. It drizzles, it drips, it pours. The clouds assemble without wind or warning, and empty out their floods without effort. It is safe to say that the winter is fairly here, but when it came, or how, nobody knows. It did not steal in on a frosty night, for we had rain before frost or north wind. And the stormy east wind—has it telegraphed or registered, or is it due via Omaha? If so, show me the paper, for I have not seen it. A little puff of air, driving around all corners of the house, ought not to bring a rain, but it seems to this winter. There have been enough dry winter prophets around to supply the Union, so that the upland farmer has worn a dubious look all the fall. He drew out his "seeder" with a nervous survive-or-perish air, and dumped his grain on with, "Well, here goes, anyway." But now that the clouds have taken to being so lavish, we are hearing that wonderful old story about '52 and '62 and '72, and its fascinating prophecy of '82. These reflections are not so entertaining, however, to the man who has invested his all in tule, levees and ditches. It will be a new experience to be hermit at home all winter after the open, sunny season of '81. But is not home as large as the neighborhood? Can it not be made as entertaining as the village, and as sunny and lovely as all out doors? It seems to me that home is a wonderful place on account of its extraordinary capabilities. Home is a big place (and that homely, obsolete word will just express it, big, because you can get so much into it. There is no taste, no pleasure, no desire, no hope, no talent, no eccentricity but we can bring in to sit with us and walk and sup with us in

Our Palace of Loves.

The American country home. Ah, how wide are its doors, how capacious its rooms, how fostering and genial its atmosphere! But some one said she could not live in the country because it was so lonesome. Fie upon it! She must live in the city and have the grocer's boy and the huckster call upon her several times a day. And she was a smart, active-minded American woman, with two pretty, active hands and swift feet. And she could read and paint. But you did not reflect, little cousin,

you could live anywhere. If you had a home in the country, and you loved your home, as most women do, you would turn to and make it a grand place for you and yours. So much can a weak, delicate woman do for a home—a common cloth-and-paper, whitewashed country house. She cannot only decorate it with what neat fingers can do, but she can strengthen it and dignify it, and arch and span it with such noble contentment that it will seem to have lofty towers and tapestried galleries, and granite corner-stones, and marble steps; then the lord of this strong mansion will bring into it by glad toil the comforts and luxuries of life, for indeed there will be no restlessness and complaining to fling such treasures out the window.

There are plenty of just such homes around here, that look as if the wives and mothers and home-makers could stay in them all the long, rainy winter and not get weary. I was riding by such a place the other day, where a good wife and ambitious husband had given an air of prosperity to a humble home. It was a little red wood house, with no fences or ornaments, but everything about the place was in the condition of exquisite neatness and order. No stray papers floating about, no empty boxes idling around. No clothes-pins, no baby shoes, no culinary nicknacks scattered over the yard; no tubs, and hammers, and tin pails, and balers knocking about, going to destruction. Red gravel from a new well had been made into neat walks. A row of box plants were taking the sun under the window. Everything was shining clean, and I said: "Surely some royal home-makers live here. I will go in and see them."

And so let it rain. There is plenty to do. There are books waiting to be read; there are rooms to be decorated; there are scrap books to be made, and pictures will grow under steady hands by the light streaming in at the farmhouse window. What lovely quilts, and sofa cushions, and lounge covers, and foot stools, and curtains, will spring into a loved and useful existence this winter! And there is the music, which hungers to absorb all the home leisure. Bless me! what ought not a woman to know to make out a perfect home. And what is the use of keeping her out of the radiance of the brightest intellectual light? And our girls, after graduating in housework, ought to learn everything—drawing, crayoning, painting, floriculture, kitchen gardening, every art useful and ornamental. Girls need and can make use of every advantage. And why not? The girls make the wives and the wives the mothers, the mothers make the homes and the homes the children; and the children make all the people, of course. Money spent in educating the girls will come back sooner or later. It will come back in gardens, and trees, and house decorations and sanitary regulations. It will return in music, and pictures, and laughter and sunshine. For girls, who have been to a good seminary and under proper influences there, will come home with a determination to fix up the old home and cheer up father and mother till they grow young again. Let us assert that if a farmer spends a thousand dollars to send his daughter to school two years, that, when she comes home, she will polish up the old place more than a thousand dollars in actual market value. She will bring out the money in energy and enterprise. At least this is the effect education is intended to produce.

This is the time of the year when the farmer's wife gets breakfast with a lamp in one hand and a fork in the other, while she keeps a watch out the window for her neighbor's light. When she first rises there is only the stars of night and the comet, but soon one after another gleam the stars of the morning all along the dark horizon.

Verily the morning star of industry, of wealth, of national prosperity, is the light that shines as the ambitious housewife makes coffee for the laborers, who must catch the first rays of the morning sun while sighting the marking stake and guiding the leaders into the farrow.

Women and the Law.

EDITORS PRESS:—I regret that Mrs. Nichols should have felt "rudely reproached" by anything I have written. I may as well just say, however, that I labored under the impression that the wind was blowing from the opposite quarter, and that I was the victim rather than the inflicter of "rude reproach." But I feel that I have written honestly, and I do not think mincing words or evading arguments really serve any cause. The one argument I wish to evade is the "argumentum ad hominem," and I hardly think Mrs. N. is justified in making my impersonal arguments so directly personal. A reference to "progenitors" or "mother-love" does not necessarily justify the inference that my father taught thus, or my mother said so. A general case is not always applicable to every individual.

Perhaps it may revive some of the warmth of feeling that my letter so chilled if I say that my actions proved my interest in woman's rights. I presented my Salinas resolution to the platform and received from our nominee for Congress, Gov. Woods, his assent thereto and approbation thereof. I was ready to bring forward the matter in the convention itself, but was advised by an older friend of the movement that such action would be detrimental rather than salutary. To his judgment I deferred. But that ignorance of the law may not be considered

in the "Home Circle" as my monopoly, let me give the experience of a lawyer friend. Some years since a fellow attorney applied to him for committee of the Republican State convention information as to the marriage laws of the State of Missouri. Miss Phoebe W. Cozzens, the first lady admitted to the bar in the United States, had then just arrived in San Francisco, from Missouri, and my friend, being honored with her acquaintance, referred his brother professional to her as the most suitable person to furnish the required information. Judge of the astonishment of the applicant when Miss Cozzens blandly confessed her ignorance of the marriage laws of her native State.

Probably the members of the Home Circle do not regard simple ignorance as a crime. Contented ignorance may excite contempt, indignation or pity, despite the old proverb that couples ignorance and bliss. But though we may all re-echo in our hearts those noble words of Longfellow,

"Let our unceasing, earnest prayer
Be, too, for light," etc.

We do not find ignorance vanishes entirely from the minds of our acutest thinkers.

We may all condemn war, but no one seems to know how it's to be obviated. Even when we have regulated all our hard work, including our fighting, to electricity collected by sun force (either direct or exerted on water), the victory will still belong to the man or woman who can make the biggest "corner" in thunderbolts; and brute force still will carry the day.

Possibly it is wrong to class woman's right of suffrage among those questions which are not quite free from obscurity. The fog may be entirely a personal exhalation of the writer's own mind. Men have claimed, and do claim, that the performance of certain duties, which they only can fitly perform, entitles them to certain rights, which also are probably more appropriately enjoyed by them. Custom, time, law and religion, all have sanctioned, and more or less justified, men in this claim. To many of us it seems to be a barbarity that has thus been justified and sanctioned. But we are trained from earliest youth to revere custom, time, law and religion, and are not lightly brought to obey the injunction given to the barbarian by the priest, "Love what you hated, hate what you loved."

I maintain in a case of this gravity, it is one's duty to "go slow;" to see solid ground ahead, and not a fathomless morass, lit up by a will o' the wisp of chivalrous fancy or whim. The propriety of equal rights in joint property and equal control over offspring is, I think, obvious to every intelligent man. The propriety of inviting women to the strife of the political arena is not so obvious. Still less obvious would be the propriety of an invitation to the comradeship in arms in the military arena. The more important claims of maternity debar, at least to some extent, from most official duties.

And were it not so, it seems to me there are not grounds for disputing that man, as possessing more equisopie of brain, and calmness of judgment, as being, if you will, less sympathetic and sentimental, is better qualified than woman for official life.

Quality of brain in woman may make up for quantity in man. When last I heard from the philosophers, the measurement of the cerebral corpuscles and filaments was rather too delicate work for microscopists. They did not know, by a good many thousands to the inch, just how big they were. On the cubic amount of these filaments and corpuscle power of brain was supposed to depend. Man's skull averaged more capacity than woman's. And (why should I shirk the fact in an argument of this kind?) history hitherto has supported the philosopher's theories. Where are the names of women who have, by their inventions and discoveries, proved their right to be considered equal in brain power to men? Even in art, which might readily be their peculiar realm, for one woman really eminent there are 20 men. Come down so low as cookery, and in its highest branches, also, the male is supreme.

I am not writing this to disparage woman-kind. Far be it from me! I should be a base, ungrateful dolt to harbor any such thought. In due regard, honor and love for them, I yield to no one! Surely this is compatible with seeing some unfairness in them for some positions in life, as at present constituted.

Nor am I disposed to admit that the female sex has a monopoly of virtue. Prison statistics, though on their face they bear damning evidence of male depravity, as compared to female, are by no means conclusive evidence. Not often does Eve steal to give to Adam. Adam may steal and let Eve go sharer, and when Adam gets into the penitentiary the law does not send Eve there for being supported from the proceeds of Adam's crime.

Jesse James' life was forfeited to the law, but I have not read that Mrs. James was regarded as a "particeps criminis," although she must have known whence James' money came.

Lady Macbeth became a murderess only when she could not arouse devil enough in her lord.

In Prof. Dasent's "Story of Burnt Njal" the men actually do all the bloody work, but the women are continually egging them on. So, though prison records may fairly apportion criminal acts, they may be no real criterion of the amount of criminal thought of which either sex may be guilty.

If women were all paragons of virtue, knowledge and refinement, they would have had the franchise long ago. But it seems to me, Messrs. Editors, that there is lots of human nature in them, even yet.

EDWARD BERWICK.

Carmel Valley, Nov. 16, 1882.

YOUNG FOLKS' COLUMN.

Our Puzzle Box.

Numerical Enigma.

I am composed of 16 letters.
My 9, 2, 7, 4, 5 is an animal.
My 8, 12, 6 is to sever.
My 14, 15, 13, 6 is a color.
My 11, 12, 1 is a resinous substance.
My 16, 7, 3, 14 is a water fowl.
My whole is a lake. My 10 is a vowel.

AMOS K. TOR.

Amputations.

1. Behead and curtail a vital fluid and leave a game of cards.
2. Behead and curtail a lover and leave a state of equality.
3. Behead and curtail to talk and leave a plant and its fruit.
4. Behead and curtail a color and leave to strike.
5. Behead and curtail a small table and leave a color.
6. Behead and curtail sound in mind and leave an article.

A. B. C.

Diamond Puzzle.

I read horizontally and perpendicularly the same.
My 1 and 7 I will let you guess.
My 2 is a word we often use in addressing gentlemen.
My 3 is a country of which we read in Scripture.
My 4 is my central and the name of a beautiful insect.
My 5 is a weapon much used.
My 6 is a kind of drink.

AUNT SARAH.

Blanks.

(Fill the blanks with words similarly pronounced but spelled differently.)

1. The _____ resources of _____ are manufacturing and agriculture.
2. The young _____ a sad mistake.

W. H.

Geographical Anagrams.

1. One wee pig is in.
2. Ned Rip.
3. A Crimea.
4. Rest, Eve.

NETTIE.

Answers to Last Puzzles

CROSS-WORD ENIGMA.—Belmont.
SYNOPSIS.—1. Burn, bun. 2. Tone, toe. 3. Keen, ken. 4. Free, fee.
BLANKS.—1. Dan, and. 2. Veal, vale. 3. Sale, seal. 4. Ate, tea. 5. Shut, thus.

WORD SQUARE.

JACK
ABLE
CLAN
KENT

CURTAINMENTS.—1. Barn, bar. 2. Lawn, law. 3. Seven, even. 4. Charm, char.

How He Saved the Train.

They were sitting around the stove when a little blue-eyed, weazen-faced individual sneaked in by the back door and slunk into a dark corner.

"That's the chap," said one.

"Who is it?" asked several at once.

"Why, the man who saved a train from being wrecked," was the reply.

"Come, tell us about it," they demanded, as the small man crouched in the darkness, as if unwilling that his heroic deed should be brought under the glare of the blazing kerosene lamp.

After much persuasion, he began:

"It was just such a night as this, bright and clear, and I was going home down the track, when right before me, across the rails, lay a great beam. There it was—pale and ghastly as a lifeless body, and light as it appeared, I had not the power to move it. A sudden rumble and roar told me that the night express was thundering down, and soon would reach the fatal spot. Nearer and nearer it approached, till just as the cow-catcher was about lifting me I sprang aside, placed myself between the obstruction and the track, and the train flew on unharmed."

The silence was so dense for a moment that one might have heard a dew drop. Presently somebody said:

"What did you do with the beam?"

"I didn't touch it," he replied, "but it touched me."

"Well," persisted the questioner, "if you couldn't lift it and didn't touch it, how did the train get over it?"

"Why, don't you see?" said the sad-faced man, as he arose from his seat and sidled toward the door. "The obstruction was a moon-beam, and I jumped so that the shadow of my body took its place, and the train flew by unharmed."

BOY INVENTORS.—Some of the most important inventions have been the work of mere boys. The invention of the valve motion to the steam engine was made by a boy. Watt left the engine in a very incomplete condition, from the fact that he had no way to open or close the valves except by means of levers operated by the hand. He set up a large engine at one of the mines, and a boy was hired to work these valve levers. Although this was not hard work, yet it required his constant attention. As he was working these levers he saw that parts of the engine moved in the right direction, and at the exact time that he had to open or close the valves. He procured a strong cord and made one end fast to the proper part of the engine, and the other end to the valve lever; and the boy had the satisfaction of seeing the engine move off with perfect regularity of motion. A short time after the foreman came around and found the boy playing marbles at the door. Looking at the engine he soon saw the ingenuity of the boy, and also the advantages of so great an invention. Mr. Watt then carried out the boy's inventive genius in a practical form, and made the steam engine a perfect automatic-working machine.

GOOD HEALTH.

How We Digest.

To make the process of digestion simple, let me say that it begins in the mouth and ends in the lungs. A man swallows a mouthful of bread. We follow it from his mouth down through the oesophagus to his stomach. It now, by a peculiar motion of the stomach, is moved about in the stomach, and as it touches here and there, gastric juice starts out, like sweat upon the forehead, and wets the bread. After a couple of hours of revolving about within the stomach the bread is changed into something that looks like buttermilk. This is chyme. Now the gate at the right end of the stomach opens and lets this chyme pass through the first parts of the intestine. There two liquids are poured in, one from the liver—the bile—the other from the pancreas—the pancreatic juice. These induce certain changes in the liquid bread which makes it resemble milk. Now it is known as chyle. Innumerable little mouths which open within the intestine suck up the milk, or chyle, carrying it to a small canal, the thoracic duct, which lies upon the backbone, and through this it runs up to the upper part of the chest and is poured into a large vein just under the left collar-bone. Through this vein it reaches the right side of the heart, and is then forced into the lungs, when it comes in contact with the air. Now a wonderful change comes over it. This is produced by the addition of oxygen to the milk-like fluid. For a given quantity of this chyle a still larger quantity of oxygen is added, and the compound which comes of this union between the bread and the oxygen is the nutriment which supplies the wants of the system. What takes place in the lungs is more important than anything that precedes it in the process of digestion. For example, a man may live on fried salt pork, hot saleratus biscuit and strong green tea (I don't know a worse dose); if he lives on the Western plains and breathes pure air he will have a purer blood, healthier skin, and will be freer from humors than another man who lives upon the choicest grains and fruits, but who constantly breathes the air of a close, furnace-heated house. In other words, we may truly say that, in considering the great function of digestion, the lungs really play a more important part than the stomach itself. It is really vital that the first and last step in digestion should be well done. First, chew well, and last, breathe well. If those two duties are well performed, a substantial contribution will be made to our welfare.—Dr. Dio Lewis.

Moonstruck—Effects of the Moon.

Some one has written upon the effects of the direct rays of a full moon upon the human system and upon vegetation:

"The sun shall not smite thee by day nor the moon by night." This beautiful verse expresses the belief, common in ancient days, that the moon exercises a baleful influence upon those exposed to her direct rays. In modern times the pernicious influence of the moon has been doubted, and even denied; but whatever the influence of the moon in the temperate zones, within the tropics it is very injurious to sleep exposed to its rays, especially when at the full. On a voyage to the antipodes, when near the line, a Maltese sailor, who was a most comical fellow, slept for some hours on the boom with his face toward the full moon. On awakening in the morning the muscles of the right side of his face were contracted so that every attempt to speak was attended with the most ludicrous contortions. Feeling sure that something was seriously wrong, the doctor gave him some medicine, the muscles gradually relaxed, and in the course of a week he was well again.

Some five or six years ago, when sailing from Tahiti to Mangia, a little boy of mine, in perfect health, was thoughtlessly placed by his nurse in his berth, the slanting beams of the moon falling on his face. Next morning he was feverish and ill, and it was two or three days before he was himself again. On the Island of Aitutaki, a native woman was watching night after night for the return of her husband. While doing so one night she fell asleep, the moon's rays pouring upon her face. On awakening she felt ill, and her eyes were drawn on one side. Considerable interest was felt by the islanders in her case. Eventually, however, her eyes were restored. These facts illustrate the injury done to human beings by the moon in the tropics. Yet I never heard of insanity or death resulting from this cause.

It is well known, however, in tropical countries, that the moon's rays occasion the rapid decomposition of flesh and fish. A number of bonitas having been caught one evening near the line by a friend of mine, the spoil was hung in the rigging of the ship, and was thus exposed to the moon through the night. Next morning it was cooked for breakfast. Symptoms of poisoning were soon exhibited by all who partook of it—their heads swelling to a great size, etc. Emetics were promptly administered, and happily no one died. The natives of the South Pacific are careful never to expose fish—to the moon's rays by any chance. They often sleep by the seashore after fishing, but never with the face uncovered. The aborigines of Australia do the same. A fire answers the same purpose.

DOMESTIC ECONOMY

FRITTERS.—Make fritters quickly and beat thoroughly. A good rule for them is two eggs, one half pint of milk, one teaspoonful of salt and two cups of flour; have the lard in which to cook them nice and sweet and hot. The proper heat may be tested by dropping into it a teaspoonful of the batter; if the temperature is right it will quickly rise in a light ball with a splutter and soon brown; take up carefully the moment they are done with a wire spoon; drain in a hot colander. Pork fritters are made by dipping thin bits of breakfast bacon or fat pork into the batter; fruit fritters by chopping any kind of fresh fruit and mixing it with the batter. Apple fritters are made by three eggs beaten very lightly and added to one quart of milk; make a thin batter; add a little salt and the grated rind of one lemon; pare, core and slice thin one quart of nice, tart, easily cooked apples; add and drop in spoonfuls in boiling lard; serve with sauce.

CALVES'-FEET JELLY.—After cleansing, boil eight feet in one gallon of water until the flesh separates from the bones; then strain the liquor and let it cool; when it is cool take the fat which has risen to the top and melt in a kettle; when every particle is melted add three-quarters of a pound of sugar, the beaten whites of three eggs and the shells of the eggs also, a quart of sherry or other wine, and two table-spoonfuls of lemon juice. Let these all boil for 10 minutes, or possibly a few minutes less. You can judge for yourself by noticing if a sort of jelly forms on the edge of the kettle. Stir the mixture at the time, as there is great danger of its burning. Strain it when boiled sufficiently and pour in molds. Any kind of flavoring can be used in place of the lemon.

BROWN BETTY.—Take one cup bread crumbs, two cups chopped sour apples, one-half cup sugar, one teaspoonful cinnamon, two table-spoonfuls butter cut into small bits. Butter a deep dish and put a layer of chopped apple at the bottom, sprinkle with sugar, a few bits of butter and cinnamon, cover with bread crumbs, then more apple. Proceed in this way until the dish is full, having a layer of crumbs on top. Cover closely and steam three-quarters of an hour in a moderate oven, then uncover and brown quickly. Eat warm with sugar and cream or sweet sauce. This is a cheap but good pudding, better than many a richer one.

COCONUT COOKIES.—To make delicious coconut cookies, use one cup and a half of sugar, about one cup of butter—a little less will answer—two eggs, one cup of grated cocoanut, half a cup of sweet milk, half a tea-spoonful of soda, one tea-spoonful of vanilla, flour enough to make a soft dough. Roll as you do common cookies, using as little flour as possible on the kneading board. Bake in a quick oven. If you cannot get the fresh nuts, the desiccated cocoanut will do.

CABBAGE SALAD.—To a dish of chopped cabbage, four teaspoons of celery seed, or one bunch of celery. Put in a bowl, yolks of two eggs, one tea-spoon of sugar, one tea-spoon of butter, one tea-spoon of pepper, one tea-spoon of salt, one tea-spoon of made mustard, one-half tea-cup of vinegar. Set the bowl into hot water, stir carefully until it begins to thicken. Let it get cold. Pour over the cabbage. If it does not moisten it enough, put in a little more vinegar.

TAPIOCA CREAM.—Three table-spoons tapioca, soaked in a tea-cup of water over night; add one quart of milk; stir together and boil 20 minutes. Beat the yolks of three eggs and one cup sugar thoroughly; stir into the milk; flavor with vanilla. Beat the whites very stiff, put in the bottom of the dish and pour the rest over it. Serve cold.

VEAL CHOPS.—A good way to prepare veal chops is to dip them in beaten egg, then in fine cracker crumbs, seasoned with pepper and salt, and a little sifted sage; a few thin slices of onion add to the flavor. Fry the chops in hot lard; they need cooking at least 20 minutes, and should be brown when done.

VIRGINIA CORN BREAD.—Dissolve one table-spoonful of butter in three pints of boiling milk; into this scald one quart of Indian meal; when cool add half a pint of sifted flour, a little sugar, a tea-spoonful of salt and two eggs, beaten until they are thick and creamy; mix all well together and bake in buttered pans.

CREAMED POTATOES.—Put into a saucepan two table-spoonfuls of butter, a little minced parsley, salt, and pepper to taste, stir to hissing, add a small cup of milk (with a pinch of soda), when hot a tea-spoonful of flour, stir until it boils; chop cold boiled potatoes, put into the cream, and serve as soon as they begin to boil.

TEN-MINUTE CAKE.—One-fourth of a pound of butter, a little less than a pound a flour; the same of sugar, six eggs beaten separately; flavor with mace or other flavoring to taste, and bake in muffin rings.

BREADED EGG PLANT.—Slice and pear the slices, lay in strong salt water one hour, wipe dry, dip in beaten egg and roll in pounded cracker, fry to a good brown, drain well and dish hot.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for each THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	6.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

S. H. STROSS.

SAN FRANCISCO:

Saturday, November 25, 1882

TABLE OF CONTENTS.

EDITORIALS.—San Jose and Vicinity; RURAL PRESS for 1883, 397. The Week; The Thankful Spirit; Call for a Dairymen's Convention; Doctored Butter, 404. The Fruit Growers' Convention, 405-06.

ILLUSTRATIONS.—View of the Outskirts of San Jose and the Valley, 397. Gen. Naglee's Grounds, San Jose, 401.

QUERIES AND REPLIES.—Milkmen's Cows; Corn from the Department; Japan Clover Seed; Preserved Apricots; Goat Raising; Duroc Swine; Are They Trustworthy? Nectarine and Olive Trees, 404.

ENTOMOLOGICAL.—Appendix to Dr. Chapin's Scale Insect Report, 398.

THE STABLE.—The Horse in California, 398.

FORESTRY.—Forest Trees of California.—No. 18, 393-99.

SHOE AND WOOL.—The Hosiery Industry, 399.

HORTICULTURE.—Preparing the Soil for Tree Planting, 399.

PATRONS OF HUSBANDRY.—Grange Leaflets.—No. 12; Resolutions in Respect; Meeting of the National Grange; Co-operation in Grange Work; The Grange; Grange Notes, 400.

AGRICULTURAL NOTES.—from the various counties of California and Nevada, 400-01.

HOME CIRCLE.—Nothing is Lost; A Seed (poetry); A Chapter of our Civil War History; From the Farm House, 402. Women and the Law, 402-3.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; How He Saved the Train; Boy Inventors, 403.

GOOD HEALTH.—How We Digest; Moonstruck—Effects of the Moon, 403.

DOMESTIC ECONOMY.—Fritters; Calves' feet Jelly; Brown Betty; Coconut Cookies; Cabbage Salad; Turnip Cream; Vial Chops; Virginia Corn Bread; Creamed Potatoes; Ten-Minute Cake; Breaded Egg Plant, 403.

CORRESPONDENCE.—A Mountain-top Ride and Vial, 406.

NEWS IN BRIEF, on page 416 and other pages.

MISCELLANEOUS.—Thoughts for Thanksgiving (Poetry); Daisy's Happiest Day, 408-10. Sound; Wood for Small Things; Thanksgiving; Thanksgiving Day; Velocity of Falling Water; The Future of Niagara Falls, 410.

Business Announcements.

Agricultural Machinery.—Baker & Hamilton, S. F. Agricultural Machinery.—Byron Jackson, S. F. Plows.—San Leandro Plow Co., San Leandro, Cal. Squirrel Poles.—John H. Wheeler, S. F. Carriages.—J. A. Bile, Pleasanton, Cal. Seeds.—Thos. Mohr, S. F. Barometers.—J. A. Pool, Oswego, New York. Books.—Russell Publishing Co., Boston, Mass. Nursery.—Thos. A. Garey, Los Angeles, Cal. Nurseries.—Byron O. Clark & Co., Pasadena, Cal. Root Grafts.—Phoenix Bros. & Emerson, Bloomington, Ill. Incubator.—I. L. Dias, Petaluma, Cal. Nurseries, L. F. Sanderson, San Jose, Cal. Agents Wanted.—J. Dewing & Co., S. F. Books.—National Book Co., New York. Grapes.—George Humann, Napa, Cal. Agricultural Implements, Matteson & Williamson.

The Week.

And now comes Thanksgiving, the good old joyful holiday, upon which we all pour forth paeans of praise, and maintain the balance by unstinted feasting. California is well prepared for an unusual observance of the day this year, for it has been a good year for nearly all classes of our population. Prosperity has been generally distributed; legitimate investments have been productive; the soil has yielded its increase, and no one who desired the opportunity to labor has been denied it. And in future, as in past, there are themes for rejoicing and thanksgivings. The State approaches another season of unusual promise, and everyone is girding himself to enter upon the conquests of the new year. Hence let all rejoice and grow strong in heart and in frame. Let youth be renewed in

the family gatherings. Let it be a day generally observed and universally enjoyed. And to this end let none forget his neighbors whose larder may perchance contain but scanty store. As you have been blessed, so give to others, that there may be no lack anywhere in this prosperous and favored land.

The Thankful Spirit.

What a joy to the world is the spirit of thanksgiving! How it gleams amid the darkness of want and desolation, and what new brightness it gives even to the sunshine of prosperity! Its presence lifts the hovel to a palace; its absence makes a palace cheerless as a hovel. Who has not seen the smile of contentment and thanksgiving illumine the countenance, and counted the possessor rich indeed? Heroic trust, sublime confidence, sweet peace of mind—these are among the gifts of the thankful spirit. Doubt, distrust and unrest are the signs of its departure. Happy is the one who cherishes the spirit of thanksgiving, and in whose heart it pours forth its treasures of kindness, of genuine sympathy, and of contentment, whatever betide.

Although the thankful spirit is innate in many lives, and a component in that congeries of heart qualities known as the disposition—it is also amenable to culture or neglect, and grows or dies as does the plant. It is not altogether the subject of religious belief, although it must be acknowledged that it reaches its highest estate when the heart of man overflows with gratitude to the Giver of all good for life, and for all that makes life worth the living. Such recognition of the source is the acme of thanksgiving. But as there are lives which the fullest faith does not apparently lift above the recurrence of despondency, so there are other lives in which the thankful spirit glows without outward recognition of its source. And yet thanksgiving must be the main spring of all true joys and the inspiration of all noble aspirations. But however the philosophers, mental and moral, may account for its existence in the heart of man, the spirit of thanksgiving should be diligently and constantly fostered. In the heat of the child it glows with unalloyed purity and strength, but may be quickly quenched by contact with the chilling blasts of adversity; so quickly, indeed, that its existence might be doubted. Hence the obligation upon those who have the care of the youth that they repress not the innate tendency by harshness, or by the example of lives despoiled of the spirit of thanksgiving. It is true, also, that the thankful spirit, although retained long in the life, may sometimes be lost by neglect amid the multitude of cares and vexations which the life struggle brings to all. Here is the opportunity for the fullest watchfulness. Thankfulness gives buoyancy and strength; its absence is a source of weakness. Whoever would be strong to bear the burdens of life, let him cherish the thankful spirit. It lifts the soul from the depression which prompts to a folding of hands and the declaration of helplessness in the face of difficulties. It gives bravery and hope. It makes its possessor a tower of strength among the weak. It fills a life with radiance, and imparts to others new trust and courage. It rallies the vanquished, and turns the battle against the powers which would crush humanity and fill all lives with woes instead of rejoicings.

Thus it appears that whatever fosters and promotes the thankful spirit is a boon to mankind. In this country we have the values of thanksgiving recognized in the declaration of a national holiday. Primarily, it is a rendering of thanks to the Giver of His good and perfect gifts—a fitting tribute which is the only return within the reach of fallen man. Hardly less, however, do we recognize these blessings by the employment of the occasion to suggest the value of continual and constant thanksgiving—the advancement of the thankful spirit in our lives. Let, then, the observance of the day set apart by the rulers be not alone the enjoyments which are usual to the occasion in our homes, but in and through them all let shine the light of the spirit which prompts the celebration. While we render thanks in formal phrase, let the heart swell with gratitude, both for the blessings and for the appreciation of them—for both are gifts of God to cheer us through the pilgrimage; both call for rejoicing and the giving of thanks.

APPLE SHIPMENTS.—The export of apples is slowly but constantly increasing, both to the territories and to foreign ports. We recently spoke of the exports to China by Cadwell, of Petaluma. We now see by a Los Angeles exchange that nine carloads have already gone to Arizona, and more are to follow. We cannot but look upon apple growing as one of the most promising lines of fruit production, and whoever has land and location suitable for the production of good-keeping winter apples should not be led away by the fever for other fruits which are just now the favorites. Plant but a few varieties which are known to succeed well in the region and sell well in the market. Keep a constant outlook to keep the noxious insects in check, and our word for it, a good-bearing apple orchard will be as comfortable a property as one can desire. But don't plant in the wrong place, and don't neglect the trees—either course will lead to disappointment.

Call for a Dairymen's Convention.

To the Dairymen of California—GENTLEMEN: We, the undersigned members of the Dairymen's Protective Association of Santa Cruz county, California, desire hereby to address you in a matter at once interesting and important to all persons engaged in the natural marketable products of the living cow.

First—Ruin threatens our business in the manufacture of oleomargarine, otherwise called "bull butter," and of the sale of the same by merchants, who, by right, should be our best friends.

Second—This ruin strikes us, first, in the depreciation of the price of butter, and then as it grows, in the demand for tallow, which being a substance not dependent for its production on green feed, naturally and eventually transfers the butter production of the State out of our hands into the hands of the great beef cattle producers of the State and rancid grease gatherers of foreign countries, thereby adding one monopoly to another and wiping our business out of existence; for if tallow is to be turned into a cheap imitation of butter, then green pasture is no longer a first object in making the supply of butter for the people. It is not necessary to reason this matter out to you, who can see for yourselves that there is no way of avoiding this issue.

Third—Against this impending ruin we must contend—must fight—or we must quit.

Now, therefore, we suggest to you, in a respectful manner, to organize in defense of our mutual interest; and to that end we would further suggest that the dairymen of each county in the State shall call a meeting at some central point in said county to discuss this matter on the 25th day of November, 1882, and to send from each county three delegates, to meet in convention at San Francisco on the 12th day of December, 1882, then and there to devise some means whereby the dairy interests of this State may be protected from competition with an artificial product made from tallow and other greases gathered in South America and elsewhere.

We deem it not in the interest of the people to destroy the dairy interests of this State on the one hand, while imposing on the stomachs of the people with the other, under the guise of supplying a cheap article for the table.

We would inform you that this work is going forward hopefully, the counties of Humboldt, Sonoma and Del Norte having already organized.

When your delegates are elected, please notify the President of the Dairymen's Protective Association, Santa Cruz. Respectfully submitted. Signed: Horace Gushee, W. F. Gaffee, G. P. Laird, H. D. Baldwin, F. W. Moore, Executive Committee.

The above is the formal call for an assemblage of dairymen, and the reason therefor. As the call has been made, it is quite important that there should be general attention paid to it and its suggestions in regard to the sending of delegates acted upon. It is very desirable, in fact quite essential to the proposed work, that the convention should be representative in its character, and that all interested counties should participate. Nothing will throw a wetter blanket on the oleomargarine business than to have a large and business-like convention to show that the dairymen are in earnest, and do not propose should be oppressed in the pursuit of their honorable and legitimate industry. Nor can the effect be less on the Legislature, which will soon convene. There is strength in numbers and in resolute action which the legislators cannot disregard. To have a weak convention, poor in attendance and in productive interest represented, would give new courage to the adulterators, new value to their product, and would also weaken the popular feeling against the counterfeit which is now very strong. For these reasons we ask the dairymen that they do not pass by the movement, which has been taken up, but that meetings be held in all counties on November 25th, and that good stalwart delegates be selected for the convention in this city, on December 12th.

We notice that Sonoma county has announced her participation in the enterprise. A meeting of the dairymen of the vicinity was held in Santa Rosa Wednesday afternoon, and it was resolved to call a meeting of the dairymen of the county at Petaluma on Saturday, Nov. 25th, for the purpose of electing three delegates to represent Sonoma county in a State Convention of Dairymen to assemble at San Francisco, December 12th. The meeting organized by the election of H. Keirch as Chairman, J. W. Kelly as Vice-President, J. M. Walker, Secretary, and Victor Piezzi, Treasurer. A call for the Convention will appear in due form in the weekly papers of the county.

There is no little interest in the subject in Nevada, and possibly organization of the dairymen may be effected there. The Reno Journal, in its last week's issue, says:

Were the original idea of the discoverer adhered to the butter produced would perhaps be unobjectionable as a poor man's butter; but when boot-jacked Thomas cats, impounded dogs, and decayed horse and mule flesh are used to furnish the necessary supply of bullock fat, the business becomes rather mal-odorous and objectionable. It will not do to injure, and perhaps destroy, the dairy interests of Nevada, and especially of Truckee Meadows, in order to benefit a San Francisco corporation, even if the article can be furnished here cheaper. The dairymen ought to organize into societies, so as to be enabled to exert a wholesale influence on the butter business, and protect it from ruinous competition with bull-butter, calling about as the genuine article.

THE RURAL AND ITS FRIENDS.—An esteemed friend of the RURAL in Ventura county says: "You seem to have great magnetism in drawing together the ablest and best practical men of the coast as contributors for the RURAL—men, too, of high moral worth, good citizens and intelligent observers." We are thankful for this compliment to the RURAL's friends; we are rather proud of them ourselves.

QUERIES AND REPLIES.

Milkmen's Cows.

EDITORS PRESS:—Will some of your dairymen inform me what is the best breed of cows for a milkman to have—what breed will give the most milk, of good quality, in a year—reference is now had with respect to milk to be sold? How much milk should a good cow give in one year?—MILKMAN, Oakland.

The subject is remanded to the dairymen for discussion. If we ourselves were to start for milk-selling and had reasonably level pastures, we should stock with the Holsteins or Friesian cattle. They give a perfect river of milk, are large and capacious machines for milk-making, and the milkman does not have to wear himself out pumping water into the milk. But what have others to say?

Corn from the Department.

EDITORS PRESS:—Last spring I received from you a package of selected yellow corn, from the Department of Agriculture, and planted some. It did not do well, but was small and imperfect. It was sown in the valley near Los Gatos.—WM. ROSS.

Japan Clover Seed.

EDITORS PRESS:—Please inform me where I can obtain some seed of Japan clover (*Lespedeza striata*).—W. F. WATERMAN, S. N. Luis Obispo, Cal.

We do not know who has it. We are writing to find out where it can be had. Has any one tried the plant in this state? If so, with what success?

Preserved Apricots

EDITORS PRESS:—There was a mistake in my quotation of canned apricots in your issue of the 11th. The four dozen cans for 38¢, should be called pint cans, not two and one-half pound tins. I wrote to you previously to correct the error before it appeared in print, but presume my communication failed to connect.—EDW. BERWICK, Carmel Valley.

Goat Raising.

EDITORS PRESS:—I write to ask if some subscriber can give, through the columns of the Press, some information about goat raising. I would like to know the price of thoroughbred, and the price of different grades of hair.—J. C. WILLIAMS, Elk Creek, Colusa Co., Cal.

Our Mariposa correspondent, Mr. Kirby, is giving a review of the goat business from his point of view. Others are invited to do the same, in order that all the phases of the business may be brought to light.

Duroc Swine.

EDITORS PRESS:—Where can I buy a Duroc boar and sow three to six months old, and at what price?—SUBSCRIBER, Box 804, Oakland.

Are They Trustworthy?

EDITORS PRESS:—Please inform me, by return mail, whether the "American News Exchange, 251 and 253 W. Fifth St., Cincinnati," whose advertisement was in the Press some weeks ago, is reliable or not.—SUBSCRIBER, San Bernardino Co., Cal.

We do not find this firm rated in Bradstreet's mercantile reports. The advertisement was sent us by an Eastern advertising agent, who has always been reliable. More than this we are unable to say at present.

Nectarine and Olive Trees.

EDITORS PRESS:—Can you tell me of whom I can procure nectarine and olive trees? If not, won't you kindly publish this, in order that those having these varieties for sale may answer in the next number of the RURAL PRESS?—A SUBSCRIBER.

Nectarine and olive trees can be had of nearly all first-class nurseries, and our correspondent had better apply to those advertising in the RURAL. New or rare plants and trees we are quite willing to ask for in these columns, but standard fruits can be had by application to our regular advertisers.

Doctored Butter.

The bull butter makers are themselves large purchasers of the genuine article, which they use to "adulterate" their composition of lard and beef fat. They use about 70 per cent. of lard and other fatty matter to 30 per cent. of pure butter, the latter being sufficient to impart a natural flavor to the compound. By this means they can produce 100 pounds of butter (7) at a cost of some \$20, and by selling the same at from 30 to 35 cents per pound they make a handsome profit. These oleomargarine fellows doubly inflict the public. They manage to keep up the price of genuine butter by themselves becoming large consumers thereof, and are at the same time enabled to flood the country with their obnoxious and cheap compound. Those who will use only the pure article are made to pay exorbitant rates for it, while the poorer classes are deprived of all chance to indulge in the luxury of a taste of dairy butter.—Sacramento Bee.

This is true to a degree at least. We cannot say whether the proportions given by the Bee are correct or not, but we find with the microscope far too many of the true butter globules to come from the milk with which the grease is churned. The oleomargarine makers are mixing in certain proportions of butter to give their compound a closer resemblance to the genuine, so that the purchaser gets a dose of tallow when he least expects it.

DISTRIBUTING SAMPLE PRODUCTS.—One of the best ways to spread the fame of California products is certainly to distribute them so that consumers everywhere may judge by sight and taste of their excellence. For this reason we regard with satisfaction efforts like the following, which is described by the Los Angeles Express: Messrs. Woodhead & Gay shipped yesterday, per order of Mr. Wm. Pridham, 24 sacks of nuts—walnuts and almonds—to Kansas City. They are from thence to be distributed to different portions of the East, as samples of California nuts, thus creating a market and building up a trade in those articles. Mr. J. J. Valentine, of Wells, Fargo & Co., will see to the distribution of the samples, and is taking a lively interest in introducing California products to the East.

The Fruit Growers' Convention.

Full Reports of Addresses and Discussions.

[By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS. We shall continue the report from week to week, and issue it, when complete, in pamphlet form.—Eds. PRESS.]

The second annual meeting of the State Fruit Growers' Convention of California assembled at the California theater, in San Jose, Tuesday, Nov. 14 1882.

The convention was called to order at 11:25 A. M. by M. Thew Cooke, Chief Executive Horticultural Officer of the Board of State Horticultural Commissioners.

Mr. Haines, of Santa Clara, placed in nomination for temporary chairman Dr. S. F. Chapin, of Santa Clara, who was unanimously elected, and who, on assuming the chair, addressed the convention as follows:

Gentlemen of the convention: I certainly appreciate the honor conferred upon me by your unanimous nomination for the position of temporary Chairman. I do not feel that I am qualified in competency with many others present for the position of chairman, but I shall try to show my appreciation of the honor thus conferred by doing the best I can to help along in the good work in which we have engaged.

I am glad to see so many present at the very opening of the convention, and trust there may be many more as future trains arrive from different points. That you will be pleasantly received and entertained by all of our horticulturists here I am perfectly convinced, for I know that it is the desire of the Santa Clara County Horticultural Society and of every fruit grower in our valley to tender you a warm welcome.

J. H. Wheeler was elected temporary Secretary.

On motion of Mr. Haines, of Santa Clara, it was agreed that Mr. Cooke be one of each committee appointed, and that a committee of seven be appointed on permanent organization and order of business.

The following gentlemen were appointed as such committee: M. Cooke; A. T. Hatch, of Solano; F. C. DeLong, of Marin; N. J. Haines, of Santa Clara; Wm. Johnston, of Sacramento; N. R. Pack, of Placer, and Ezra Fiske, of San Joaquin.

On motion, the following gentlemen were appointed a Committee on Literary Exercises: Dr. S. F. Chapin, Matthew Cooke, Prof. Dwinelle, L. M. Holt, of Riverside, and J. M. Asher, from San Diego.

On motion, the convention took a recess until 1 o'clock.

Afternoon Session.

The minutes of the forenoon session were read and approved.

Mr. Cooke, for the Committee on Organization, presented the following report:

1st. Your Committee on Organization respectfully recommend that the temporary officers be made the permanent officers of this convention.

2d. And also recommend the election of two Vice Presidents.

3d. We recommend that Ed. B. Silva, of Placer, be declared Assistant Secretary.

4th. Address by the Chairman.

5th. Address by Prof. Dwinelle, President of Board of State Horticultural Commissioners.

6th. Address by M. Cooke, Chief Executive Horticultural Officer.

7th. Report of Committee on Literary Exercises.

8th. Appointment of committees.

We make this partial report, and respectfully ask further time.

On motion, the report was adopted, and W. B. West, of San Joaquin, and Wm. Johnston, of Sacramento, were elected Vice Presidents.

Address of the President.

Gentlemen of the convention: I do not desire to take up more than a moment's precious time in an address upon the reception of the honor of your making me the Chairman of this convention. I will try to do all I can to aid you in this work of making the convention successful, hoping that we may all as fruit growers meet with encouragement in the discussions which may be brought before the convention, so that we will be more and more successful in the future than we have been in the past. I will not delay you further at this time, but I hope by your indulgence at a later period to present a paper upon a very important subject, which will be offered for discussion during the session of the convention, and hope that that address will suffice for me.

Address of Prof. C. H. Dwinelle, President of the State Board of Horticultural Commissioners:

Gentlemen of the Horticultural Convention:—After another harvest, we gather together from various parts of California to compare notes as to the past, and to make plans for the future. The Board of State Horticultural Commissioners, in calling this convention, have had in view a variety of objects. Upon their shoulders has been laid the burden of superintending the execution of laws intended to prevent the introduction of insects and diseases injurious to fruit and fruit trees, check their spread, and, if possible, to secure their extirpation where existing within the borders of our State.

They have executed their duty as they understood it fearlessly. Although contending with difficulties of great magnitude, and at times failing in the attainment of the object aimed at, they feel that they have accomplished much in the right direction. Their actions have been very freely commented upon in private and in public. Some have commended their measures as wise and of great value to our horticultural interests, while others have denounced them as foolish, prompted by self-interest, calculated to ruin the industry involved, and not in accord with the wishes of orchardists.

The truth is, that the Board, as such, receives not one cent for its services, not even traveling expenses. Most of its members are typical fruit growers, and they have been striving for the preservation of an industry in which their

all is invested, and which is second in importance to none other in the State.

As servants of the people, they do not claim exemption from criticism which is based upon the honest convictions of men who are competent to form opinions of the matters in hand. They wish to be guided by the will of the majority of intelligent men engaged in the fruit industry throughout the State. They learn something of this will through personal intercourse and correspondence during the year, but they find meetings of this kind particularly valuable.

Contending for a Principle.

The principle for which the State Board is contending is contained in the saying, "So use your own as not to injure others." They interpret this to mean that you must not, through neglect of known and economical means of prevention, allow insects injurious to fruit and fruit trees to spread from your premises. When opposed, they have not always thought best to avoid a contest. It is sometimes preferable to conquer a peace.

You have been called here primarily to state frankly your views as to legislation, past and future, for the preservation of our fruit interests. You may have valid objections to some measures adopted heretofore, or you may find that you were mistaken when you compare views with those who have had a different experience from yours. Fortunately the terrors of the law are not the only incentives to the use of vigorous measures in combating the plagues of the orchard. Proper business pride and a desire for pecuniary gain point in the same direction. To these should be added a sense of justice which would forbid a neglect promoting the spread of pests to the premises of a neighbor. Many of you have valuable experiences in insect-fighting to relate. Where one has failed, another may have succeeded. By noting causes of victories and defeats we hope to establish a system of tactics which will enable us to subjugate, if not exterminate, our common enemies.

Value of County Horticultural Boards. The County Boards of Horticultural Commissioners have in numerous instances done excellent service in rousing people to action against the orchard pests.

By visiting farm after farm, with magnifying glass in hand, distributing the publications of the State Board, and relating losses through neglect and gain from intelligent care, they have secured the attention of the apathetic, and convinced those who doubted the feasibility of a successful resistance to the insect invaders. Old orchards which were supposed to have passed their usefulness have taken a new lease of life when relieved from the vermin which were sapping their vitality, and invigorated by alkaline washes. Many an orchardist could be pointed out who could better have paid the whole cost of his county Commissioners rather than to have been without their services. The men selected for this work should be the best that can possibly be secured. They should be familiar with trees and their proper management, and should have the intelligence and perseverance needed in the study of insect life. They should possess the confidence of their fellow citizens, and above all things should believe in the practicability of that which they teach. He who doubts his own doctrine is ill-calculated to convince others.

If any are occupying this important office and not faithfully performing its duties, they should be at once called upon to resign, and if they refuse to do so, should be removed in the manner provided by law. Better men are needed in their places.

The efficiency of the county Boards has in some cases been lessened by a misapprehension as to the form of complaint needed before they could legally perform their duty of inspection. Individuals have hesitated to enter specific complaint against near neighbors, and it has been held that such complaint was a necessary initial step. The fact is that any person residing in a county, a member of the Board as well as any one else, may complain to the Board of an orchard, or trees, or any other place, in their jurisdiction which is infested with noxious insects liable to spread contagion to the trees or fruits of complainant.

A whole township, or two or three such, may be set down at once as the place to be inspected. The law is none too broad. A man should have the right to complain of an infested spot at the other end of a county, as a threat to his orchard.

At the other end of the county? Yes; and at the other end of the State as well. Have not infested nurseries in times past sent out their infection-bearing stock to every part of the State, from Del Norte to San Diego? Have not the precious "return boxes" brought you the codlin moth, and other abominations too numerous to mention here, from the infested fruit stores of San Francisco?

What would have been the saving to our growers of citrus fruits if the few infested trees which brought the "red scale" (*aspidiotus aurantii*) and the "cottony scale" (*Icerya purchasi*) to our shores could have been prevented from reaching their destinations until they were cleaned? We cannot tell, but we know that it would have been enough to pay for Horticultural Commissioners in our southern counties for many a year to come.

Yes, gentlemen, this unlimited propagation and dissemination of pests is all wrong. It should be, and it must be stopped!

Unwarranted Opposition.

A few orchardists have worked themselves into a fine fury over this tyrannical law which gives men who know less of such matters than

themselves the authority to dictate what remedies they shall use, and in case of failure in complying with their mandates, allows County Commissioners to "invade private premises and cut down trees."

These malcontents simply prove that they have not read the law carefully and intelligently. There is nothing harsh in its provisions.

Commissioners are authorized to examine places complained of, and if they are found to be infested, to notify the owners to disinfect the same within a given time. The owner is at liberty to use such remedies as he may choose. If disinfection is not accomplished within the time specified, the Commissioners may then prescribe the treatment which shall be used. Upon another failure to accomplish the desired object the law declares the infested premises to be a nuisance, to be proceeded against as such. The accused is to have his opportunity to disprove the charge brought against him. If found guilty, the court shall direct the Commissioners to abate the nuisance.

What could be fairer or more just? Nothing whatever is said about cutting down trees. It is the insects which are to be destroyed, that the trees may live and bear good fruit.

The only one who here has a grievance is he who asserts his right to preserve that which is unprofitable to himself, a nuisance to his neighbors and a nuisance to the public.

The Impossible.

The law requires impossibilities of no one. But beware how you say that a thing is impossible to men of intelligence and energy. Two years ago we were told that the orchards and nurseries of Santa Clara county were being ruined by scale insects, and that it was impossible to check their ravages.

Scientists prescribed washes fatal to the pests, mechanics made pumps which would apply them with economy to the tallest fruit tree. The impossible disappeared, and what had been mistaken for it became every man's duty. A few months later, and the impossible was said to be at Santa Barbara, where the "black scale" had spread its sable mantle upon the olive groves. It was deluged with hot tobacco water, and the impossible took its flight in disgust. A year ago the impossible was again announced as in the orange trees of fair Los Angeles. The dreaded "red scale" from Australia was there, and no remedy for it was known. A little expostulation, a good deal of soft soap, and the vulnerable point of the enemy was found. We are still told of the impossible in various forms and divers places, but when it takes the shape of an indestructible insect, we do not believe all that we hear.

Profit in Disinfection.

Some of the most violent opponents to our horticultural laws have been dealers and speculators in real estate. Time has shown how shortsighted they were. While the announcement that an insect pest has appeared in a region in such numbers as to call for public measures against it may, for a time, check the sale of land, it is upon such action that the permanent value of the land depends. It is one of those cases where honesty is best policy as well as the best principle. The presence of the pest can not long be kept secret, and the community cannot hope to prosper until it determines to purify itself, cost what it may.

Several examples could be named of an advance in the price of orchards, and land suitable for orchards, equal to from 25% to 100% and even 200%, directly attributable to the demonstration that united effort could destroy the insects feared.

It is safer to locate an orchard in an old settled district where public sentiment is in favor of enforcing horticultural disinfection, and if need be, quarantine, than in a new and clean district where people do not appreciate the need of these. Above all should be avoided a community where public sentiment has pronounced against protecting horticulture as the laws provide.

One of the most serious obstacles to clean horticulture in our State is the too common practice of leasing orchards without a provision that the tenant shall conform with the laws, and return the orchard in as good condition as when taken.

Horticulture has not yet with us reached the condition existing in Illinois, as described by Dr. E. S. Hull, some 12 years ago, as follows:

"If I had all my means at my command * * I would not choose fruit growing for profit. Not that there need be any want of success in itself, but because I would be almost entirely controlled by the action of my neighbors in regard to fruit growing, and all hope of success depends on combined and energetic efforts towards the controlling of insects. * * It is as much a man's duty to take care of his insects as his stock. Some years ago I caught 60 curculios and white-washed them, and took them to a neighbor's, three-quarters of a mile distant, and caught nearly all back."

Let California take warning in time.

In two years past California has made more progress in solving the insect question in agriculture than any other State in the Union, if efficiency in the use of insecticides and legislative measures are considered.

It is for those most interested to say whether the future shall show retrogression or a still further advance. You can all aid in the framing of that strongest of all laws, "public opinion."

Your attention is invited to other and pleas-

anter themes than those already dwelt upon. If our orchardists have to exercise eternal vigilance, they also have been rewarded with success, and the question arises: How shall bounteous crops of luscious fruits be utilized at a profit? Where shall consumers be found for our surplus? We have but a handful of population to eat our crops, and they must be sent to less favored countries. The matter of preserving them in the best manner for transportation to distant markets, then, becomes of prime importance. Distances are long and freight is high. Weight must be cut down as much as possible. Competition with countries which have accumulated centuries of experience will force us to study niceties of flavor and appearance. These topics should be carefully considered, with a view to securing a higher standard of excellence in products and a greater degree of economy in methods of preparation. As object-teaching is the order of the day, specimens of dried fruits, as prepared for market, have been called for, so that various processes may be judged by the results which they produce. The notice of this exhibit was given late in the season, and we did not expect such a showing as may be made another year, if it is thought best to repeat the experiment. Let us hope for such marked improvement in the quality of our products that California may ere long stand where she deserves to, as the first fruit-producing country of the world.

Mr. Haines: I move that Prof. Dwinelle be tendered a vote of thanks for his address, and that a copy be furnished to the press for publication.

Matthew Cooke's Report.

The report of the Chief Executive Horticultural Officer, Matthew Cooke, was read to the convention, and after discussion, in which a number of delegates participated, on motion, the report was received and referred back to the author for amendment.

On motion of Mr. Hatch, of Solano, discussion was limited to five minutes to each speaker.

The Committee on Programme and Literary Exercises presented the following programme of literary exercises, which was adopted:

Programme of Exercises.

Tuesday, P. M.—Reading of letters from Prof. Hilgard, A. S. White, and others. Paper on "Pruning," by Robert Williamson, to be read by the Secretary, and discussion for three-quarters of an hour on same. Paper on "Importation of New Varieties," by W. H. Jessup, and discussion for one hour thereon.

Wednesday.—9 A. M.—Questions and relation of horticultural experience. 10 A. M.—"The Codlin Moth; Practical Progress in its Suppression," by Dr. S. F. Chapin; discussion thereon. 11:30 A. M.—"Evils of the Return Package," by W. H. Jessup. 1:30 P. M.—"Horticulture and the Law," by W. J. Tuska, S. F. Leib and J. N. Young; report of Committee on Legislation; discussion. Evening, 7:30 P. M.—"Horticultural Organization," by E. J. Wickson; "Peach Culture," by James Shinn; "Apple Culture," by M. P. Owen; "Insecticide," by G. N. Milco.

Thursday.—8:30 A. M.—Visit to opening exercises of the State Normal School. 9 A. M.—Address of S. F. Leib; address of J. H. Barbour. 10 A. M.—Reports of committees and discussion. 1:30 P. M.—Practical washing of infested trees for the destruction of the scale insect, to be done in the open lot adjoining theater. 2 P. M.—Report of Committee on Packers of Dried Fruits, by E. Hayden; general discussion; adjournment.

The Exhibition.

The President extended an invitation to the members of the convention, and the public generally, to visit the exhibition in the smaller hall. This exhibition presented Mr. Matthew Cooke's valuable collection of insects, both beneficial and injurious, and a large display by the Santa Clara County Horticultural Society of orchard and ornamental trees and plants infested with living destructive insects; also, there were shown infested fruit in contrast with clean fruit, choice samples of green and dried fruits, fresh grapes and raisins, implements used by orchardists, and remedies employed for the destruction of insect pests, together with apparatus for their application.

Correspondence.

Vice-President Johnston in chair. The Secretary read the following letters:

UNIVERSITY OF CALIFORNIA, COLLEGE OF AGRICULTURE, BERKELEY, Nov. 13 1882.

Matthew W. Cooke, Esq., Chief Horticultural Officer: DEAR SIR:—I sincerely regret that the state of my health prevents me from attending the Horticultural Convention at San Jose, in accordance with your invitation. I cannot, however, allow the occasion to pass without giving expression to my strong appreciation of the pressing importance of the work you and your colleagues have undertaken, and of the energy and good judgment with which you have carried it forward during the past two years. I can speak of it the more feelingly, as it has fallen to my lot more than once to have to press salutary measures of agricultural reform in the presence of, at first, a general apathy, and more or less direct opposition and ridicule on the part of those most immediately to be benefited by the work. I think I may congratulate you upon the rapid disappearance of these obstacles before the eloquent results already achieved in numerous localities in the State, demonstrating not only the perfect feasibility of controlling the insect pests that have invaded our orchards, but also pre-emptorily settling the ever-recurring question: "Will it pay?" a query that, with the experience before us, may well be answered by this other question: "Will it pay to give up fruit growing in California?" The fruit growers of the very district in which this Convention most fittingly meets, have had both of these questions brought home to them in the most emphatic manner, and happily they have found amongst themselves men ("may their tribe increase" all over the State) to take hold of them practically, and to show that these pests can be repressed, and that it will pay, even though as yet they have to contend constantly against reinvasion from neglected orchards, and perchance from those disseminators of evil, "return fruit boxes." It may thus be hoped that before long a united and pre-emptory public opinion will place derelictions of this kind under the same ban as it does the harboring and dissemination of other contagious diseases, and so enforce the faithful execution of a salutary law. Whenever conviction in this respect shall have taken such hold, as in the case of the citizens of Riverside versus the red scale, the work of the Horticultural officers will become an easy one. But, for the present, there is a great deal of work before us yet, in combating the enemies harbored by individuals and communities either too supine to take part in the active war, or as yet exempt from invasion in consequence of an isolated position. In some of these cases the insects themselves will in a short time carry conviction, as has already been exemplified, but the

enlightened friends of the great fruit industry cannot afford either to yield an inch of their position or to be off their guard for a moment. Efforts may be made to withdraw from them the needful support of the present law at the coming session of the Legislature. I sincerely trust that this convention will so act as to evoke an energetic expression of sentiment on the whole subject, and to enable the friends of the measure to present a strong and united front against all efforts to weaken the efficacy of the existing legislation. Thus far, California may claim the honor of having inaugurated the most effectual measures for the repression of insect pests as a natural vindication of her position at the head of the fruit-growing States. Let us see to it that the maintenance of that position, and of this great and lucrative industry, is not jeopardized, whether through the interposition of legal quibbles, mismanagement or the selfish supineness of individuals or communities deeming themselves secure from invasion. Very truly yours,

E. W. HILGARD.

RIVERSIDE, Nov. 9, 1882.

C. H. PIERCE. DEAR SIR, I regret to write that I shall not be able to attend the Fruit Growers Convention at San Jose. L. M. Holt, of the *Press and Horticulturist*, will attend, and will carry with him samples of our dried fruit. Hoping that you will have a most successful and profitable meeting, I remain, yours truly,

ROBERT S. WHITE.

The next order of business being the paper on pruning, by Robert Williamson, the Secretary read as follows:

Pruning Fruit Trees.

Intelligent men differ in opinion on most all subjects, and perhaps there is not a wider range of opinions on any subject connected with horticulture than on the subject of pruning. This is largely due (on this coast) to the fact that we have here such a great diversity of climates; so that what may be proper and practicable in one locality may be quite improper in another locality but a few miles distant. But while it is true that there cannot be any general rule laid down for pruning that will apply to all localities, I think that there are some reports in which all orchard and nursery trees (of the same kinds) may be treated nearly alike, regardless of locality or climate. For instance, there are certain kinds of trees, such as figs, olives, oranges, lemons, limes, which require no trimming except to keep the suckers off of the trunks, and the occasional lopping off of straggling branches barely enough to give shape to the tree. It is my opinion that both the almond and cherry should be treated much the same, except that they should be trimmed lower, especially the cherry.

I am decidedly in favor of low-trained trees in any and all localities or climates, especially in hot climates, such as we have in the foothills and valleys back or inland from the ocean. I think this low training should begin in the nursery, for if not begun there it will seldom be done in the orchards, especially if the trees are two or three years old when transplanted. To illustrate the effect of low training in the nursery, we will take, for example, a cherry tree, which, if budded on a good, strong stock and properly cared for, and not headed back, will grow up the first year a straight whip from six to eight feet high, and will be from one-half to three-fourths of an inch in diameter; but if headed back (say in June) to 16 or 20 inches from the ground, it will at once throw out and send up three or four branches, and the trunk will enlarge to from one to one and one-half inches in diameter. At the same time (as a rule) it will throw out more lateral roots than if allowed to run up a straight sprout. I have noticed for several years that the tree with many lateral branches will have corresponding lateral roots. With this state of facts, is not the low-trained tree decidedly preferable to plant?

Right here I must urge the necessity of heavy pruning of young trees when transplanting. Most planters seem to forget that the best dug trees have been robbed of half their feeders in digging, and that the top should be correspondingly cut back. Can any intelligent planter expect a half root to support a whole top?

But to return to low training. Some urge that you cannot work close to a low-trained tree, and that they are more likely to split apart when loaded with fruit, etc. Both these objections are ill-founded (at least to a great extent). First, the only difference between a low and a high-trained tree is this: The low-trained tree has two, three or more upright branches, or trunks, all with an upward tendency, while the high-trained tree has one trunk running up, with branches running out horizontally, or at right angles with the trunk, and often drooping, and often not sufficiently high to admit of a horse passing under them, and these branches being stuck on to the tree, as it were, and hanging out horizontally, the chances for splitting off with the weight of fruit is much greater than in the other case.

The Advantages of the Low-Trained Tree. Are many: First, the foliage protects its trunk from the hot rays of the sun. Hundreds of thousands of trees are annually ruined by the direct rays of the sun coming in contact with the trunk, especially while young. The bark is scorched or burnt so as to contract, the sap is soured, the tree's health impaired, the borers attack it, and it is gone. Many trees whose bark does not show the effects of the sun to a casual observer are so affected as to become dwarfed and sickly, and finally die after being an eyesore and worthless incumbrance for many years—all due to the fact that nature was not allowed to protect itself. Again, low-trained trees grow stalky and stout, and are better able to resist the wind. They seldom, if ever, blow over. The fruit is much easier picked from them. Much of it (for a number of years) can be picked from the ground and very short ladders, usually at half or less than half the expense of picking from tall trees by the use of long ladders.

By a system of shortening in the lateral branches near the ground a compact, beautifully shaped tree can be made, and a large amount of good fruit grown near the ground. Some of the finest cherries I ever saw grew on trees 10 years old on these low side branches within from six inches to three feet of the ground. As a rule, I do not believe in heavy pruning in the way of shortening in of the upright or leading branches; certainly not in annually chopping the tree's head off. The apricot may be an exception to a certain extent. I have known apricot trees that were shy bearers to be induced to bear heavy crops by severely cutting it back; but I doubt the propriety of doing that every year. I know a tree can be killed by annually cutting it back heavily. Whenever there is not enough top left on the tree to absorb the full flow of sap from the root, the health of the tree is impaired, and if this course is persisted in, disease and death is the inevitable result. I believe that millions of valuable trees are destroyed by what I would style "wood butchers."

A Reasonable Amount of Pruning

And heading back is absolutely necessary, but judgment should be used in the method and time of doing it. All ordinary pruning and head-cutting back may be done in the fall or winter, but I think that early spring is preferable. All large wounds should be covered with wax or paint—most any cheap paint will answer.

For clipping back or moderate shortening in, I think midsummer, or about the time you are thinning the fruit, is a good time. If properly done at this time the bramble or broom-like cluster of new shoots, usually resulting from heading back, may be in a very great degree avoided. But to avoid this at any season care should be taken to make a smooth cut close to and just above a lateral shoot so as to induce the flow of sap to go into these laterals instead of throwing out new shoots.

Finally, with bearing trees I believe in moderate and judicious thinning out of the fruit to get the best results and insure both vigor and long life of the tree.

On motion, the essay of Mr. Williamson was accepted.

Discussion on Pruning.

Mr. Jessup: I differ somewhat from Mr. Williamson in his treatment. I think to get the best result from the cherry tree it is absolutely necessary to prune it every year, and so keep it always thinned out, and to leave it open for the admission of light and air and all of the water sprouts that are not needed to shorten back and force into fruit spurs; it is necessary to remove them. In reference to shortening in the top branches, I find a great deal better results emanating from shortening in every year than any other method. I do not think there is an orchard in this State or any other, and that is proof to my satisfaction as the result that I have secured from it since I have been in charge of it, pruning it every year. I do not think there is an orchard in the country that has yielded and kept on increasing in its yield as my little orchard has, and I make a practice of commencing the pruning just as soon as the growth is stopped, as soon as the last leaf stops falling and drops back at the apex. After taking off the fruit I commence my pruning. My pruning is all done by the first of September on my cherry trees, and I have noticed one thing, that my fruit is improving in quality every year, and far beyond my expectations in quantity. From 10 acres of land this year I have taken nearly 76,000 pounds of cherries, and all are merchantable, good fruit that the canneries did not reject.

Mr. Hatch: I was going to ask Mr. Jessup if this practice seems tending towards the death of the trees.

Mr. Jessup: I remember when I was severely censured and criticized for my treatment of my orchard when I took hold of it about six years ago, all watching to see my trees die. It was prophesied all over the community that I was ruining the orchard and killing it. In order to satisfy some skeptics, I left a few trees without touching them at all. Two of them have died, and two more are half dead, and the fruit on them has never been worth the gathering. I have not lost a single tree in my orchard by pruning, or that I did prune, that I could not give some practical and good cause for its death, such as being girdled at the roots by gophers or being planted in a place that was unfavorable, as in an old barnyard or something of that kind. I have lost several trees that were planted out in an old stock yard that was covered rich with manure, and I deem that to be certain poison to a cherry tree. I have never seen a cherry tree succeed yet that was planted in a rich barnyard lot, and all that have been planted in that lot in different seasons, receiving good attention equal to the balance of the orchard, nearly all have died, and all have been sick ever since I have had charge of the orchard. In reference to the pruning of other varieties of trees, as a matter of course, men of judgment will not prune a fig tree as they would a peach or a pear tree; but, as to the pruning system of a tree, I do not think that any locality is exempt from the necessity. I think that all parts of the country require about the same treatment.

M. P. Owen, of Santa Cruz: As I have had some discussion on the subject, and been pretty severely attacked for my ideas in regard to pruning, and been pretty severely criticized in my own community in that regard, I would like to make a few remarks on this subject, in reply to the letter read, and I will commence

with the tree in the nursery. The suggestion was to cut the tree back—the yearly tree back. I endorse that, but instead of making three or four branches run out of equal size, forming a top or a head as it is called from the cutting back, I would let one main shoot run up. It is my practice in all orchard trees that I cultivate to keep one straight body of the tree running up. There will two or three branches come out, either a cherry or apple or pear or any other tree you have a mind to cut back. You take them all off except the one, and let the branches come out as it branches right from the ground. I let my trees grow out so that the chickens can feed on my cherries, and, as Mr. Jessup remarked, if any gentlemen in the audience can show any finer tree, or any better fruit than those of my cherry orchard, near Sequel, I would like to know where it is. I believe with friend Jessup that the tree should be pruned every year. I have never seen a tree yet that I thought was too old to prune. We do not always cut back, though we serve different trees in a different manner. We need a different treatment on different cherry trees; for instance, we will take the black Tartarian, that you are well acquainted with; it has an upright growth, and wants, both cutting back and thinning out, at least it does in our region because it produces too many limbs, and you want to thin it out, and I scarcely use anything bigger than hand-shears, and doing that every year, a little thinning out is all that is necessary. I do not have any large sears to paint over; I do not believe in it. The Tartarian is an upright grower, and I always cut leaving an outside growth running right out. I shorten back, and have shortened back for the last three or four or five years very severely, as they are inclined to run too high. On the other hand, take the Napoleon Bigarreau and other big varieties of cherries, they are inclined to spread, to fall down, and we cut them back we lop them off so that they won't hang over. Now I give all my trees a similar treatment: we thin out, we hold the limbs straight out well at the shoulder, and keep those branches shortened in so that when they bear fruit they stand out and will hold the fruit that is necessary for them to bear without any propping up. I use no props in my orchard. I always keep the branches shortened back so that they will hold all the fruit that the tree is able to mature.

As I remarked, we cannot adopt any general system for all fruit trees and all localities, but we can come pretty near to one system, that the tree must not have too many branches; it must be thinned out; it must be thinned out every year. For instance, the Bellflower apple tree, you are all acquainted with; every year I will cut off one-half of the small branches, and I cut them off with small hand shears; and every year as long as that tree grows, if it get to be a hundred years old, I will take out one-half, and sometimes two-thirds, of the small branches of the Bellflower apple tree. That keeps it sufficiently open for the sunlight and for the circulation of air, and it will keep the tree within bounds of what fruit it may mature by thinning out the fruit properly, for I take from one-half to two-thirds of the fruit off nearly all my trees in our region, except the cherries.

Mr. Geiger: I endorse what Mr. Jessup has said and the last speaker, and a great portion of the letter of Mr. Williamson, in regard to pruning, especially of the cherry tree. The cherry tree is a specialty with me, and has been for the last 35 years of my life, and if a man cannot learn something in that time he had better sell out. I believe in low training, and believe in thinning out the large branches. Taking a tree from a year old, I cut it down to about three feet, and two or three or four branches will come out as it advances; the lower ones, below the one you advance as a leader, about a foot in length or 16 inches.

A Mountain-top Ride and Visit.

EDITORS PRESS:—For the first time since living over three years upon this mountain top, we have this fall made a visit to "our neighbors," living some 10 to 15 miles further south upon the same range, in the Patchen, Burrell and Highland districts. A good summit road, such as we might and ought to have, would shorten the distance to be traveled, and do away with the necessity of going to the foot of the mountain by one road to ascend by another, as is now required. Besides, a mountain road along the summit, first winding one side of a hill and then around the opposite side of another, would open up to the tourist the finest views imaginable of extensive valley, forest, ocean and bay scenery, as well as be most attractive and pleasing in itself. The residents along the summit are talking of such a continuous road, to be jointly owned by Santa Clara and Santa Cruz counties, if a bill to that effect can be passed through the next legislature. Several portions of such a road are already built, and it only needs a systematic survey and light expense in labor to complete it as it should be. The time has come when such a road is absolutely needed by the inhabitants, and it requires no argument to convince business men of the advantages to the community of opening up new places by facilitating travel.

These mountains are now attracting home-builders with the inducements they hold out for producing superior fruits. Our mountain fruits are quoted at higher prices than valley fruits. For fineness of flavor and texture they are cer-

tainly unequalled, and for keeping qualities they are surely excel; while for beauty and all the essentials which attract the eye, the exhibits made at all district fairs have proved them unsurpassed. And what we saw upon vines and trees, while on our late visit, was really astonishing as to productiveness and richness. Such loads of grapes upon the vines as we saw in Mr. Feeley's and Mr. Burrell's vineyards, one to realize must see for himself. Such peaches, plums, apples, pears, etc., as we saw in Mr. Burrell's, Judge Miller's and other orchards made us feel doubly glad that we had a mountain farm, and may soon grow just such an abundance of choice fruits.

Down the Richardson road, past Lakeside farm and several other improved places, six miles to Lexington and Alma station, we commenced to ascend the old Santa Cruz stage road to Patchen, where resides our old-time friends, the Feeleys. Mr. D. C. Feeley is the Postmaster at Patchen, and it was cheerful to here find a postoffice without the inevitable saloon. His pleasant villa is situated on a spur running east from the road, and his vineyard, principally of finest table and shipping grapes, is noted for its superior excellence. Here we tarried, enjoying the society and hospitality of warm friends. Mrs. F. is not only a model housekeeper in all respects, but is also a naturalist, and has found time to collect a beautiful cabinet of choice curiosities, such as shells, fossils, minerals, stuffed birds, etc. Mrs. F. took several premiums on exhibits of artistic and useful articles at the late fair in San Jose; and Miss Frances F., aged 13, for the best loaf of bread. There was in that house something to see, think and talk about, and enjoy, of more importance than petty neighborhood scandal and latest fashions. After a belated ride in the chill of evening time, we found a most hearty welcome awaiting us—bright lights, fires and warm hearts never to be forgotten.

The three school districts of Patchen, Burrell and Highland have together organized a literary society, which is represented as in a flourishing condition; also a horticultural society, a regular monthly meeting of which on the following Saturday it was our good fortune to attend. Here the fruit growers meet with their families, and discuss such subjects pertaining to their vocations as are of general interest. It is to be regretted that the local papers of Los Gatos and Santa Cruz do not see the importance of reporting the proceedings. It would certainly do more to make them interesting and valuable to subscribers than the mere stuffing usually substituted. [Let the Secretary send reports to the RURAL PRESS].—EDS.

The subject under discussion, aside from reports of committees on fruit exhibits at the fairs, was that day upon insect pests. Mr. J. B. Burrell, the pioneer fruit grower, led the discussion with the history of fruit pests, so far as his observation and experience extended in his neighborhood, with such recommendations as seemed practical to avoid and exterminate the pests. His experience with the woolly aphis was of especial value and interest, and the RURAL PRESS should solicit from him a communication upon this subject.

[We should like to have it.—EDS.]

Owing to an event of especial interest to transpire on the next day (Sunday) at the schoolhouse, and the decoration of the school-room with white curtains, mottoes, and evergreens, ferns, bright-colored grape and autumn leaves, etc., the interesting discussion was out short and postponed till the next meeting in Highland district. That "coming event" was the marriage of the young lady school teacher, Miss Hattie Chase, a personal friend of the writer, to a Mr. De Hart, of Watsonville. The public wedding at this place was a concession on her part to her loved and loving pupils and friends, with whom she had devoted two years as guide and teacher. The ceremony was performed by Prof. Norton, of the State Normal School, under whom Miss Chase graduated as teacher three years ago. The schoolhouse glowed with love and beauty, most attractive in the atmosphere of a bright bright Sabbath morning. There was a merry meeting of neighbors and friends, from far and near, till the room was crowded with cheerful and happy faces and "good wishes" from old and young. The ceremony was short but impressive, sad though beautiful, as he entrusted the girl-teacher himself had taught, and knew to be worthy and true, into the keeping of the stranger—the one she had chosen for a life companion, forsaking for him her chosen vocation and pupils, parents and home, for his home and society and fortune.

The presentation of an elegant silver cake basket by the school children to the bride, in token of their love and esteem for their teacher, was most admirably done by Miss Feeley. Then came a surprise to bride and parents. A refreshing repast of cake and coffee, sandwiches and fruit from neighborhood lunch-baskets in greatest plenty for all! Good cheer, merry chat and good wishes reigned supreme, and a vote of thanks to the ladies and pupils of Patchen went up from the hearts of all friends present.

Owing to the length of this article, and the much more which interested our further visit among friends and orchards, we defer the rest till next week.

JEWELL.

Dear Ridge Farm.

THE Washington monument is fast getting to be a big thing. It is now over 300 feet high. When completed it will be the highest piece of architectural work in the world.

A Word to Subscribers.

Prompt renewal of subscriptions is the strongest support that newspaper publishers feel. It is, so to speak, "the most sustaining part" of a newspaper diet. We have much to be pleased at in connection with our large list of subscribers, yet there are some whom we trust can favor us more promptly in forwarding the renewal of their subscriptions, and we feel the necessity of soliciting all who like our paper, and are pleased to support us in our efforts to produce a worthy and progressive journal, to do the best possible in forwarding their subscriptions promptly and aid us in securing new ones.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Successful Patent Solicitors.

As Dewey & Co. have been in the patent soliciting business on this coast now for so many years, the firm's name is a well-known one. Another reason for its popularity is that a great proportion of the Pacific coast patents issued by the Government have been procured through their agency. They are, therefore, well and thoroughly posted on the needs of the progressive industrial classes of this coast. They are the best posted firm on what has been done in all branches of industry, and are able to judge of what is new and patentable. In this they have a great advantage, which is of practical dollar and cent value to their clients. That is this understood and appreciated is evidenced by the number of patents issued through their agency from week to week and year to year.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
L. L. WOODMANSE—Nevada State.
E. W. CROWELL—Los Angeles county.
L. WALKER—Butte, Tehama and Shasta counties.
E. A. WILLIAMS—San Francisco.
S. E. BAKER—Eastern States.
J. WILTSE, Amador county.

Apprentice Wanted.

Wanted, a well-recommended, able and steadfast boy, of fair education and good intellect, to thoroughly learn the printing business. None other need apply. Address this office.

Extra Type For Sale.

We offer Scotch brevier type, (same as used on this paper) for sale in any quantity from 100 lbs. to 1,000 lbs., for 25 cents per lb., if ordered soon. Also, several hundred pounds of nonpareil at favorable rates. The type is in good condition and is of a very durable character.

DEWEY & CO.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDGOUR & Co., 10 Barclay St., New York.

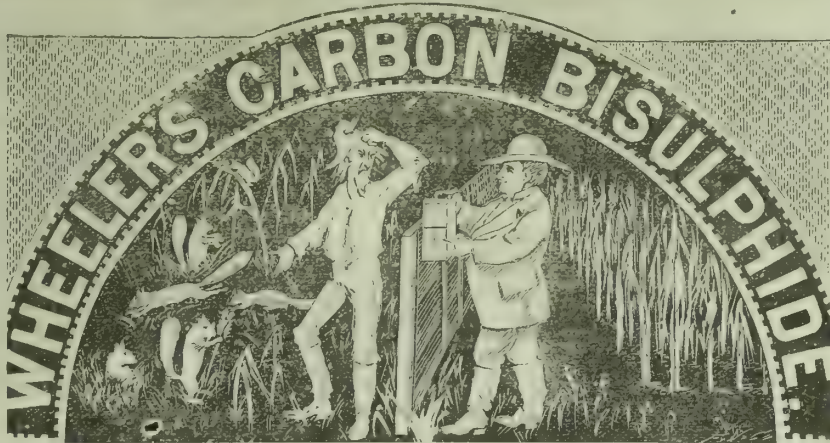
Agents Wanted.

A Library in One Volume. New, authentic and exhaustive. The largest, handsomest, most comprehensive and best illustrated Work on Live Stock ever issued in this country.

Adorned by Veterinary Surgeons and the Agricultural Press everywhere. The "Object Teaching" Stock Book for every day use.

The "American Farmers' Pictorial Cyclopaedia of Live Stock," embracing Horses, Cattle, Swine, Sheep and Poultry, including Departments on Dogs and Bees; being also a Complete Stock Doctor, combining the effective method of Object Teaching with written instructions.

For Terms and Circulars apply to J. DEWING & CO., 420 Bush St., San Francisco, Cal.



FOR KILLING SQUIRRELS, GOPHERS, PHYLLOXERA, Etc.

Should be Used After the First Rains.

Sold by Druggists and Dealers in General Merchandise. May also be obtained direct from the Manufacturer,

JOHN H. WHEELER,

Manufacturer, also, of

Sulpho-carbonate of Potassium and other Disinfectants for Vines and Trees.

ALL KINDS OF FERTILIZERS AND VINEYARD SUPPLIES FURNISHED.

OFFICE: 111 Leidesdorff Street, - - - SAN FRANCISCO.

J. A. BILZ'S CARRIAGE MANUFACTORY,

Machine and Blacksmith Shop,

PLEASANTON, - - - California.



J. A. BILZ.
PLEASANTON CAL.
PAT'D. AUG 8 1882

I present above an exact representation of my new Excelsior two-wheeled Phaeton, which is the result of long experiment, and with which I am willing to challenge competition by any other two-wheeled vehicle made. I guarantee that the chucking motion is entirely removed, and that for ease of riding, my Phaeton is equal to any Buggy. The shafts are hung loosely in a rubber box, by which means the jar is completely removed from the axle and the horse's back. The body is also hung loosely on a round axle, and is balanced in front by two coil springs with eccentricity, which prevents the "joggling motion" that would otherwise be imparted by the horse. It is, therefore, as easy for the horse as for the rider.

The Excelsior Phaeton

is made in four different styles, ranging in price from \$90 to \$160. I also keep a large stock of Family Carriages, Open and Top Buggies, spring Wagons and all kinds of Farming Implements, all of my own manufacture. I also manufacture my well-known VINEYARD and ORCHARD PLOW, which can be run close to trees without danger by the whiffletree. I am prepared to do all kinds of machine work.

N. B.—Parties from abroad who want to get the best article made, at reasonable prices, should address me for further information and reference.

Patent Right for Sale in Counties and States Abroad.

J. A. BILZ.

Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Grant.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for free circulars containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE,

Anderson, Shasta County, Cal.

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON CONSIGNMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Trademen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

JAS. P. HULME,
Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936

SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and Prompt Returns. Advance Liberally on Consignments.

Arrears of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1882.

Pensions for all soldiers disabled in line and discharge of duty, either by accident or otherwise.

Widows of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty. Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges. Honorable Discharges procured; also duplicates. Send for blanks.

Increase of Pension. Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps,

STODDART & CO.,

Washington, D. C.

Box 623

Thoughts for Thanksgiving.

If gracious smiles are met with smiles
(And who would meet them otherwise?)
And tender words persuade the heart,
Till tears, kept back, unbidden start
In dry and unfamiliar eyes:

If acts of courtesy like these,
The common coin of every day,
Pass current everywhere, and make
So many richer for their sake,
For none can be too poor to pay:

What shall be, can be said for those
Who greater gifts their whole lives long
Receive without acknowledgment,
Receive, perhaps, with discontent,
Without a thankful word or song?

Time was they were not, now they are.
A Power by them unseen, unknown,
Produced them, not to die like flowers,
Poor pensioners of Summer hours,
For they remain though years have flown.

From nothingness to conscious Life,
That feels itself if nought be due,
And straightway all it sees demands;
Perpetually puts forth its hands
To take, and will not be denied.

That such a creature, selfish, frail,
One-half whose days are passed in sleep,
Watched over by maternal eyes,
Which, when its small breath comes in sighs,
Tremble and rest, are to be wept.

That childhood should in manhood end
Is strange as childhood just begun.
Why did he live? He might have died.
What massed Death's arrows lance aside?
The power of Life and Death in one.

This he perceives not, or forgets,
For now because he lives he lives;
He has no torment and his food,
Awaits what comes, and finds it good,
And never thinks of Him who gives.

Something he sought he may have missed,
Or in his heart, or in his brain:
Fame, power, wealth, love. If so, what then?
Blot all these from the lives of men,
Still Man, and Life, and earth remain.

The sun still rises as of old;
The stars and planets shine on high;
The great sea laughs; clouds come and go;
Rains fall; birds sing; the sweet flowers blow;
And fragrant is the west wind's sigh.

Oh, Earth, thou art a goodly world!
And who deny, if such there be,
The Power that placed them here, should own,
Thou Symbol of that Power unknown,
Their endless gratitude to thee!

They breathe the air that stir thy trees;
Thy sunshine is their constant light;
Without thy harvests they would die,
Their sustenance and sole supply;
They lie and slumber in thy Night!

Eut say thou art no more, oh, Earth!
Than we behold from day to day,
An fun, we travelers, thou at least
Hast spread us many a bounteous feast
And comforted upon the way!

We thank thee, and through thee the Host,
Who has provided of His best,
And housed us so we hate to go;
For we can never hope to know
More watchful care, more perfect rest!

R. H. STODDARD.

Daisy's Happiest Day.

A Thanksgiving Story.

(Written for the RURAL PRESS by ELSIE ANGE.)

"Such a lovely day!" exclaimed Daisy, looking from her window at the clear blue sky. "Such a lovely day, and I believe it will be the happiest I ever spent!"

She is a bright-faced girl of 22, with all the charms which belong to a pair of velvet-brown eyes, a dimpled chin, and a wealth of waving, bronze-colored hair. But, attractive as these external graces are, she has a heart to correspond—gentle, kindly, gay, which, until very lately, has been "fancy-free." Love came knocking at the door, which opened and admitted a guest, and now it is singing its first sweet song, and stirring the depths of its maidenly abode into deeper thrills of happiness and tenderness.

It does not take her long to dress, for there is a great deal to be done in that busy house, where only one servant "puts her shoulder to the wheel" of the ever-revolving round of care and drudgery. So she hastens from her own toilet to make that of the little ones she hears already astir in an adjoining room.

"Come, my darlings, come with Auntie, and don't disturb dear mamma. She was up so late last night."

There is a great deal of clatter and noise as the ablutions of the four little Clarkes are progressing. Then their breakfast is prepared and given them with Daisy's own hands; but her brow is unruined when, two hours later, she seats herself at the table with her sister and brother-in-law.

It is evident she has no appetite. She laughs, and chats, and breaks her bread into pieces; her coffee is almost untasted, and the tempting omelette lies in a neglected little heap on her plate.

"You are not through, Daisy?" inquires her sister.

"Yes, Hattie; there is so much to do, and if you and John will excuse me—"

"Come, Daisy, this will never do!" exclaims Mr. Clarke, with a quizzical twinkle in his eyes. "It's only people in love that don't eat. Has that good-looking fellow who is coming to dine with us to-day anything to do with your failing appetite?"

But Daisy has not stopped to listen to the good-natured banter. She is already half way

upstairs, where she is soon engaged in doing the chamber work, and from there to the kitchen, where peas are to be shelled, and cranberries to be stewed, and the hard sauce is to be prepared.

As the church bells are ringing her feet are tripping lightly toward church, and there is nothing to show for that morning's hard work (and what a task it has been to get ready for church!) but the deep rose color in her cheeks.

It was not a brilliant sermon she listened to. There is a great deal about the Puritans and the Mayflower, the Revolutionary war and the Declaration of Independence. Daisy's heart swells. She is glad she is an American girl. She seems to be thankful for the first time in her life that it was her glorious privilege to be born under the folds of the stars and stripes. Thanks to copious rains the preceding winter, the harvests had been bounteous. The fearful depression which had made business so dull for several years past was being gradually but surely lifted off the benumbed community. The evils of stock gambling were being realized, and people were coming to the conclusion that it was better to invest their earnings in more legitimate channels. There had been no fearful earthquake to swallow us up; no terrible cyclones or hurricanes to ruin homes and bring death and desolation into families. We of the Pacific coast had especial cause for thankfulness, inasmuch as the Chinese Restriction Bill had become a law, and John Pig-tail found that he could not quite supplant the poor white man for a while. Now all was sunshine, prosperity and happiness for the Golden State.

Daisy thinks it was a beautiful sermon, and when the closing hymn is sung, her voice rings out so sweetly and clearly that every one near her listens with delight. There is a tall young man who is especially interested, and as she follows her sister out of church, she meets the gaze of a pair of blue eyes that say so plainly "I love you," that her happy heart swells into ecstasy, and she does not know what a tale her own tell in return.

Married sisters are so prosaic, so undiscerning, or why should Hattie say so calmly: "Good-bye for the present, Mr. Howard; remember, we dine at five," and he might just as well walk home with them.

"But, never mind," says Daisy to her heart, "Five o'clock will soon be here."

When they reach home, she arranges flowers in the parlor, opens the piano temptingly, and even makes the chairs assume a welcome appearance. Then off she flies to set the table for dinner, and we hear her saying: "John here, and Hattie opposite. Then Maude Martin and her sister Sue, with Mr. Howard between them. George Martin on the right of Hattie. Then Mr. Lisle and Mr. and Mrs. Belmont and myself. Yes, I must be where I can wait on them."

It is now our place to tell who the guests are. The Clarkes are kindly, hospitable people, and it is their custom on holidays to invite those to their table that the day would bring no especial cheer to at their own humble homes.

The Belmonts are an elderly couple of very slender means. They keep a small shop in the neighborhood, but sell so little that Mrs. Belmont is obliged to do fine needlework to eke out their poor existence. Mrs. Clarke knows it will do them good to get out of their dark rooms for a few hours, and she invites them. Mr. Lisle is an old bachelor, with no home but a lodging-house, no cheer but what a restaurant affords. Mr. Clarke asks him. Mr. Howard is a friend of Daisy's. He has received innumerable invitations, for he is young, wealthy and handsome. We must tell the truth, and say that he invited himself, for he insisted that he would not accept any of his invitations, and hinted so strongly that there was but one place where he could feel at home and enjoy himself, that Daisy had told him he could come.

The others are accidental guests. There had been sickness in the Martin family. The father had been very low with typhoid fever, and although convalescing, there will be an exceedingly quiet Thanksgiving in their house this year.

Maude was sadly disappointed. She loved merriment and gaiety, and it was in pathetic strains she held forth to her friends:

"It is so hard. You know what jolly times we have always had, Daisy; but this year no dinner, no company, no dance. Nothing for us to do but to smell drugs, look at medicine bottles, moan, and envy our neighbors."

"But think how much worse it might have been, Maude," Daisy had said with a mist gathering over her beautiful eyes, for she had neither father nor mother. "If you think you could enjoy yourself with us, dear, you will be very welcome. But we are plain folks, you know, and our guests are not society people."

It was enough for Maude to know that one of the gentlemen was elegant and attractive, so she had accepted the invitation for herself, her sister and her brother with profuse expressions of gratitude.

But we must return to Daisy, where we left her, in the dining-room. There she stands, contemplating the neatly set table with its snowy damask, its handsome china, sparkling crystal and shining silver; but there is a far-away look in her eyes.

"Yes," she is thinking, "Mr. Lisle and the Belmonts will leave early, they always do. Then we young people will have such a pleasant time, and Maude will see that he is good and intelligent as well as being handsome. And how glad dear little Sue will be. I can imagine her whispering, 'He is just splendid, Daisy!'"

When they leave they will probably invite me to walk home with them, for it will be a lovely night, and he will go too; and then we will be alone together. Oh, my darling, what will you say to me, for I know it is coming!"

Tears are standing in the rapturous brown eyes, but she brushes them hastily away and flies to other duties.

The Belmonts are estimable people; but they actually come three hours before dinner.

It is trying enough to a girl that wants to look her very best, and has counted on plenty of time for arranging her hair and her dress in the most becoming manner. But Daisy knows that it is her duty to entertain them, so she greets them with extended hands and a welcoming smile:

"You will excuse my apron, I know, Mrs. Belmont; but I must take care of the children, and I can't afford to spoil my dress."

"O, you pretty dear!" says the old lady, kissing the girl's bright cheek, while her husband very ceremoniously shakes hands. "We have thought and talked of nothing else but coming here for the past week. What beautiful flowers! Mr. Belmont, see these pansies, and calla lilies, and roses—yes, actually roses!"

"Remarkable!" echoes her husband, sentimentally. "My dear Miss Lee, this California is a remarkable place, as I observed in coming up your garden walk. Flowers in bloom outside which would be exotics in summer where we came from—Canada."

Daisy smiles beamingly, and bears the weight of Mrs. Belmont's gush and her husband's dignity heroically.

She is glad when the old gentleman says:

"I perceive you have a fire, and although it is an unusually fine day, there is a freshness in the atmosphere which makes a fire acceptable within doors. May I avail myself of the privilege of sitting near it and perusing the day's newspaper?"

Daisy answers by drawing up the easiest chair. Mrs. Belmont then chirps in:

"My love, if I may sit by this window and look out upon those dear children playing on that sweet, green grass and do my bit of work, you won't care?"

"Do just as you like, Mrs. Belmont. Take this rocking chair," says Daisy.

Mr. Belmont is now out of the way behind his newspaper, and the young lady divides her attention between Mrs. Belmont and the children until she is relieved of the latter by their mother's summons for them to come to their dinner. She has barely time to remove her large apron and straighten her hair, when the Martins arrive.

"Come up stairs," she exclaims, cheerily.

"But where is your brother?"

"He changed his mind about coming. Business or something," answers Maude, as she removes her things.

For the first time that day a cloud appears in Daisy's sky. It is a very small one, but she detects it lurking about her friend's brow; she sees it in Sue's patient smile. Something is the matter with Maude. Is it possible that she is out of temper? Sue gives an expressive shrug and casts a deprecating look toward her sister, which poor Daisy only interprets too well.

Maude is one of those high-strung girls that does just as she likes at home. In fact, she rules the house. When she is kind and pleasant she is a gracious sovereign, when she is otherwise—well, to use her brother's expression, "she is the old Nick himself!" On this particular Thanksgiving day she has been disappointed in not receiving a dress she had expected to outshine Daisy in, and as the chief joy of her life consisted in making conquests, it is more than she can bear to think of meeting the eligible Mr. Howard in a toilet which had lost its freshness. So she had her revenge by being hateful at home. She quarrelled with her brother and angered him into refusing to come to the dinner. He said he knew what Maude's tantrums were. Poor little Sue went meekly enough, but she preferred to stay at home, especially when she found she could not wear her pale blue evening dress. How could she, when her sister took special pains to array herself in a somber, gray woolen walking suit.

No wonder Daisy looks surprised, and Maude takes in her friend's graceful pink robe with cool eyes.

"We did not dress, Daisy, because we thought it would be poor taste to wear any but our plainest clothes, as we are to meet obscure people," she says, with assumed pleasantness; but the stab goes to Daisy's gentle heart.

"You are welcome however you dress, dear friends, but you can be so handsome and dashing, Maude, it is but natural that I want Mr. Howard to see you at your best." Maude evidently softens, and Daisy continues with a suppressed sigh, "I do hope you will enjoy yourselves."

"If we do not it won't be your fault," says Sue, giving her arm a gentle but significant squeeze.

Now they are in the parlor, and Daisy rejoices at Maude's sweetness as she is introduced to the Belmonts. She thinks the cloud has blown over.

Mr. Lisle arrives. He is that pitiful caricature of humanity, the young old man. He dyes his moustache and assumes a jaunty step. He simpers, and shows the whole set of his very false looking false teeth. He wears a white vest and bright blue necktie. While he is smirking and bowing, and expressing his delight at meeting three such beautiful and charming young ladies, Mr. Howard is announced,

and he is, of course, just what he should be, and needs no description.

Maude likes fun. She sees stores of it in Mrs. Belmont's grateful gush, in Mr. Belmont's pompous dignity, in Mr. Lisle's assumed youthfulness; and she resolves to enjoy herself, until she sees Mr. Howard shake hands with Daisy as he enters the room. She reads that in his eyes which tells her that he is beyond all her conquests—he is already won. Then poor, unhappy Maude envies her friend almost to hatred.

The dinner bell rings in upon the little company. Mr. and Mrs. Clarke come in with pleasant greetings, and soon they are seated around the sumptuous table, where Daisy is busily employed in supplying the poorer guests with dainties which are unknown at their simple board.

Maude allows her ill-temper to slumber as she discusses the relative merits of boiled chicken and roast turkey, for she has a weakness for a good dinner, and with Mr. Howard to help replenish her plate, and to laugh at her wit, she manages to enjoy the meal.

Mr. Lisle holds Daisy's kindly ear in a pause between her ready ministrations. "My dear Miss Daisy, if you only knew how this warms my heart! I find myself pitying those poor mortals I expected to meet at the restaurant to-day, had I not received your brother's cordial invitation. This well spread table, these happy faces clustering about it, form a picture which I will carry away with me and never forget."

Maude's silvery laugh causes the little man to cut short his flowery speech and to look admiringly in her direction, and more than once he turns to Mr. Clarke and says: "She's a rogue, sir, a beautiful rogue!" Daisy catches the glance of a pair of blue eyes over the celery glass. It is full of admiring tenderness, but she is too busy helping Mrs. Belmont to her third dish of cranberry sauce to encourage demonstrations of affection; but her heart takes in the loving look. Mrs. Belmont is shaking her head and murmuring, "Such a treat!" between the mouthfuls. Her husband partakes of his meal with solemn appreciation, while his gentle spouse continues: "Only think! fresh tomatoes, and not a month before Christmas! Brussels sprouts and string beans, also. Yes, dear, I will have a few more peas. Such a treat!"

But the dinner comes to an end at last. Maude has feasted on mince pie and English plum-pudding until her dress is far from comfortable. Her sister eyes her suspiciously as she throws herself in a corner of the sofa and presses her hand to her side. She knows what to expect. Daisy asks Sue to play, and she sweetly complies, and gratifies all present with her modest bearing and her soothing music. As she concludes, Daisy invites her sister to sing with her, as they know many duets and their voices blend so harmoniously.

Maude declines decidedly. She does not say she has eaten too much to sing credibly, and she is too selfish to make the effort. So she plays the hypocrite.

"I cannot think of singing, and father so sick at home," she says, throwing a great deal of rebuke and pathos into her voice.

"Poor dear!" exclaims Mrs. Belmont, sympathetically; and Miss Maude is at once the center of attraction; for the subject turns from music and things of a festive character to Mr. Martin's sickness, beginning with a series of questions from Mr. Belmont.

What was the nature of her respected father's illness? Who was his physician? What course of treatment was he following?

It did not take long for the discussion to turn upon allopathic treatment versus homeopathy. Poor Daisy leaves the piano disappointedly, and fixes her eyes on the carpet. Sue pulls her handkerchief nervously. Mrs. Belmont is all interest, for she has a stock of recipes at her command, and she loves to hear her husband display his knowledge, as he is on the present occasion.

Maude almost forgets her tight dress in her delight; it is just as rapid as she can desire.

Mr. Lisle has his hobby; it is hygiene. He does not believe in medicine. With his treatment he could have Mr. Martin well in a few days. It is a great mistake to drug fever patients to the verge of the grave, and then weaken their digestive organs with such gross things as milk, beef-tea, whisky and the like.

"What would you prescribe, Mr. Lisle?" asks Maude, with twinkling eyes. She does not say that her father is on the road to recovery, and that he has followed the treatment which Mr. Lisle deprecates; while that gentlemen, delighted with her deference, waxes warm and gives her the full benefit of his advice.

"In typhoid fever the circulation must be equalized by applying jugs or bottles of hot water, or bags of hot sand, to the feet or limbs when cold, and tepid wet cloths spread over the body when hot. Sponge baths of tepid water are also essential. Instead of drugs give him occasional sips of water."

"Bah!" responds Mr. Belmont in his profoundest bass. "Desperate diseases, sir, must be combated with corresponding remedies," and he plunges into the most severe regimen of Allopathy. Mr. Lisle smiles and bows to him, but says in an undertone to Mr. Howard:

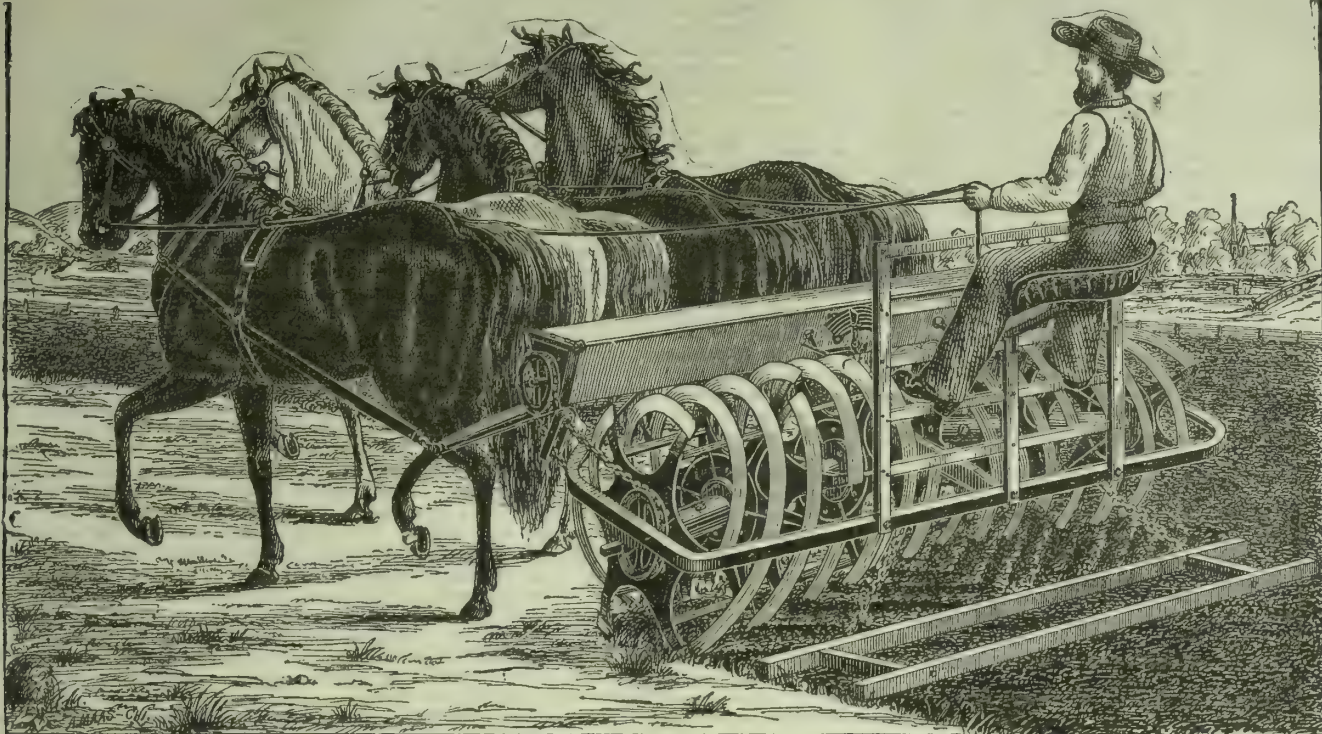
"A very set old man, but we must respect his age by humoring him. We ourselves may be old some time."

(Mr. Lisle, by the way, is Mr. Belmont's senior in years.)

At eight o'clock the Belmonts depart with a well filled basket, the gentleman bidding all

(CONTINUED ON PAGE 410).

CHICAGO SCREW PULVERIZER.



Unequaled for working Tule, Salt Marsh and Salt Grass Lands; also for cross-plowing Summer Fallow, putting in Summer Fallow and Volunteering. Weight, 1,600 pounds; capacity, fifteen acres per day by the use of six animals. This machine is not only a Pulverizing Harrow, but is a PLOW for any purpose except that of a Breaking Plow. Price reduced. Fully guaranteed and sold on its merits. Send for circulars containing Letters from 150 Leading Farmers. Address,

H. P. NICHOLS, Stockton, Cal.

Redlands.

Good water, rich soil and magnificent view. High elevation, dry air, few fogs and northerers.

No brush or fences on the land, which is especially adapted to the culture of the orange and raisin grape.

Near to church, school, store and depot. Hotel open. Telephone Communication.

Stage from San Bernardino Tuesdays, Thursdays and Saturdays.

SEND FOR CIRCULAR.

JUDSON & BROWN,

Redlands,

SAN BERNARDINO, CALIFORNIA.

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, DR. J. McLEISH, No. 215 West Fourth Street, Cincinnati, O.

A NEW BOOK.

A Treatise on the Horse and his Diseases.

By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year.

DEWEY & CO., 252 Market St., S. F.

LAND

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

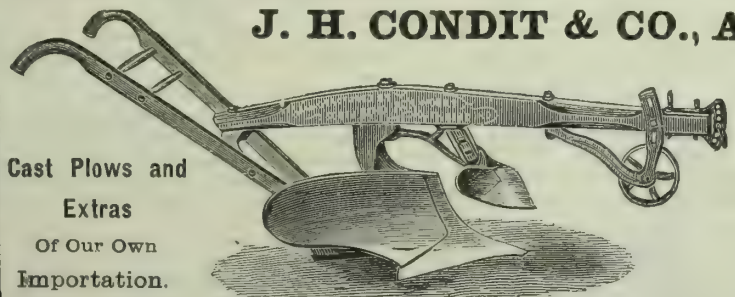
Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

J. H. CONDIT & CO., Agents

-FOR-

OLIVER CHILLED PLOWS.



Cast Plows and Extras Of Our Own Importation.

Steel Plows, Reversible Molds, Eureka Gangs, Seed Sowers, Harrows,

Fence Wire, Wheelbarrows, Hardware and Ship Chandlery.

Rubber and Leather Belting. Rubber and Hemp Packing. Tents, Hose and Twine. Garden, Flower and Field Seeds—Alhalfa.

J. H. CONDIT & CO. Hunter St., near Main, Stockton.

PACIFIC COAST LAND BUREAU.

President, Wendell Easton; Vice President and General Manager, Geo. W. Friek; Treasurer, Anglo-Californian Bank. Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, U. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock-raising or dairying down to fruit culture. On the coast of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale.—The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands at from \$1 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$6.50 an acre; 840 acres fine grazing land, 7 miles from San Luis Obispo, \$8 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. R'y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue 8.

HORTON & KENNEDY'S

FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the Best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before) LIVERMORE, ALAMEDA CO., CAL.

San Francisco Agency, LINFORTH, RICE & CO., 323 & 325 Market St., S. F.

AMERICAN COMPOSERS.

As regards musical compositions of note, America is undoubtedly young. A great deal has, however, during the last few years, been accomplished. The following are all by native composers:

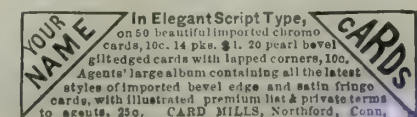
Zenobia. (\$2.00) By S. G. Pratt.
A Grand Opera of much merit.
St. Peter. (\$1.00) By J. K. Paine.
A well-known Oratorio.
Redemption Hymn. (30 cts.) By J. C. D. Parker.
A short, but complete and impressive work.
Christmas. (30 cts.) By A. C. Guterson.
A sacred Cantata for Christmas time.
Fall of Jerusalem. (30 cts.) By H. E. Parkhurst.
An impressive and musical Cantata.
46th Psalm. (80 cts.) By Dudley Buck.
A first-class sacred composition.
Praise to God. (\$2.00) By G. F. Bristow.
An Oratorio. Noble words and music.
Be'shazzar. (\$1.00) By J. A. Butterfield.
Grand and beautiful scenic Cantata.
Joseph's Bondage. (\$1.00) By J. M. Chadwick.
A splendid oriental sacred Cantata.
Christ the Lord. (30 cts.) By W. Williams.
Easy Christmas Cantata.
Don Munio. (\$1.50) By Dudley Buck.
A legend of the crusaders set to music.
Picnic. (\$1.00) By J. R. Thomas.
Will do (n doors) for a winter concert.
New Flower Queen. (75 cts.) By G. F. Root.
New arrangement of a famous Cantata.
Burning Ship (80 cts.) and Storm King. (38 cts.) By B. F. Baker. Easy and striking Cantatas.

OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hairs' Asthma Cure, prove most conclusively that it is all that it is represented to be. DR. HAIR'S Treatise on Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. B. W. HAIR & SON, Cincinnati, Ohio.



Daisy's Happiest Day.

(CONTINUED FROM PAGE 408.)

adieu with that consciousness in his bearing which says so plainly, "My presence has done much to make this occasion a success," while his wife, in a voice broken by gratitude, thanks their friends for the pleasure that has been given to them, and she whispers to Mrs. Clarke: "My dear, we will remember you, your husband, your children and your sweet sister in our prayers to-night."

There are tears shining in Hattie's eyes. She is weary with the day's care and worryment, but, with it all, she knows the sweetness of making others happy. She finds "it is more blessed to give than to receive."

Mr. Lisle lingers for a few moments. He fain would stay longer, for he tries to think that he is young and that the youthful circle cannot be complete without him. But long habit will assert itself. He finds his eyes watering, and he cannot refrain from gazing. He fears that he will fall asleep in his chair, so jumps to his feet, declares how sorry he is to be obliged to leave such charming company, but he remembers another appointment which he must attend to immediately. Maude alone is sorry to bid him good-night. She had hoped he would remain, for she has some mischief brewing in her mind. She tries to laugh gaily at her kind-hearted friend goes to the hall door with him.

"Dear me, Daisy is actually helping the old fellow on with his coat. Now he is buzzing something in her ear. He is actually kissing her hand. O, I must turn my head, I believe he is proposing to her! Maude gives one arch glance at Mr. Howard, and her sister exclaims: "Don't, Maude, it is unkind of you."

"Unkind! Can I help it if Daisy is flirting in the hall? I guess he must be rich. She always said she would rather be an old man's darling than a young man's slave." This last is a thrust at Mr. Howard, and fire begins to shine in his eyes, which Maude perceives triumphantly.

Mr. Clarke has seen the Belmonts safely off, and enters just as Mr. Lisle is taking his departure. He pities the lonely old man and insists upon accompanying him to his lodging-house.

Hattie is upstairs. She is tired, and she is sensible enough to know that her company can be dispensed with. Daisy is also tired, but her young nature craves the rest which pleasure gives, and it is a very bright face she carries into the parlors. Maude is whispering hurriedly to her sister, then she looks grimly enough at the fair young form smiling in the door-way.

"Did you think I was never coming back?" asks Daisy. "Well, what shall we do to make a pleasant evening, girls? Can you suggest anything?"

Sue fears that Maude may wound Daisy, so she answers, "We have had such a delightful time, dear, and you have been so busy thinking of everyone but yourself." (Mr. Howard is glancing very intently at Daisy.) "What better can we do than chat a little? Then later, when Mr. and Mrs. Clarke rejoin us, and George comes to see us home, we may have a game of authors."

By this time Maude is glaring. She wants to shake her sister, but masters herself sufficiently to say icily:

"Of course, you may do as you like, Sue, but as I told you a few minutes since, I am going home. It is our duty to be there. Think of mother alone with father, and he so far from well! Indeed, we ought to have gone an hour ago." She arises majestically with the air of one who says, "No earthly power can persuade me to remain." Sue follows her example with a sigh, and Daisy's cheeks are aflame with resentment.

"You know what is best," she says, proudly. "Mr. Howard, will you see these ladies home?"

A little later, and a solitary form in a pink dress stands alone in the deserted parlors. There are tears on her cheeks, and sobs in her throat. It is not that her pleasure is spoilt, but she feels that she has lost her lover. She has slighted him all day for others, and now he has gone, and perhaps he will forget her. Maude can be so fascinating. Is she not bewitching him now with her smiles? Poor Daisy shudders at the gulf she already feels between them.

Mr. Clarke returns and finds his usually placid wife in a state of indignant excitement.

"It means," she explains, "that Maude Martin has spoilt all our poor Daisy's pleasure. She and her sister have gone home, taking Mr. Howard with them, and there is nothing for Sis to do but go to bed, and it isn't half-past eight."

"Poor child!" exclaims the kind hearted man, "can't she run into one of the neighbors for an hour or two? It will be better than going to bed."

"If we could persuade her to go to the Hunt's it would be all right, for they have a party to-night and Daisy was invited, but declined on account of her own company. I wish she would go, if it was only to spite Maude Martin," says Mrs. Clarke, with spirit.

"She will go, and I will take her," responds her husband.

Poor Daisy bathes her tear-stained face, and lets Hattie arrange some white Marguerites in her hair. She tries to seem pleased, and she even chats gaily with her brother-in-law as they start off together. He does not know that her own quiet room would have been more acceptable than the scene of festivity, that she longs for the luxury of shedding tears over her

blighted hopes, for this was to have been her happiest day!

Mr. Clarke leaves her at their friend's house, promising to return for her later. Every one is glad to see her, and her sad heart begins to warm under the kindly influences around her. With her usual thoughtfulness, she relieves a weary looking girl at the piano, and as her fingers fly over the keys and she watches the dancers whirling around, she wonders if she is not dreaming. She feels so dazed, so absent to her surroundings. She hears the hum of talk, the sound of laughter from the drawing-room where the sedate guests are assembled; she discerns a couple in loving converse in the conservatory. She does not know how long she plays. She lives the day all over again. She sees Maude Martin smiling on Mr. Howard and drawing him into her net, and still her hands are flying while the light feet keep time to the music.

A lull comes at last. The young people take refreshments, and Mrs. Hunt brings coffee to Daisy, and, gently patting the pretty brown head, tells her that she has seemed inspired, she has played so well. Will she not change places with some one else? Daisy says: "I am too tired to dance, Mrs. Hunt; it rests me to play."

The piano stands in an alcove, and she takes a low seat and sips her coffee, wondering when it will be time to go home, when some magnetic influence makes her look at the doorway and see a gentleman enter. He is looking around as though in quest of some one.

She watches him as he eyes the groups about the room. She forgets that she is almost hidden behind the piano. Her heart throbs as he comes toward her, and then it seems to turn to ice.

Can that listless, indifferent face belong to the man who a few hours before had looked

to Mr. Clarke's. In fact I did so; and if there had been lights down stairs, I believe I would have found some excuse for going in. Unfortunately, I had left neither cane nor overcoat, or I would have ventured anyway."

(Daisy laughs so sweetly that the gentleman says, in a significant undertone: "Not but what I did leave something.")

"Well, there was nothing to do but return to my rooms, but I met a friend who insisted upon bringing me here. I have been playing checkers in another room, and have been beaten ignominiously every game, so made up my mind to go home, but thought I would see Griffin first. I was looking for him when I discovered you."

"I think he is in the conservatory," says Daisy, with such a conscious blush that Mr. Howard takes in the situation at once.

"And he has entirely forgotten me," laughs the gentleman; "and as he stays there, he evidently finds her kind. Happy fellow! I wish it had been my good fortune to stray into the conservatory two hours ago and find a flower to wear upon my heart forever more. Not a gay rose, nor a stiff white camellia, but that sweetest, truest, bravest, noblest of all the modest little blossoms which God has created—a Daisy!"

Mr. Howard waxes eloquent. He is oblivious of everything around him. He sees no one but the girl who has won his heart. He does not know that the hostess is approaching. She asks if Daisy will play another waltz—only one more—as her brother-in-law is waiting without to take her home. Daisy assents, and as she turns over the music Mr. Howard bends toward her eagerly.

"Daisy, I have only a few seconds to say what I wish, and I am in that frame of mind that I cannot stand another interruption without knowing my fate. You have been making



such volumes of love and tenderness at her? But he is there now; he leans upon the piano. He turns his head and sees a pair of brown eyes fixed mutely upon him.

"Am I dreaming?" he asks, staring in astonishment. "Is it really you, Daisy?"

"It is no one else, Mr. Howard. How came you here?"

He sits down beside her and takes her hand.

"Poor, tired little girl!" he says, sympathetically, looking full into her sad, pale face. "This has been a hard day for you, yet here you are wearing yourself out for others when you ought to be asleep. Poor child!"

"Don't pity me," says Daisy, with a large tear on each cheek. "It was too early when you and the girls left for me to go to bed. Did you have a pleasant time with Maude? Did you go in?"

"Not much!" answers Mr. Howard, more expressively than elegantly. "Don't you think you were very cruel to throw me into the clutches of that tigress as you did?"

"Why, Mr. Howard!" Daisy tries to look shocked, but laughs in spite of herself. The gentleman, however, is in earnest.

"Yes; no one but a tigress could have looked at you as she did to-day; and then to take me away from you when I had been longing for a little word, a little look, all to myself for hours; and then to leave without either. It was very hard, Daisy."

She blushes deliciously, and looks deep into her coffee cup.

"What else could I have done?" she murmurs. "There was no one to escort them but you."

Delighted as she is with his tender voice, his loving eyes, Daisy, like a modest girl, does not want matters to culminate just now; and she adroitly turns the conversation by saying: "But you have not told me how you managed to come here."

"Well," responds her companion, with an impatient look at the young people that are drawing near the piano eager for another dance—"Well, I bade the young ladies good night at their door. I felt very like returning

so many happy this day, and one word from you will make me either the happiest or most miserable of men. If it is no, say good-bye now. If it is yes, may I tell Mr. Clarke that I will see you home?"

She turns her beaming face toward him. He reads the answer in her soft eyes, her smiling lips. Once more her fingers fly ecstatically over the keys. The dance goes on. A tall form stands beside her. Looks of love fall upon her bright head, and two hearts beat as one.

SOUND.—The following curious observations of sound have been carefully verified by an extended series of experiments: The whistle of a locomotive is heard 3,300 yards; the noise of a railroad train, 2,800; the report of a musket and the bark of a dog, 1,800; an orchestra or the roll of a drum, 1,600; the human voice reaches to a distance of 1,000; the croaking of frogs, 900; the chirping of crickets, 800. Distinct speaking is heard in the air from below up to a distance of 600 yards; from above, it is only understood to a range of 100 yards downwards. It has been ascertained that an echo is well reflected from the surface of smooth water only when the voice comes from an elevation. Other similar phenomena connected with the transmission of sound have been observed, but the results disagree, either from inaccuracy in the observations or from the varying nature of the circumstances affecting the numbers obtained. Such variations occur to an extent of 10% to 20%, and even more. The weather being cold and dry, or warm and wet, are the chief influencing causes. In the first place the sound goes to a greater, and in the second to a lesser, distance.

WOOD FOR SMALL THINGS.—A Maine paper states that poplar, spruce, elm, and all good fiber woods are now assuming much importance from the uses to which they may be put in manufactures. The increasing demand for thread, spools, excelsior, clothes pine, and many other wood manufactures, gives increasing interest to our forests.

Thanksgiving.

A Proclamation by the President of the United States.

In conformity with custom, the annual observance of which is justly held in honor by this people, I, Chester A. Arthur, President of the United States, do hereby set apart Thursday, the 30th day of November next, as a day of public Thanksgiving—for the blessings demanding our gratitude are numerous and varied—for the peace and amity which subsist between this Republic and all the nations of the world; for freedom from internal discord and violence; for the increasing friendship between the different sections of the land; for Liberty, Justice and Constitutional Government; for the devotion of the people to our free institutions, and their cheerful obedience to mild laws; for the constantly increasing strength of the Republic while extending its privileges to their fellow-men who come to us; for improved means of internal communication, and increased facilities of intercourse with other nations; for the general prevailing health of the year; for the prosperity of all our industries; for the liberal return for the mechanic's toil; for affording a market for the abundant harvests of the husbandmen; for the preservation of the national faith and credit; for a wise and generous provision to effect the intellectual and moral education of our youth; for the influence upon conscience of a restraining and transforming religion, and for the joys of home. For these and many other blessings we should give thanks.

Wherefore, I do recommend that the day above designated be observed throughout the country as a day of national thanksgiving and prayer, and that the people, ceasing from their daily labor, and meeting in accordance with their several forms of worship, draw near to the throne of Almighty God, and offer to Him praise and gratitude for the manifold good which He has vouchsafed to us, and praying that His blessings and mercies may continue.

And I do further recommend that the day thus appointed may be made a special occasion for the deeds of kindness and charity to the suffering and needy, so that all that dwell within the land may rejoice and be glad in this season of national thanksgiving.

In witness whereof I have hereunto set my hand and caused the seal of the United States to be affixed. Done at the City of Washington this 25th day of October, in the year of our Lord, 1882, and the 107th of the Independence of the United States.

CHESTER A. ARTHUR.

By the President, FRED'K. T. FARLINGHOVER, Secretary of State.

Thanksgiving Day.

STATE OF CALIFORNIA.

EXECUTIVE DEPARTMENT.

The observance of one day in the year as a day of thanksgiving, rest, and recreation, is now recognized as a national custom. It is the annual Sabbath of the American nation, on which occasion all men of all beliefs and creeds may congregate around the altar of their respective faiths and render grateful thanks to the Giver of all good for the blessings he has bestowed upon us as a people, for the rights which civil liberty has given us and for our unimpeded enjoyment of religious freedom.

In accordance with the proclamation of the President of the United States, and in full harmony with his sentiments therein expressed, I, George C. Perkins, Governor of California, by authority of the power vested in me, do hereby proclaim Thursday, the 30th day of November instant, as a day of public Thanksgiving, and I do further recommend that all secular business be on that day suspended. Let the day be marked in the annals of our lives as one set apart for devotion, as each of us may desire according to our conscientious opinions, in extending our assistance and sympathies to the poor and lonely in family reunions, in friendly greetings, in charitable deeds, so that all who dwell within the land may rejoice and be glad in the season of National Thanksgiving.

In testimony whereof, I have hereunto set my hand and caused the Great Seal of the State to be affixed, at Sacramento, this, the 9th day of November, A. D. 1882.

GEORGE C. PERKINS, Governor.
By the Governor: D. M. BURNS, Secretary of State.
God save the Commonwealth of California.

VELOCITY OF FALLING WATER.—The mean or average velocity of a flowing stream is found by scientific experiments to be from .81 to .83 of the maximum velocity, or that in the line of the current. At half depth of the stream the velocity is .914, and at the bottom .83 of that at the surface. The average depth of flowing water is found by setting off the breadth of the stream into any convenient number of divisions, ascertaining the depth of each and adding these depths together; their sum being then divided by the number of divisions of the stream, the quotient will be the average depth. The area of the stream is obtained by multiplying the mean depth by the breadth. To obtain the volume of flowing water, multiply the area of the stream by the velocity of the flow in feet; the product will be the volume in cubic feet. The velocity of water in a canal should be proportioned to the character of the bed. To prevent the deposit of slime and growth of grass a velocity of about eight inches per second is requisite, and the mean velocity over a slimy bed should not exceed this limit. Over common clay it should not be more than six inches per second; over sand or small gravel, one foot, and on shingle or stony bottom it may range from three to six feet per second.

THE FUTURE OF NIAGARA FALLS.—Prof. Tyndall gives some interesting views in regard to what he terms the "proximate future" of Niagara. At the rate of excavation assigned to it by Sir Charles Lyell—namely, a foot a year—Prof. Tyndall says that 5,000 years or so will carry the Horseshoe falls higher than Goat island, and, as the gorge recedes, it will drain, as it has hitherto done, the banks right and left of it, thus leaving a nearly level terrace between Goat island and the edge of the gorge; higher up it will totally drain the American branch of the river; the channel will become cultivable land. The American falls will then be ransformed into a dry precipice, forming a continuation of the cliff boundary of the river Niagara, and lastly, at the place at present occupied by the fall there will be a whirlpool.

WAKELEE'S

PATENT

AND

Squirrel



Gopher

TRADE MARK.

EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

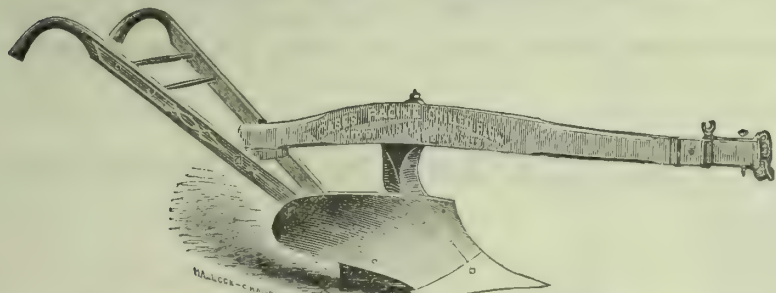
WAKELEE & CO., Chemists,

Occidental Hotel, S. F.

Grangers' Union of San Joaquin Valley,

Importers and Dealers in

AGRICULTURAL IMPLEMENTS.



GANG PLOWS, SULKY PLOWS, SINGLE OR WALKING PLOWS. THE BEST CHILLED PLOW IN USE.

Hollow Toothed Harrows, Cultivators, Barbed Wire, Bailing Wire.

Wagons! Wagons! Wagons! Buggies! Buggies!

Coal, Iron and Steel. Builders' Hardware.

Write or Call and see us before Purchasing. Address all Communications,

GRANGERS' UNION,
280 and 282 Main Street, STOCKTON.

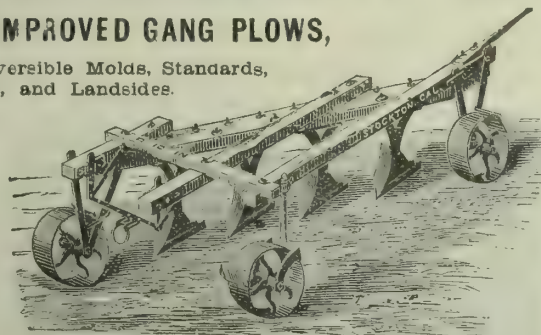
PRICES REDUCED!

JOHN CAINE,

Sole Proprietor of the

Globe Iron Foundry and Machine Shop.

STOCKTON IMPROVED GANG PLOWS,

With Extra Reversible Molds, Standards,
Wheels, and Landsides.Eastern and Home
MadeSulky &
Gang Plows.The Russell Manu-
facturing Co.'s Solid
Woven COT-
TON BELTING,
Black Coated.BEST BRANDS
BARBED WIRE.Agent for
STUDEBAKER
Farm, Freight and
Spring Wagons.
Made to my Order.GEM and CA-
HOONSEED
SOWERS.Salesroom and Ware-
house, northeast cor-
ner of Market and
El Dorado Streets,
Stockton, Cal. Ad-
dress, JOHN
CAINE, Globe Iron
Works, P. O. Box
No. 95, Stockton.

BYRON JACKSON,

Manufacturer of

AGRICULTURAL MACHINERY.

THE

Will last Long r

BEST
WOODEN
HARROW,

AND

DO BETTER WORK

Solid Steel

Than any Other

Wooden Harrow.

V-SHAPED
Teeth.

It is Undoubtedly

THE HARROW OF THE AGE!

THE V-TOOTH HARROW.

I believe the above to be the best Wooden Frame Harrow made. The Teeth are made of solid steel, V-shaped which form is found to give greater strength, last longer and cut better than any other. The frame is strong and well-braced, and they will do the work. Sent on Trial. Send for Circulars. Address,

BYRON JACKSON, 625 to 631 Sixth Street, San Francisco.
149 to 169 Bluxome Street,

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Recently removed from San Leandro, to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

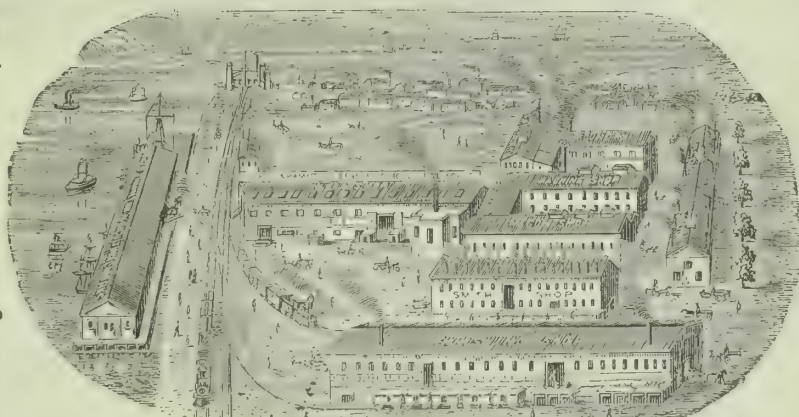
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Har-
rows, Cultivators, Seed Sowers, Hay Presses, Haying and Har-
vesting Machinery, Headers, Iron Farm and Freight
Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain
Cleaners, Barley Crushers, Eureka Ditching and
Grading Plows, Sweepstake Quartz Mills, Etc.

The Largest and Most Complete



Agricultural Works on the Coast.

THE BUILDINGS are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We have increased facilities for manufacturing not only Spring, Farm and Thoroughbrace Wagons, but all styles of Vehicles will be built to order, including Iron Gear Spring Wagons with the Celebrated Patent Iron Wheel; also, the Sweepstake Patent Iron Farm and Freight Wagon. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento, was awarded the first premium of one hundred dollars.

WE ALSO MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Gillis' Improved Horse Powers. Cultivators. Gem Seed Sowers. Hill's Improved Headers. Wood and Iron Harrows, etc.

Remember that Water-Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

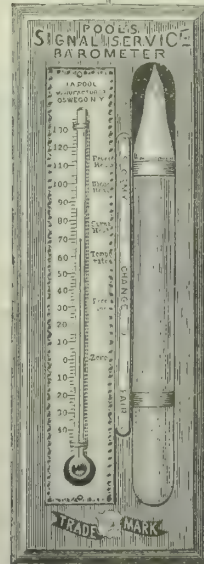
Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

WHAT WILL THE WEATHER BE TO-MORROW

Pool's Signal Service Barometer

OR STORM GLASS AND THERMOMETER COMBINED,

WILL TELL YOU!



It will detect and indicate correctly any change in the weather 12 to 48 hours in advance. It will tell what kind of storm is approaching, and from what direction—invaluable to navigators. Farmers can plan their work according to its predictions. Saves 50 times its cost in a single season. Has an accurate thermometer attached, which alone is worth the price of the combination. This great WEATHER INDICATOR is endorsed by the most eminent Physicians, Professors, and Scientific men of the day to be the BEST IN THE WORLD!

The Barometer and Thermometer are put in a nicely finished walnut frame, with silver-plated trimmings, etc., making it a beautiful as well as useful ornament. We will send you a sample one, delivered free, to your place, in record order, on receipt of \$1, or \$2 for \$1. Agents are making from \$5 to \$20 daily selling them. A trial will convince you. Order at once. It sells at SIGHT! Just the thing to sell to farmers, merchants, etc. Invaluable to every body. U. S. Postage Stamps taken in payment, but money preferred. Agents wanted everywhere. Send for Circular and terms. Address all orders to OSWEGO THERMOMETER WORKS, (Largest establishment of the kind in the world) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business house in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money-order, draft on New York or registered letter, at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as one that costs fifty dollars. You can rely on it every time. Capt. Chas. B. Rogers, Ship "Twilight," San Francisco.

Barometer received in good order, and must say that the instrument gives perfect satisfaction in every respect. It is nicely made and wonderfully cheap at two dollars. Geo. B. Parsons, M. C. R. R. Office, Detroit, Mich.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. It is a wonderful curiosity and works to perfection. E. J. Robinson, Milwaukee, Wis.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. POOL, on back of Instrument, as below:

Every instrument warranted Perfect and Reliable. Size 9 1/2 inches long, 3 1/2 wide. If not satisfied on receiving the instrument, return it at once and we will refund your money. Please state where you saw our advertisement.

GARDEN SEEDS.

THOS. MEHERIN,

Importer, Wholesale and Retail Dealer in

SEEDS, TREES AND PLANTS,

Alfalfa, Red and White Clover.

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass, Red Top, etc.

Also a large and choice collection of FRUIT and ORNAMENTAL TREES.

BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES.

Budding and Pruning Knives, Greenhouse Syringes, Hedge and Pole Shears.

Price List Ready Jan 1st.

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for R. D. Fox's Nursery.

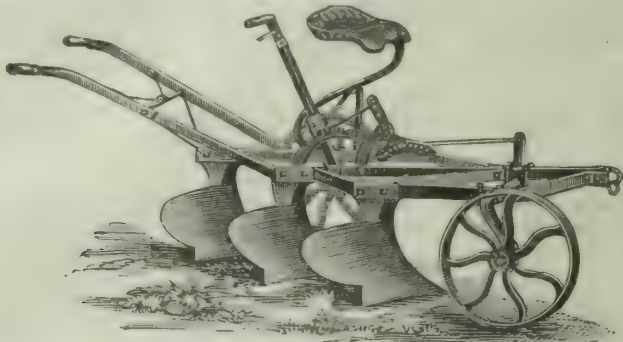
FLOWER SEEDS.

FRUIT TREES.

Ranchers, Farmers, Orchardists and Vineyardists, **ATTENTION!**

A New Era in Gang Plows, and Pacific Coast Plowing Completely Revolutionized!

2-Plow Sulky, Stockton and Orchard Plows Cast Aside.



THE "FARMERS' FRIEND" THREE-PLOW GANG.

This Plow, as will be seen by the cut, consists of three 9-inch Plows securely fastened to a wrought iron frame, and is easily adjusted by a lever to plow from three to nine inches deep.

We desire to call the attention of Agriculturalists to the main advantages of this Plow over all others.

1. Its Superior Work, the soil being thoroughly cut up and the furrows being turned completely over, effectually covering all trash and weeds.

2. Its Special Adaptability to Orchard and Vineyard Work. Being built low, it does not interfere with the branches overhead, and is easily handled around trees and vines.

3. Its Superior Sidehill Plow. Being without a pole, the Plow is enabled to follow the team; and for Sidehill Plowing we warrant it unequalled by any Plow, single or gang.

4. Its Economy in the saving of time and horse flesh. This Gang is exceedingly light of draft, in common soil three horses plowing five acres a day. The "FARMERS' FRIEND" will more than pay for itself in a single season.

5. Its Great Seasonal and Yearly Economy. These gangs will turn two to four inches deep, plow Corn, Wheat or Oats stubble from two to eight inches deep; and in working Summer Fallow once over are more effective in killing weeds and preparing the ground for seed than three times over with the best cultivator in the market.

Our success in the introduction of this Plow is unparalleled in the Plow business, and is far surpassing our most sanguine expectations. We are receiving daily letters in praise of the "Farmers' Friend" from all parts of the State, and upon application we will mail the names of Farmers who are using these Plows, and by writing direct to them, reliable information can be obtained.

In conclusion, we would say that we will ship one of these Plows on trial, and will give the following guaranty with it: That the "FARMERS' FRIEND" GANG PLOW will do better work, and more of it, with less horse flesh, than any Plow on the Pacific Coast.

PRICES:

With Steel Shares.....	\$80
With Chilled Iron Shares.....	75
With Seat (Extra).....	5

For Further Information Write us or Call at our Store.

GEORGE BULL & CO.,

Sole Agents for the Pacific Coast,

31 Market St., - SAN FRANCISCO.

Send for our Illustrated Catalogue of Agricultural Implements.

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50 to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Crabbe, C. Grozinger, T. L. Grigby, D. Emerson, M. M. Estee, Prof. Huesman, Berringer Bros., and others, Napa county. I. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dresel, James Shaw and others, Sonoma county. B. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wykoff, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

P. K. STOCKTON,

St. Helena, Napa County.

CALIFORNIA.

W. R. ALLEN & CO.,

IMPORTERS OF

Iron Pipe and Fittings,

Lift and Force Pumps,

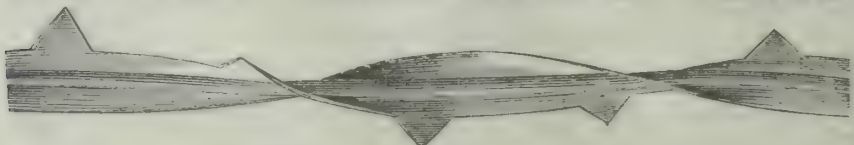
Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.

Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

MYER'S IMPROVED GANG PLOW.

The only Plow that ever Received the \$100 PREMIUM at the State Fair.

Simplest and Most Effective Plow in the World!

The Lifting Gear and Land Gauge need only be seen to be appreciated.

The Adjustable Spindles and Boxes are a new feature, and when worn can be replaced without purchasing new wheels or arms.

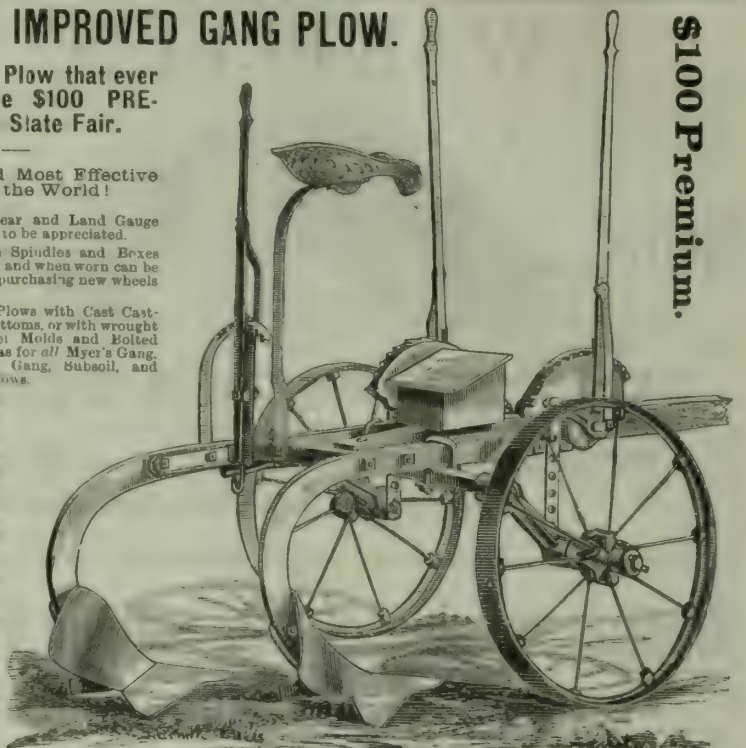
We have these Plows with Cast Cast-Steel Siphon Bottoms, or with wrought extra heavy Steel Molds and Bolted shares; also Extras for all Myer's Gang, Single, Sidehill, Gang, Subsoil, and Vineyard Gang Plows.

We will have, in time for summer fallowing, Myer's Gangs with the Celebrated Collins Cast Cast-Steel and Bolted Shares, with extra high Mouldboard for Deep Plowing.

In ordering Extras be sure to give number of Plow.

AGENTS SOUGHT AND LIBERAL TERMS GIVEN.

Fifth Street Carriage Works every five minutes.



\$100 Premium.

RICE'S ENGINE, BOILER AND PLOW WORKS,

Manufacturer and Sole Agent, Nos. 52, 54, 56, 58 & 60 Bluxome St., Bet. Fifth & Sixth, near U. P. R. Depot.

SOMETHING NEW,



DORR'S IMPROVED GANG PLOW.

Over 700 Sold Last Season.

Adjustable Draft Bar and Lifting Device. Superior in Strength, Durability and Lightness of Draft. Address,

WM. A. DORR, Agent,

o. 203 El Dorado Street,

Stockton, Cal.

SPERRY & CO.

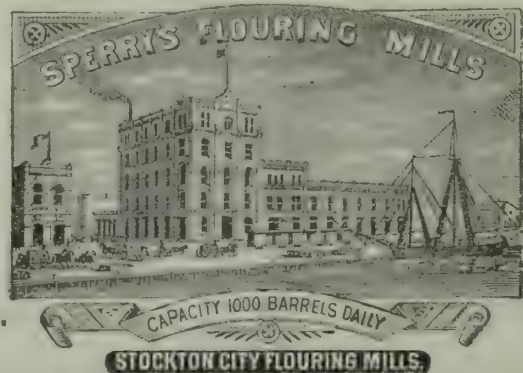
MILLERS,

Stockton,

Manufacturers of

New Process

Roller Flour.



San Francisco

Office,

22 California St.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and all others who have used it.

INFALLIBLE SQUIRREL AND GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store, San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS.



Habits of the Hair.

A prematurely bald physician in Thirty-fifth street was asked a number of questions about the growth and habits of the hair.

"In the first place," he said, "do you know what hair is, anyway?"

"Only in a general way, perhaps."

"Then let me tell you in a word. It is an elongated epidermic appendage. Its essential structure consists of an assemblage of epidermic cells, at the bottom of a flask, shaped foliate, in the substance of the skin, supplied with blood by vessels distributed to its walls."

"Can hair be made to grow on a bald head?"

"Not as a rule. In debilitated persons the hairs sometimes fall out spontaneously, or with slight assistance, and if the bulb alone comes away, and the sheath and germ remain behind, they are capable of reproducing the hair, under proper treatment or favorable circumstances. The short and pointed hairs on the scalp of old people show that new shafts are constantly forming. The nutrition of hair is affected through vessels which are in contact with their tissue, without entering into their structure, so that causes affecting the general health, or affecting the health of the skin, also affect the nutrition of the hair."

"What causes premature baldness?"

"In a great measure the violation of hygienic rules, and the excess of mental and physical labor in a climate foreign to the race."

"Is there a greater disposition to gray-headedness in this country than in others?"

"Well, some well informed people think that it is about the same in all civilized countries; but, if there is any difference, it is because of the hurried and unhealthful habits of life and mental exercise among Americans."

"What is the chemical action which produces gray hair?"

"Accurately speaking, that's one of those things that no fellow can find out. The color of the hair depends partly on the presence of pigment granules, and partly on the existence of air spaces, which cause it to appear dark by transmitted light. In Albinos and gray-haired people this coloring matter is simply absent."

"Is it the case that hair may, from extreme fright or other strong emotions, turn white, as it is said, in a single night?"

"It is an undoubted fact. Just how the change takes place is a matter of conjecture. But it may perhaps be explained by some chemical action upon the oily coloring matter. This oily matter would be withdrawn from the hair under conditions of cold, debility, or insufficient food."

"Does gray hair then become dead?"

"Not by any means. The loss of vitality does not necessarily follow the loss of color, for gray hair often grows vigorously. For that matter hair will grow after the body's death. One of the causes of premature baldness and grayness is tightly fitting and unyielding hats."

"Are any of the thousand and one preparations for restoring the hair of any value?"

"Tonics and stimulating applications are sometimes beneficial. When the hair is thin and falls out easily shaving the scalp will often produce a thicker, firmer and darker growth.—*N. Y. Sun.*"

BUHACH.—Buhach is the name of an insect powder, obtained by grinding the blossoms of the plant known as *Pyrethrum Cimeraria Folium*, and has obtained a wide sale. It has, until within a few years, been obtained from foreign countries, but now it is grown and manufactured in this State. Mr. G. N. Milco, of Stockton, introduced the plant, and is largely engaged in growing and converting it into powder. The powder has, until recently, been used altogether for house insects, but of late experiments have been made upon fruit pests, which show that it is a valuable remedy. Mr. Milco made some statements before the Horticultural Convention this week in relation to the plant and powder. He advised fruit growers to experiment with the plant themselves. And right here it may not be amiss to say that any statements that may have been made to the effect that Mr. Milco was introducing a patent remedy are entirely without foundation. He is growing the plant, and manufacturing the powder as a business proposition, and advises anyone having a suitable soil to go into it as a money-making business. He has such confidence in its value as an insecticide that he does not believe enough can be grown to overstock the market. Mr. Milco claims that as an insect exterminator it is far cheaper than lye or whale oil soap.—*San Jose Herald.*

GLASS NAPKINS.—Spun-glass napkins are a recent addition to the supplies of luxuries, which people who indulge a taste for oddities will probably not consider too high-priced at \$100 a dozen. One on exhibition in St. Louis is pearl shade, the size of an ordinary breakfast napkin, and almost as pliable as silk. The falling consists of minute glass threads, crossed by a silk chain, and the fringe of glass fiber is about two inches long.

PASADENA NURSERIES.—Byron O. Clark & Co. have in this issue an advertisement of their nurseries at Pasadena to which we call the attention of those needing trees. The stock is represented by our correspondent to be very good.

Woolsey's Cheese Vat and Steam Generator.

John S. Woolsey's improved cheese vat, shown in the engraving, has been constructed with a view of equalizing the temperature in every part thereof. This is accomplished by providing a space between the tin which contains the milk and the wood or outer covering which is designed to hold water. Within this space, running almost the entire length on the bottom of the vat, is a half-inch pipe with short pieces projecting from either side at regular intervals, so curved as to send a current of steam or hot water completely around the vat, thus heating

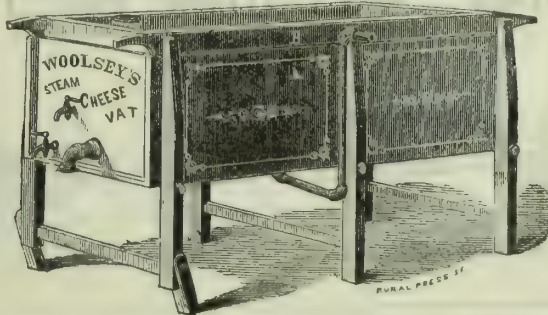


NEW HARROW, INVENTED BY D. C. MATTESON, STOCKTON.

the milk so evenly that a thermometer will register the same degree of heat immersed in any part of the vat. Connection is made with the improved generator, which is also one of Mr. Woolsey's inventions, by a T in the center of the distributing pipe leading out through the bottom of the vat. A steam valve in the supply pipe regulates the amount of steam admitted.

One of the points in favor of this device consists in its being separate from the heater, thereby avoiding all artificial heat in the cheese-room. These vats are made in sizes from 75 to

for stock, heat water for the bath-room or kitchen, or to scald hogs, cleanse the dairy buildings or implements, or for any other purpose, the steam being conveyed through pipes or garden hose, with the necessary connections. This generator is exclusively used about Gilroy, where it is best known, and they use it at the Santa Clara factory, where it is a success. At Los Angeles it is used by Mr. J. J. Harshman exclusively, and it will be remembered by the readers of the RURAL that last spring it was stated that he had obtained the best results in the State. Some of the dairymen did not believe the reports. This generator, and the improved cheese vat which it is designed to operate, is well liked where used. Mr. Woolsey has recently sold out his machine works at Gilroy, and will now confine his attention exclusively



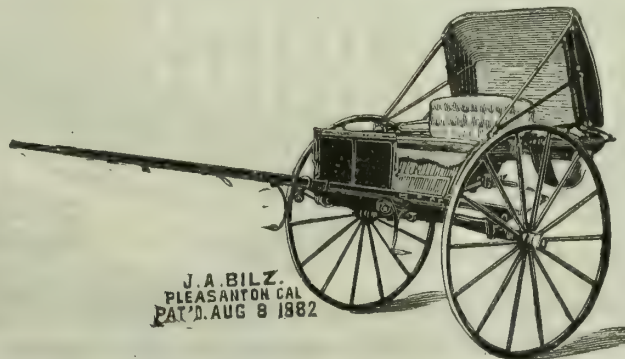
STEAM CHEESE VAT, INVENTED BY J. S. WOOLSEY, GILROY, CAL.

600 gallons, and cost from \$35 to \$150. Several premiums have been received for it at the State fairs.

The steam generator to which we have referred above was fully described in the RURAL of April 15, 1882. All the requirements of a first-class and economical steam boiler are met in the construction of this machine, though it is made especially for the use of dairymen. There is no rivet work, the boiler being constructed of short pieces of wrought iron pipe, with one end inserted into a cylinder eight inches in diameter, the other inclosed by a cap, as shown in

ment, and gives a hint of its arrangements, which can be learned more fully by the following description:

In this harrow the beams in which the teeth are to be fixed are of two pieces of iron, bent into the form C. These angle irons are placed with their open sides towards each other and bolts passed through them, to clamp them together. These angle bars have the upper and lower edges, which face each other, notched so that the opposite corners of the teeth will rest in the upper and lower notches, and will thus



J. A. BILZ, PLEASANTON, CAL. PAT'D. AUG 8 1882

THE EXCELSIOR PHAETON, MADE BY J. BILZ, PLEASANTON, CAL.

the cut. This construction gives the greatest possible fire surface, and makes it absolutely safe, because the effect of expansion and contraction is borne by each piece of pipe independently, and whatever water the boiler contains is always nearest the fire. These pieces of pipe can be replaced by anyone having a pipe wrench, thus obviating the necessity of sending the boiler to the machine shop for repairs. Economy in fuel is obtained by the great fire surface and small fire grate, which is only 10 inches in diameter in the larger size generator, requiring only a small amount of fuel to keep it covered, and thereby prevent the cold air from coming in contact with the boiler. One hundred and ten pounds of steam have been raised in 23 minutes, from cold water, using only one stick of four-foot redwood about six inches square. But two sizes have thus far been made, either of which will run a small engine, the larger one having a capacity equal to four-horse power, the price of which is \$225, and the smaller one \$100. The absolute safety and economical working of this machine makes it available in a wide range of work.

This device is useful in more ways than one on the farm. It will run an engine to pump water or saw wood, furnish steam to cook feed

be held firmly in place, when the nuts are drawn tight. When the teeth are fixed in place there will be a long narrow slot between the two angle bars, and bolts pass up through this slot and through the transverse beams which form the harrow, thus holding them firmly together. Angular teeth of any size may be inserted and held with equal firmness, by separating the bars or drawing them towards each other to suit the size of the teeth used. This is one great advantage of the harrow. Whenever a tooth is to be removed it may be done by simply loosening the nuts on the bolt, when it will slip out easily. Thus, if the farmer wishes to use a half-inch, three quarter inch, or a tooth an inch square or larger, he only has to slack the nuts on the equalizing bolts and open the bars, and he can put in any sized tooth he chooses. The harrow is prepared in sections, can be built to any size ordered. The advantages of this construction are clear, and are attracting much attention. A though but recently invented, sales have been large; as we are informed, 50 were taken the first month of its manufacture. The inventor is D. C. Matteson, of the old and well-known firm of Matteson & Williamson, Stockton, who will proceed to manufacture the harrow as rapidly as possible.

Report of the Arid Lands Commission.

We have received an early copy of the report of the "Arid Lands Commission," popularly so called, but more particularly a "report on the climatic and agricultural features and the agricultural practice and needs of the arid regions of the Pacific slope, with notes on Arizona and New Mexico, made, under the direction of the Commissioner of Agriculture, by E. W. Hilgard, T. C. Jones and R. W. Furnas."

This document has been long awaited, and we are pleased to find that it contains much which it will be to the advantage of the State to have generally known at the East. Ex-Governor Furnas and Judge T. C. Jones are gentlemen well known at the East, and their comments upon what they saw here will be received and believed when the *ex parte* statements of a Californian would be questioned. We find in the observations of the Eastern members of the Commission many remarks which show them to be close observers and fair judges, and we expect to transfer to our columns, from time to time, parts of their reports. In this issue we give Judge Jones' report upon California horses.

The Chairman of the Commission, Prof. Hilgard, contributes to the report many pages of excellent information upon California climates, soils and special industries, and it cannot be doubted that California will be much better understood at the East when the document is generally circulated. In the printing of the report by the Government printers there have been grievous omissions occurred in not crediting each member of the Commission with his individual work. Prof. Hilgard calls our attention to the following list of errata regarding authorship, which are serious: Page 92. All the matter from the heading "Sugar Cane and Sorghum" to the heading on page 98 should be credited to E. W. Hilgard. Page 98. All from heading "Horticulture and Viticulture" to page 107 inclusive should be credited to R. W. Furnas. Page 125. All from end of paragraph headed "Small Fruits" (being the discussion of citrus fruits) to heading on page 128 should be credited to E. W. Hilgard. All from that heading to page 137 to R. W. Furnas. Pages 152 and 153 ("Insect Pests") should be credited to R. W. Furnas.

We presume that copies of this report can be had on application to the Commissioner of Agriculture, at Washington, or to the Congressional representatives in each district.

Excelsior Phaeton.

We give on this page an engraving of the Excelsior two-wheel phaeton, manufactured by J. A. Bilz, of Pleasanton, Alameda county, whose advertisement may be found in another column. The Excelsior phaeton is coming into wide use, and is spoken well of by the many who ride in it. Mr. Bilz's advertisement gives information concerning the vehicle.

DETERMINING THE COLOR OF WATER.—There has been some difference of opinion as to the color of perfectly pure water, and a German journal says that Victor Meyer has been investigating the matter. He finds that the color is neither blue nor green, but a shade between the two. To demonstrate this he takes five glass tubes, 40mm. in diameter, and about 1½ meters in length. These are connected by means of rubber tubing, forming a tube 7½ meters long. Both ends of this tube are closed with glass plates fitted in metal sockets. The latter are furnished with brass nozzles for filling the tube. The tube itself is placed in an exactly horizontal position and covered with a black cloth. Upon looking through the empty tube the field of vision appears perfectly colorless, the cloth and the metal sockets preventing the color of the glass from exerting any influence. As soon, however, as the tube is filled with distilled water, an intense bluish-green color is observed.

IMPROVED MORTAR.—Sawdust is said by some one to be better than hair in protecting rough-cast from peeling and scaling under the influence of frost and weather. The sawdust should be first dried, and then thoroughly sifted, in order to remove the coarser particles. A mixture is then made of two parts sawdust, five parts sharp sand and one part cement, which should be thoroughly stirred together and then incorporated with two parts of lime.

LIGHT AND DARK GOLD.—To produce light and dark shades of gold leaf the metal is alloyed with silver and copper. The addition of the baser metals lessens the malleability, and as the leaf is sold by superficial measure, and not by weight, adulteration is kept at the minimum.

THE annual report of the Secretary of the Treasury shows the receipts of the Government, exclusive of the public debt, during the fiscal year ending June 30th, to be \$403,525,250, and the expenditures, exclusive of redemption of public debt, \$257,981,439.

VALUE OF THE BELL TELEPHONE PATENT.—The Bell patent would, it is considered by those competent to form an opinion, be cheap at \$10,000,000. The consolidated telephone interests of the United States are estimated at from \$100,000,000 to \$150,000,000.

Lands for Sale and to Let.

Fruit and Homestead Lands
FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Elmira.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasture, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

Educational.

STOCKTON
BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address: P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address: E. C. Atkinson, Sacramento, Cal.

CALIFORNIA
COMMERCIAL COLLEGE

417 Kearny Street, San Francisco.
C. N. ANDREWS, President. G. B. BARNARD, Business Manager.

Send for Circulars

DO Not Fail to send for our FALL Price-List for 1882. Free to any address upon application. Contains descriptions of everything

required for Personal or Family use, with over 2,200 illustrations. We sell all goods at wholesale prices, in quantities to suit the purchaser. The only institution in America who make this their special business. Address
MONTGOMERY WARD & CO.,
227 and 229 Wabash Avenue, Chicago, Ill.

BOONE & MILLER,
Attorneys & Counsellors-at-Law

Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$6 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens Heavy Kip Boots, \$5; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

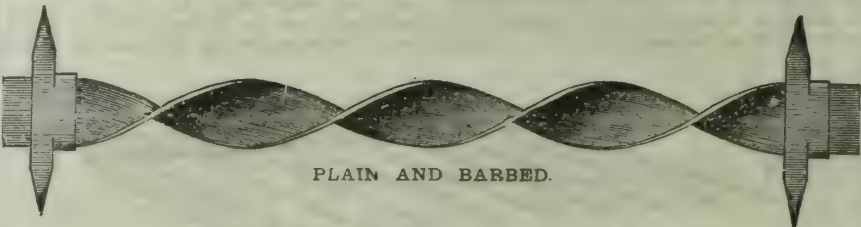
SACRAMENTO.

SAN FRANCISCO.

HUNTINGTON, HOPKINS & CO.,
Hardware, Iron and Steel.

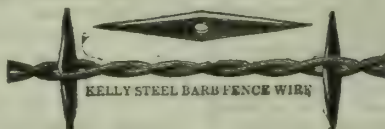
AGENTS FOR

BRINKERHOFF GALVANIZED FENCING,



PLAIN AND BARBED.

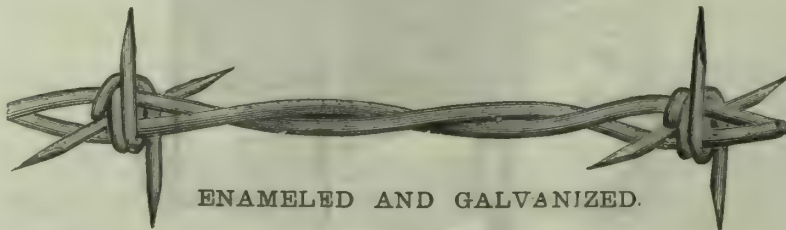
"KELLY" BARB WIRE.



KELLY STEEL BARB FENCE WIRE

ENAMELED AND GALVANIZED.

"Red Star," 4-Pointed, Barb Wire,



ENAMELED AND GALVANIZED.

Illustrated Catalogue. Photograph and Lecture. 10c. Automatic Cabinet. Play any Tune.

MAGIC LANTERNS AND VIEWS ORGANS ONLY \$5.

Magic Lanterns and Slides WANTED. Musical Wonder Catalogue FREE.
HARBACH ORGANINA CO., 809 FILBERT STREET, PHILADELPHIA, PA.

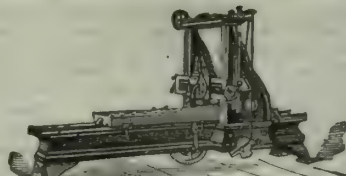
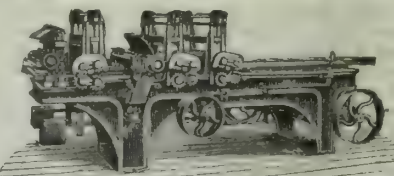
PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street,

San Francisco, Cal

Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers, STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

CUT THIS OUT!

Country hotel and boarding house keepers and farmers can save 25 per cent. by purchasing their Groceries from CLUFF BROS., 40 and 42 Second Street and 9 and 11 Montgomery Avenue. Make out a list of all the Groceries and Provisions you may want and forward it to us; we will put prices to same and mail it back for your approval. All goods guaranteed and shipped on boats or cars free of charge.

ADDRESS

CLUFF BROS.,

Wholesale Grocers,

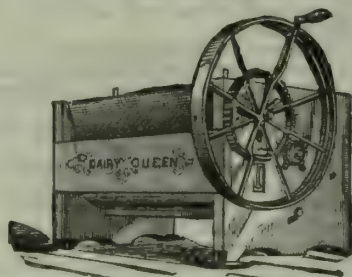
40 and 42 Second Street,

San Francisco.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.
RECEIVED TWO DIPLOMAS.



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Jamestown, Cal.,

Or Jas. L. Haley, Jamestown, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with THREE and FOUR complete, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co., 163 Tremont Street, Boston, Mass.**

D. C. MOORE, M. D.,

MRS. E. D. MOORE, M. D.,

OF THE

Trull Hygienic Medical and Surgical Sanitarium

Have returned from a tour in the States and resumed Chronic case and general family practice, including obstructions at 1029 Market St. Cancer, Consumption, Bright's Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion and all Chronic and desperate cases a specialty.

YOUR NAME On 50 large size CARDS. Rememberance, Sentiment, Handkerchief, &c. No 2 white, 10c, 14 pks. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and reduced Prices List. 20 fine Gift Bevel Edge Cards, (turned corner), 10c. Your Name in this lettering Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

REISTER'S
PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,

Chico, Butte County, CALIFORNIA

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT HOUSEHOLD SEWING MACHINE. GEN'L AGENCY, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.

Queen OF THE South
PORTABLE
FARM MILLS

For Stock Feed or Meal for Family use.

10,000 IN USE.

Write for Pamphlet.

Simpson & Gault Mfg Co.

Successors to STRAUB MILL CO.

CINCINNATI, O.

THE DAVIS

IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific.

P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE. Circulars furnished on application.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Willard Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKLEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham cattle, and Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Ducks for sale.

TOULOUSE GESE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal., breeder and importer of all kinds of thoroughbred poultry.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

LADIES Why pay such enormous prices for Sewing Machines when you can buy all good for half the money from me. All machines guaranteed as represented. Enclose stamp for circulars. H. P. ANDREW, Wholesale Dealer, 1036 Howard street, San Francisco, Cal. Agents wanted.

JERSEY BULL FOR SALE.

A thoroughbred. Year and half old. Ready for service. Good color. Well broke to lead. Took a prize at San Mateo and Santa Clara Agricultural Fair this year. Enquire of

J. T. HOYT, San Mateo, Cal.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

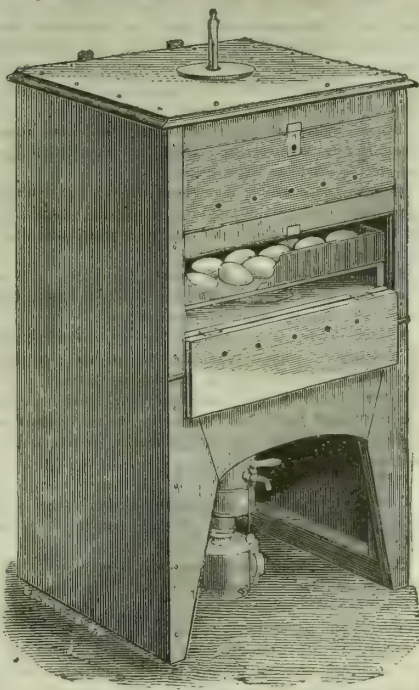
Baden Station - - San Mateo Co.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

GEORGE B. BAYLEY, Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to

GEO. B. BAYLEY,

Box 1771, San Francisco.

NAPA VALLEY POULTRY YARDS.



I have for sale all the leading varieties of Pure-bred Poultry: Single Birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn chickens, and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list.

R. G. BEAD,

Napa, Cal.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

LANGSHANS.



My Langshans are genuine Major A. C. Croad's strain. A fine lot of these beautiful and valuable chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR,

1416 Folsom St., S. F.

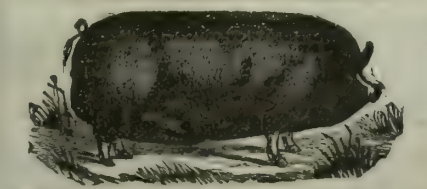
BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.



We have for sale at our farm at Mountain View thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pigs from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, I. J. Truman, S. F.

HOG RINGING A FAILURE!
OUR TENDON CUTTER
A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.

"Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address

G. G. WICKSON,

General Pacific Coast Agent,

No. 319 Market Street, San Francisco, Cal.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. B. Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,

Los Angeles, Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government. Cures thoroughly the SCAB OF THE SHEEP.

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to CHAS. DUISENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco.



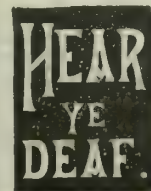
LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



Artificial Garmore's Ear Drum. As invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without and Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured.

JOHN GARMORE,

Fifth & Race Sts., Cincinnati, O.

AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy, but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As fanciers, Amateurs and others are ready to use a good, reliable, self-regulating incubator, that can be procured cheap, we now offer one that holds 150 eggs. The baby Price, \$28. Send for Circular.

J. P. CLARK,

Sole Agent for the Pacific Coast.

JOHN ELLIS,

Landscape Engineer and Garden Architect, Practical Nurseryman and General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERVILLE.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....Sacramento Co
THOS. MCCONNELL.....Merced Co
C. J. CRESSEY.....Napa Co
SENECA EWER.....Colusa Co
A. D. LOGAN.....

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received.

CERTIFICATES of DEPOSIT issued payable on demand.

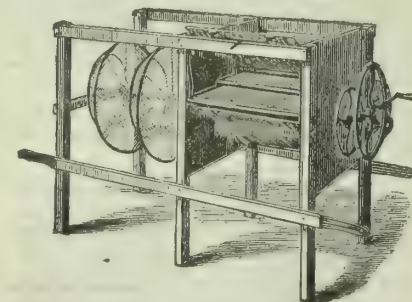
TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTPELLIER
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"
GRAIN CLEANER.

Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire-arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

Mission Rock Dock and Grain Warehouse,

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

OHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—318 California Street, Room 2.

To Fish Raisers.

I am now ready to sell Oarp which were imported by me from Germany in 1872, in lots to suit address
J. A. POPPE, Sonoma, Cal.

News in Brief.

ADMIRAL SEYMOUR and General Wolseley have been gazetted peers.

The past year's vintage in southern California has been the best for 12 years.

DURING October 57,689 passengers arrived in the United States from abroad.

A YOUNG lady has been elected Superintendent of Public Schools in Mono county.

THE six Chinese companies of San Francisco have combined for charitable purposes.

WILLIAM CUNNINGHAM jumped into a blast-furnace at the Birmingham, Ala., rolling mills Saturday.

A STATUTE of 1784, in relation to the observance of Sunday, has been revived in Connecticut and enforced.

SMITH, who was inspired to "remove" his 14-year-old son, was arraigned at Los Angeles, and pleaded not guilty.

CALIFORNIA lions and grizzlies are plentiful near Bear valley, Mariposa county, and have killed considerable stock.

THE British Government has expended \$120,000 for the destruction of locust eggs in the island of Cyprus the present year.

IT is denied at the Chinese Legation in Washington that the Chinese Minister and suite are to be withdrawn from the United States.

JUDGE ADVOCATE GENERAL SWAIN decides that the failure of army officers to satisfy any indebtedness fairly contracted would not be a violation of the 61st Article of War.

THE Northern Pacific Express Company will soon begin operations on the railway and steamboat lines in Oregon, Washington, Idaho and Montana, supplanting Wells, Fargo & Co.

THE Secretary of the Navy has issued a circular inviting the presentation to the Department by any skillful person of plans, models and designs for the new steam cruising vessels for the navy.

THE Ottawa correspondent of the Montreal Gazette asserts that a large number of artisans and others are coming into Canada from the United States, bringing their families with them, for the purpose of settling.

IN an Oregon city retail liquor licenses have been increased from \$200 to \$1,000 per year. The movement is not a strictly temperance one, but is in ended to work the suppression of a low class of saloons where the vilest liquors are sold.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

A COMPANY of settlers, in naming their new town, called it Dictionary, because, as they said, "that's the only place where peace, prosperity and happiness are always found."

LOS ANGELES NURSERY.—Attention is called to the well-known nursery of O. W. Childs, Los Angeles, Thos. A. Garey, Agent.

Less Tendency to Take Cold.

As a protection from cold, Compound Oxygen is very efficacious. A patient writes: "I have not had a cold this winter, which is perfectly wonderful for me." Another says: "No return of hemorrhage, hoarseness gradually wearing off, less tendency to take cold, and when I do take cold, it is more easily controlled under the use of Oxygen." Another: "I feel that it has been a great benefit to me, increasing my appetite and preventing me from taking cold." Our Treatise on Compound Oxygen, its nature, action, and results, with reports of cases and full information, sent free. LRS. STARKY & PALLEN, 1109 and 1111 Girard St., Philadelphia, Pa.

All orders for the Compound Oxygen Home Treatment directed to H. E. Matthews, 606 Montgomery street, San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

They Bring Good Prices.

J. S. Cooper, a prominent horse dealer of Chicago, said in reference to one-half and three-quarter blood Percheron-Norman horses: "They are the finest looking, most attractive Gray being the prevailing color of the French horses, and that being the most fashionable color, it enhances the price. I would advise the farmers to breed their mares to Normans in preference to any other breed, and to breed lots of them, as the demand is far ahead of the supply."—Chicago Tribune. M. W. Dunham, Wayne, Ill., has imported from France and bred nearly 1,000 of this breed in their purity, and now has nearly 400 on hand.

Redlands Water Meeting.

The annual meeting of the Redlands Water Co. will be held at the office of the company, Redlands, on Tuesday, November 28, 1882, at 11 A. M., for the election of a Board of Directors. A full representation of the stockholders, either in person or by proxy, is desired.

Redlands, Nov. 14th. F. P. MORRISON, Secretary.

Agricultural Implements.

The enterprising firm of George Bull & Co., 31 Market St., have just received a car-load of the Farmer's Friend Gang Plows, 50 of which were sold to arrive. The demand for this gang since the season opened has been very large, extending to all parts of the Pacific Coast and wherever they were used last year. Messrs. Elwood Cooper and Col. W. W. Hollister, prominent orchardists and farmers, testify to their merits and are using them with satisfaction.

We call the attention of our readers to the advertisement of "POOL'S SIGNAL SERVICE BAROMETER," in another column. It combines with an excellent Thermometer a Storm Glass or Weather Indicator, of surprising accuracy, rendering it an article of great value to the farmer, and to all others who feel an interest in the important question, "What will the weather be to-morrow?"

SAMPLE COPIES—Occasionally we send copies of this paper to persons who we believe would be benefited by subscribing for it, or willing to assist us in extending its circulation. We call the attention of such to our prospectus, terms of subscription, etc., and request that they circulate the copy sent.

A CORN SHELLER can be obtained for \$5 of Wiest & Co., S. F.

THE VACAVILLE LAND SALE.—The sale of fruit land near Vacaville by the Pacific Land Bureau of Easton & Eldridge, on Wednesday, November 15th, was quite a success, and much credit is accorded the firm for the manner in which the property was offered to the public. There were about 600 acres in small lots of from 10 to 50 acres. The land belonged to the estate of Lewis Pierce, and the soil is of a deep alluvial kind, suitable for fruit growing, but heretofore used for grain. It was divided into 32 blocks, and there were many would-be purchasers present who could not have purchased large tracts. Twelve men from different parts of the State purchased the property at prices ranging from \$85 to \$150 per acre, the total sum being above \$84,000. Ere long what was once a large wheat field will be the homes and orchards of a score of farmers and their families.

THE TELEPHONE IN THE FIFTEENTH CENTURY.—Leonardo da Vinci makes the following statement: When one is upon a lake, if he puts the opening of a trumpet into the water and holds the point of the tube to his ear he can perceive whether ships are moving at a remote distance. The same thing occurs if he thrusts the tube into the ground. Then also he will hear what is going on at a distance.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 22, 1882.

There has been a little fluctuation in the leading cereals. Wheat has proceeded in the way marked out last week, and being now strong at a 2½c advance on all grades. Barley, on the other hand, has an easier feeling. Produce generally is quiet. The latest from abroad on Wheat is the following:

The Foreign Review.

LIVERPOOL, Nov. 22.—Wheat—California spot lots are dull at 9½c 3d. Cargo lots, 44s for just shipped, 44s for nearly due, and 44s 6d for off coast.

LONDON, Nov. 22.—The Mark Lane Express, in its review of the British Grain trade for the past week, says: The weather during the week has allowed some wheat sowing, but the arrears of this week are not materially reduced. There has been a large, irregular supply of native wheat, and prices for good samples were occasionally higher; foreign, unchanged in price. The demand was scarcely so good, and business was restricted by the firmness of sellers. Business in cargoes off coast is virtually at a standstill. There have been four arrivals and two sales. The market for cargoes on passage or for shipment closed firm, but quiet. Red Winter and California are 3d to 6d. Better flour was supplied freely, but the demand was inactive and prices are unchanged; foreign was dull, with a laboring sale. Barley was unchanged; foreign was steady, with a hardening tendency. Oats were dear, and there was a fair trade in foreign, at unchanged rates. Malts was in small supply, with a retail sale at fancy prices. Sales of English wheat during the past week were 48,986 quarters, at 46s 1d, against 41,911 quarters, at 45s 4d, during the corresponding period last year.

The Hop Trade.

The New York Journal of Commerce of November 13th says of the Hop Market: After a brief period of rest the market is once more lively and rapidly advancing, and the quotations again have to be marked up. The reports from the other side are even more encouraging to higher prices, while the country markets are also on the move to still higher figures, as the result of more anxiety to buy. Here quotations are: Choice new State \$1.00 @ \$1.15; lb; medium do, \$1.00 @ \$1.05; Eastern, new 95c @ \$1.15; yearlings, 95c @ \$1.15.

W. H. & H. LeMay, Hop factors, London, report as follows concerning the condition of the British Hop market under date of October 25th: The demand for all descriptions of Hops is far in excess of the supply. All are now out of farmers' hands, and the few that are left in merchants' stock are advancing rapidly in value. The Continent cannot supply the demand from England, although orders have been attempted to be placed there irrespective of price.

In their extra supplementary report, dated October 25th, 5 o'clock P. M., they say the market finished this afternoon in a most excited state. All Hops offered have been secured by a few houses, and £40 ½ cwt was reached for one very choice parcel of Kent.

Eastern Grain and Provision Markets.

NEW YORK, Nov. 21.—Wheat dull; \$1.03, cash; \$1.07 ½, November; \$1.08 ½, December; \$1.10 ½, January; \$1.12 February. Hides, 24 @ 24 ½. Wool, spring, fine, 24 @ 32 ½; lb; bary, 16 @ 20; pulled, 18 @ 42; fall clip, 15 @ 20; bary, 12 @ 14.

CHICAGO, Nov. 21.—Wheat quiet; regular, 95c cash; 94 ½, November; 94 ½, December; 94 ½, January; 95 ½, cash, red; 92 ½, cash, Barley, 83 ½, November; feed, 67c cash; 57c, November. Corn, 70c cash, 67c, November; 60 ½, year. Pork, steady, \$17.70 cash; \$17.50, November; \$17.70, year. Lard steady, \$11.40 cash; \$11.25, November; \$10.90, December. Ribs, \$10.30 cash; \$10.30, November. Whisky, \$1.17.

ST. LOUIS, Nov. 21.—Wheat, 94c ½ bushel, cash; 94 ½, November; 97c, December; 96c, January; 97 ½ February. Market lower.

Eastern Wool Markets.

BOSTON, Nov. 21.—The demand for wool is steady, but moderate. Prices are unchanged. Foreign wool quiet. Nothing of any consequence has been done. Stocks of both clothing and carpet wools sold up close.

London Wool Market.

LONDON, Nov. 21.—The fourth series of wool sales began to-day, and 6,000 bales of Sydney, Port Philip and Adelaide were sold. There was a good attendance, the bidding was fairly active, and prices of Australian rather easier.

BAGS—Bags are quiet and unchanged, and little doing in wheat sacks, as is usual at this season.

BARLEY—Barley has improved a little in tone over the condition for the last few days. Sales include 100 tons No. 1 brewing, December, \$1.50; 200 do No. 1 feed, December, \$1.47; 100 do, buyer December, \$1.43; 100 do, \$1.48; 100 do, buyer January, \$1.49; 100 do, \$1.50; 100 do, \$1.50; 200 do, buyer the season, \$1.57 ctd. In No. 2 feed the only sale was a lot of 100 tons for December at \$1.48 ½ ctd. Spot quotations are: Brewing, \$1.45 @ \$1.55; feed, \$1.40 @ \$1.45 ctd.

CORN—Corn is quiet and sales few. Prices are about the same as last week.

DAIRY PRODUCE—Choice Butter is firmer, but prices are just the same as one week ago. Oleomargarine is reported as rather difficult to work off, and makers are talking of shipping their grease East, to be butterized there. This will be done if the eaters and the dairymen join hands for the pure article.

EGGS—Eggs have advanced nearly 30% this week. Eastern Eggs are freezing on the way, and Californians are getting scarce as Hens' teeth.

FEED—There is no change except that the best Wheat Hay again brings \$17.50 per ton. Bran has been dropped by the speculators somewhat, and goes from the mills at \$18 per ton.

FRESH MEAT—Beef has jumped up to 10c per lb for the best. Pork is ½c higher, and Mutton does not go below 4c. The best Calves now sell at 10c.

FRUIT—There is no change. The list is now reduced to a few poor grapes, pears and apples, and the semi-tropicals, which sell about the same as last week.

HOPS—There is little trade reported. Dealers do not quote above \$1 per lb, but lots are known to have sold at \$1.05. The Eastern and foreign market is described in another column.

OATS—Oats are selling fairly at last week's rates.

ONIONS—The range is the same as before, poor stock going as low as 25c per ctd, while the best reach 75c per ctd.

POTATOES—There is a temporary oversupply and rates are cut into considerably, as shown in our list.

PROVISIONS—Sales are quick and rates on Hams, both California and Eastern, are advanced.

POULTRY AND GAME—Shipments have been heavy, and rates are reduced on everything but tame ducks, which are higher. Game ducks are very abundant and cheap, and fowls have dropped off from \$1 to \$1.50 per dozen. Turkeys, both alive and dressed, are 2c per pound cheaper than a week ago.

VEGETABLES—There is little in the market, and no change in rates.

WHEAT—Wheat is strong, and choice milling lots bring \$1.74 @ \$1.75. On call at the Produce Exchange there were sales of 100 tons No. 1 white, buyer November, \$1.70; 200 do, buyer December, \$1.73 ½ ctd.

WOOL—Some of the better lots are selling at the higher figures. A lot of Mendocino fall wool brought 18c, and a choicer lot reached 20c. These were extra fine.

General Merchandise.

WHOLESALE. WEDNESDAY M., Nov. 22, 1882.

CANDLES.
Crystal Wax, 16 @ 18
Paraffine, 20 @ 20
Patent Sperm, 25 @ 28
CANNED GOODS.
Assorted Picnic Fruits.
2 ½ lb cans, 3 @ 25
Table do, 3 @ 25
Jams and Jellies, 3 @ 25
Pickles, hf gal, 3 @ 25
Sardines, hf gal, 3 @ 25
Hf Boxes, 2 @ 50 @ 90
Merry Fruit Cakes.
Preserved Beef.
2 lb, doz, 3 @ 25
do 4 lb doz, 6 @ 50
Preserved Mutton.
3 lb, doz, 3 @ 25
Beef Tongue, 5 @ 75
Preserved Ham.
2 lb, doz, 5 @ 50
Deviled Ham, 1 lb, doz, 3 @ 50
do Ham 1 lb doz 2 @ 50
3 lb, doz, 3 @ 75
Spiced Pillets 2 lb doz 5 @
Head Cheeses 1 lb 3 @ 50
COAL-Jobbing.
Australian, ton, @ 8 50
Coos Bay, @ 6 10
Birmingham Bay, @ 6 50
Cumberland, @ 13 00
Mt Diablo, @ 10 00
Lehigh, @ 10 00
Liverpool, @ 10 00
West Hartley, @ 9 50
Scotch, @ 9 50
Scranton, @ 8 50
Vancouver Id., @ 8 50
Wellington, @ 8 50
Charcoal, sack, @ 10 00
Ooke, bush, @ 10 00
COFFEE.
Sandwich Id, 12 @ 14
Costa Rica, 12 @ 14
Guatemala, 12 @ 14
Java, 18 @ 20
Manilla, 15 @ 18
Ground, in cs, @ 23 ½
FISH.
Sag's Dry Cod, @ 7
do in cases, @ 7
Eastern Cod, 7 @ 7 ½
Salmon, bbis, 7 @ 7 50
Hf bbis, 3 @ 4 00
1 lb cans, 1 12 @ 1 22 ½
Pickled Cod, bbis, @ 10 00
Hf bbis, @ 10 00
Mackerel, No. 1.
Hf bbis, 8 @ 9 00
In Kits, 1 @ 10 00
Ex Mess, 3 @ 3 25
Pickled Herring, box, 3 @ 3 50
Boston Smoked Herring, 65 @ 70
LIME, etc.
Plaster, Golden Gate Mills, 3 @ 3 25
Land Plaster, ton, 10 @ 12 50
Lime, Santa Cruz bbl, 1 25 @ 1 50

PAINTS.
Pure White Lead, 7 @ 9
Whiting, 1 @ 5
Putty, 4 @ 5
Chalk, 1 @ 5
Paris White, 2 @ 5
Ochre, 3 @ 5
Venetian Red, 3 @ 5
Averil mixed Paint, 3 @ 5
White & Tint, 2 @ 20
Green, Blue and Ch Yellow, 3 @ 20
Light Red, 3 @ 20
Metallic Roof, 1 @ 20
REC.
China Mixed, 4 @ 5
Hawaiian, 4 @ 5
SALT.
Cal. Bay, ton, 14 @ 22 00
Common, 6 @ 50 @ 64 00
Carmen Id., 14 @ 22 00
Liverpool salt, 14 @ 22 00
SOAP.
Castle, lb, 9 @ 10
Common brands, 4 @ 6
Fancy Brands, 7 @ 8
SPICES.
Cloves, lb, 37 @ 40
Cassia, 19 @ 20
Nutmegs, 85 @ 90
Pepper Grain, 15 @ 16
Pimento, 16 @ 17
Mustard, Cal 1 lb Glass, @ 25
Cal. Cube B, @ 12 ½
Powdered, @ 13
Fine Crushed, @ 12 ½
Granulated, @ 11 ½
Golden C, @ 10 ½
Cal Syrup, kg, 65 @ 70
Hawaiian Molasses, 25 @ 30
TEA.
Young Hyson, 40 @ 65
Moynay, etc., 40 @ 65
Country pkd Um-powder & Imperial, 35 @ 75
Hyson, 30 @ 35 ½
Poo-Chow C, 27 @ 32
Japan, medium, 35 @ 37

SIGNAL SERVICE Meteorological Report.
SAN FRANCISCO.—Week ending Nov. 21, 1882.
HIGHEST AND LOWEST BAROMETER.
Nov. 15. Nov. 16. Nov. 17. Nov. 18. Nov. 19. Nov. 20. Nov. 21.
30.072 30.238 30.334 30.335 30.277 30.106 30.226
29.974 29.987 30.238 30.238 30.181 30.473 30.482

MAXIMUM AND MINIMUM THERMOMETER.
Nov. 15. Nov. 16. Nov. 17. Nov. 18. Nov. 19. Nov. 20. Nov. 21.
85.5 60 36.5 54 53.5 55.5 51
48 51 46 46 46 45 51

MEAN DAILY HUMIDITY.
Nov. 15. Nov. 16. Nov. 17. Nov. 18. Nov. 19. Nov. 20. Nov. 21.
55.0 44.7 71.7 78.3 82.3 84.7 84.3

PREVAILING WIND.
N | NE | E | SE | S | SW | W | NW | N | NE | E | SE | S | SW | W | NW |
156 | 264 | 74 | 118 | 91 | 77 | 180

WIND—MILES TRAVELED.
Nov. 15. Nov. 16. Nov. 17. Nov. 18. Nov. 19. Nov. 20. Nov. 21.
Clear | Clear | Clear | Clear | Fair | Fair | Clear

RAINFALL IN TWENTY-FOUR HOURS.
Nov. 15. Nov. 16. Nov. 17. Nov. 18. Nov. 19. Nov. 20. Nov. 21.
.00 .00 .00 .00 .00 .01 .00
Total rain during the season from July 1, 1882, 26.91 inches.

Domestic Produce.

WHOLESALE. WEDNESDAY M., Nov. 22, 1882.

BEANS & PEAS.
Bayo, ctd, 3 @ 40
Butter, 3 @ 25
Castor, 3 @ 25
Pee, 3 @ 12 ½
Red, 3 @ 10
Pink, 3 @ 10
Large White, 3 @ 10
Small White, 3 @ 10
Lima, 3 @ 10
Field Peas, 3 @ 10
do, green, 3 @ 10
Southern, 3 @ 10
Northern, 3 @ 10
CHICKORY.
California, 4 @ 44
German, 5 @ 47
DAIRY PRODUCE, ETC.
Butter.
Cal. Fresh Roll, 30 @ 35
do Fancy Brands, @ 37 ½
Pickle Roll, 27 ½ @ 28 ½
Firkin, new, 27 ½ @ 28 ½
Eastern, 20 @ 25 ½
New York, 20 @ 25 ½
OLEOMARGARINE.
Roll, @ 28
Firkin, @ 28
HIDES.
Cheese, Cal, 14 @ 14 ½
do boxed, 15 @ 16
EGGS.
Cal. Fresh, doz, 50 @ 55
Ducks, @ 40
Oregon, @ 40
Eastern, by exprs, 40 @ 45
Picked here, @ 40
Utah, 27 ½ @ 35
FEED.
Bran, ton, @ 18 00
Corn Meal, @ 38 00
Hay, @ 13 00 @ 17 50
Middlings, 27 00 @ 28 00
Oil Cake Meal, @ 32 50
Straw, bale, 60 @ 75
FLOUR.
Extra, City Mills, 5 @ 25 @ 25 50
do, Country Mills, 4 @ 25 @ 25 50
do, Oregon, 4 @ 25 @ 25 50
do, Walla Walla, 4 @ 25 @ 25 50
Superfine, 3 @ 50 @ 54 75
FRESH MEAT.
Beef, 1st quality, lb, 9 @ 10
Second, 7 ½ @ 8
Third, 6 @ 7
Mutton, 4 @ 4 ½
Spring Lamb, 6 @ 6 ½
Pork, undressed, 6 ½ @ 7
Dressed, 10 @ 12 ½
Veal, 7 @ 8
Milk Calves, @ 9
do, choice, 9 ½ @ 10
GRAIN, ETC.
Barley, feed, ctd, 40 @ 41 ½
do, Brewing, 5 ½ @ 57 ½
Chevalier, 5 ½ @ 57 ½
Buckwheat, @ 22 ½
Corn, White, @ 22 00
Yellow, 1 @ 21 60
Small Round, @ 21 72 ½
Oats, 1 @ 21 80
Milling, 1 @ 21 80
Rye, 75 @ 25
Wheat, No. 1, 70 @ 72 ½
do, No. 2, 65 @ 67 ½
do, No. 3, 60 @ 61 50
Choice Milling, 72 ½ @ 75
HIDES.
Hides, dry, 20 @ 21
do, wet salted, 11 @ 11 ½
BONE, ETC.
Beeswax, lb, 23 @ 25
Honey in comb, 12 @ 20
Extracted, light, 10 @ 11
do, dark, 5 @ 9
HOPS.
Oregon, 15 @ 17 ½
California, 15 @ 17 ½
Wash. Ter., 15 @ 17 ½
Old Hops, @ 10
NUTS—Jobbing.
Walnuts, Cal., 10 @ 12
do, Chile, 7 @ 8
Almonds, hd shd, 8 @ 10
Soft shell, 10 @ 12
Brazil, 10 @ 12
Peanuts, 7 @ 8
Filberts, 14 @ 15
ONIONS.
Red, 6 @ 7
Silverkin, 30 @ 75
POTATOES.
New, ctd, @ 10
Early Rose, 50 @ 90
Futura, ctd, 80 @ 95
Tomatoes, 60 @ 95
Humboldt, 60 @ 90
"Kidney," @ 10
"Peachblow," @ 10
Jersey Blue, 10 @ 10
Cuffey Cove, 10 @ 10
River, red, 60 @ 70
Chile, young, 15 @ 20
do, Oregon, @ 10
Peerless, 100 @ 110
Salt Lake, @ 12 ½
Sweet, 1 @ 25
POULTRY & GAME.
Turkeys, 10 @ 30
Hens, doz, 60 @ 65
Broilers, 4 @ 45
Ducks, tame, doz, 70 @ 80
do, Mallard, 20 @ 25
do, Teal, 75 @ 100
do, Sprig, 15 @ 15
Goslings, pair, 1 25 @ 15
Chick, young, 15 @ 20
Wild Geese, doz, 50 @ 60
White do, 50 @ 60
Turkeys, 13 @ 15
do, Dressed, 13 @ 15
Turkey Feathers, 10 @ 30
Skins, Eng, 1 75 @ 2 00
do, Common, 60 @ 75
Quail, doz, 1 12 ½ @ 1 37 ½
Rabbits, 1 50 @ 1 75
Hares, 2 00 @ 2 25
Venison, 3 @ 9
Cal. Bacon, extra clear, lb, 16 ½ @ 17
Medium, 17 @ 18
Light, 17 @ 18
Lard, 15 @ 17
Cal. Smoked Beef, 14 @ 15
Shoulders, 9 @ 10
Hams, Cal, 16 @ 17
do, Eastern, 15 @ 16 ½
SEEDS.
Alfalfa, 11 ½ @ 12 ½
do, Chile, @ 10
Canary, 14 @ 15
Clover Red, 14 @ 15
White, 45 @ 50
Cotton, @ 30
Flaxseed, 24 @ 30
Hemp, 42 @ 50
Italian Rye Grass, 20 @ 25
Perennial, 25 @ 25
Sweet V Grass, 10 @ 12
do, Common, 7 @ 10
Mustard, White, 1 12 ½ @ 11
Brown, @ 3
Rape, 24 @ 30
Ky Blue Grass, 20 @ 25
3d quality, 16 @ 18
Chester V Grass, @ 17 ½
Orchard, 20 @ 25
Red Top, @ 15
Hungarian, 8 @ 10
Lawn, 30 @ 40
Mesquit, 10 @ 11 ½
Timothy, 8 @ 11
WHEAT, ETC.
SPRING—1882.
San Joaquin, free, 18 @ 20
do, fair, 18 @ 19
do, duty, 15 @ 17
Southern Coast, 14 @ 20
Modoc & Shastu, 24 @ 25
Humboldt, 26 @ 27 ½
Calaveras & Foot-hill, 22 @ 24
Stanislaus & Tuolumne, 22 @ 24
Sonoma & Mendocino, 23 @ 27
Nor. Sacramento, 23 @ 25
Oregon, eastern, 20 @ 25
do, Valley, 23 @ 27
FA—1882.
San Joaquin and Coast, 10 @ 12
San Joaquin and Coast Lamb, good 11 @ 13
Northern, free, 15 @ 17
Northern defective, 11 @ 14
Northern Lamb, 16 @ 17
Free Mountain, 13 @ 16

San Francisco Metal Market.

WHOLESALE. THURSDAY, Nov. 23, 1882.

IRON.
American Pig, soft, ton, @ 23 00
Scotch Pig, ton, 28 50 @ 30 00
American White Pig, ton, @ 20 00
Oregon Pig, ton, @ 20 00
Clipper Pig, Nos. 1 to 4, 32 00 @ 31 00
Rebbed Bar, 4 @ 50
Horse Shoes, keg, @ 7 ½
Nail Rod, @ 7 ½
Norway, according to thickness, 6 ½ @ 7 00
STEEL.
English Cast, lb, 16 @ 25
Black Diamond, ordinary sizes, 15 @ 16
Drill, 14 @ 15
Flat Bar, 14 @ 15
COPPER.
Ingots, @ 22
Sheet, 30 @ 35
Sheathing, Tinned 14x18, @ 36
Nails, @ 17
Bolts, @ 8
Bar, @ 30
Cement, 100 fine, @ 15 ½
LEAD.
Pik, 5 @ 6 ½
Bar, 6 @ 6
Pipe, @ 9
Sheet, 16 @ 18
Shot, discount 10% on 500 Bags
Drop, per bag, @ 2 10
Rick, @ 2 30
Chilled, @ 2 50
TIN PLATES.
10x14 10 Charcoal, @ 25 00
Bacon Tin, @ 25 00
Australian, @ 25 00
1 C. Charcoal Roofing 14x20, @ 6 90
ZINC.
By the Cask, @ 9
Zinc sheet 7x3 ft. 7 to 10 lb, less the cask, @ 10
NAILS.
Assorted Sizes, 4 00 @ 4 75
QUICKSILVER.
By the Cask, @ 37 ½
Flasks, new, @ 1 25
Flasks, old, @ 1 05

Lumber.

WEDNESDAY M., Nov. 22, 1882.
Shingles, @ 2 50
Posts, each, 15 @ 17 ½
PINE.
CARGOES.
Rough, @ 18 00
Su faced, 24 @ 23 00
Floor and step, @ 27 50
RETAIL.

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Nov. 22, 1882.

FRUIT MARKET.	
Apples, bx.....	35 @ 1 00
Bananas, bnch., 2 50 @ 3 50	
Cocconuts, 100.....	6 00 @ 7 00
Crabapples, bk.....	50 @ 50
Crabapples, bbl. 15 00 @ 16 00	
Grapes, bx.....	40 @ 65
do, Rose Peru.....	60 @ 85
do, Muscat.....	60 @ 90
do, B. Hamb'g.....	60 @ 85
do, Tokay.....	75 @ 90
do, Isabella.....	70 @ 75
Limes, Mex.....	5 00 @ 6 50
do, Cal. box.....	75 @ 3 50
Lemons, Cal. bx 2 00 @ 3 00	
Sicily, box.....	6 10 @ 7 50
Australian.....	25 @ 2 75
Oranges, Cal. bx 2 25 @ 2 75	
do, Tahiti M. 35 00 @ 37 50	
do, Mexican. 20 10 @ 25 00	
do, Loreto.....	40 @ 1 25
Pears, bak.....	50 @ 1 25
Pineapples, doz 6 00 @ 8 00	
Plums.....	40 @ 60
Quinces, bak.....	75 @ 1 25
do, box.....	60 @ 75
Strawb'ry's, chst. 6 00 @ 7 00	
Wat'mel's, 100. 5 00 @ 10 00	
DRIED FRUIT.	
Apples, sliced, lb.....	4 @ 6
do, evaporated.....	9 @ 11
do, quartered.....	8 @ 10
Apricots.....	13 @ 14
Blackberries.....	14 @ 16

Leather.

[WHOLESALE.]

WEDNESDAY, M., Nov. 22, 1882.

Sole Leather, heavy, lb.....	30 @ 32
Light.....	25 @ 28
Jodot, 9 to 10 Kil. doz.....	26 00 @ 45 00
11 to 13 Kil.....	50 00 @ 60 00
14 to 16 Kil.....	65 00 @ 72 00
Second Choice, 11 to 16 Kil.....	40 00 @ 65 00
Simon Ullmo, Females, 12 to 13 Kil.....	52 00 @ 65 00
14 to 15 Kil.....	60 00 @ 64 00
16 to 17 Kil.....	66 00 @ 68 00
Simon, 18 Kil.....	60 00 @ 60 00
20 Kil.....	65 00 @ 65 00
24 Kil.....	65 00 @ 65 00
Kips, French lb.....	85 @ 1 20
Cal. doz.....	55 00 @ 60 00
French Sheep, all colors.....	12 00 @ 15 00
Eastern Calf for Backs, lb.....	1 00 @ 1 25
Sheep Roans for Topping, all colors, doz.....	9 00 @ 10 00
For linings.....	3 00 @ 5 50
Cal. Russet Sheep Linings.....	4 50 @ 5 00
Boat Legs, French Calf, pair.....	4 00 @ 4 50
Good French Calf.....	4 75 @ 5 00
Best Jodot Calf.....	35 @ 40
Leather, Harness, lb.....	45 @ 60
Fair Bridle, doz.....	33 @ 37
Skirting, lb.....	30 00 @ 36 00
Welt, doz.....	17 @ 20
Buff, ft.....	19 @ 20
Wax Side.....	19 @ 20

Retail Groceries, Etc.

WEDNESDAY M., Nov. 22, 1882.

Butter, California	8 @ 10
Choice, lb.....	45 @ 55
Cheese.....	17 @ 25
Eastern.....	25 @ 30
Lard, Cal.....	10 @ 18
Eastern.....	20 @ 25
Flour, ex. fm. bbl. 8 00 @ 9 00	
Corn Meal, lb.....	24 @ 3
Sugar, wh. crushed. 124 @ 134	
Light Brown.....	8 @ 94
Coffee, Green.....	23 @ 35
Tea, Fine Black.....	50 @ 61 00
Finest Japan.....	55 @ 61 00
Candles, Adm'te.....	15 @ 25
Soap, Cal.....	7 @ 10

Persons receiving a sample copy of the PACIFIC RURAL PRESS with this notice marked, are requested to examine the merits of the same, and consider fairly its claims for support, and if consistent, subscribe for the paper through the P. M. or agent delivering it, or otherwise. We will send it, on trial, at the rate of \$3 per annum for any period the reader may wish. Please notice our terms elsewhere, and if desired, send for further samples and information. Those who can circulate this No. further to our advantage are invited to do so.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 3 cts. per half-ounce), 10 cts.

Pacific Coast Weather for the Week.

[Furnished for publication in the PRESS by NELSON GOROM, Sergt. Signal Service Corps, U. S. A.]

The following is a summary of the rainfall for each day of the week ending 11:58 A. M. Wednesday, Nov. 22d, for the stations named:

Date.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Sunday.
Olympia.	.00	.00	.00	.00	.00	.00	.00
Portland.	.00	.00	.00	.00	.00	.00	.00
Roseburg.	.00	.00	.00	.00	.00	.00	.00
Cape Mendocino.	.00	.00	.00	.00	.00	.00	.00
Red Bluff.	.00	.00	.00	.00	.00	.00	.00
Sacram'to.	.00	.00	.00	.00	.00	.00	.00
San Francisco.	.00	.00	.00	.00	.00	.00	.00
Visalia.	.00	.00	.00	.00	.00	.00	.00
Los Angeles.	.00	.00	.00	.00	.00	.00	.00
San Diego.	.00	.00	.00	.00	.00	.00	.00
Winnemucca.	.00	.00	.00	.00	.00	.00	.00
Pioche.	.00	.00	.00	.00	.00	.00	.00
Salt Lake.	.00	.00	.00	.00	.00	.00	.00

* Reports missing.

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & Co.]

SAN FRANCISCO, Nov. 22, 3 P. M.

SILVER, 1/2 GOLD BARS, 890 @ 910. SILVER BARS, 10 @ 18 1/2 cent. discount. EXCHANGE on New York, 30 premium; London, 49 1/2 @ 49 1/2; Paris, 5.13 francs @ dollar; Mexican dollars, 85 @ 90 New York (4 per cent.) 119

GUARD AGAINST PHYLLOXERA

By Planting Resistant Vines.

I offer for sale all the leading varieties of Riparia, Rupestris and Estivaia, especially Lencir, Hertemont and Elvira.

Price List and Circular Sent on Application.

Stock guaranteed true to name and in good condition. Orders should be sent early, as the stock is limited. For particulars apply to

GEORGE HUSMANN,
Napa Cal.

Business Offices and Sunny Rooms to Let.

We have some desirable rooms to let adjoining the offices of this paper which will be rented on favorable terms. Stair entrance, No. 252 Market St. Elevator, No. 12 Front St. Parties wishing offices, etc., will do well to call and see them

DEWEY & CO.

SAN LEANDRO PLOW CO.,

Manufacturers of

Gang, Single and Sulky Plows.

Also Manufacture Wagon Beds, Harrows, Seed Sowers and Various Agricultural Implements.

A SPECIALTY

Made of Furnishing Plow and other Extras to Order. Castings of all Descriptions Furnished with Dispatch and at Reasonable Rates.

ORDERS RESPECTFULLY SOLICITED.

ADDRESS ALL COMMUNICATIONS TO

San Leandro Plow Co.,

SAN LEANDRO, CAL.

DEWEY & CO.'S

Scientific Press



Patent Agency.

[ESTABLISHED 1860.]

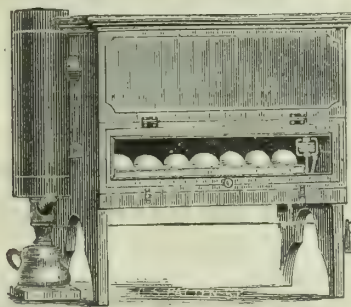
Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. R. EWER.

GEO. H. STRONG.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity, \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over

PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium, Diploma and only Special awarded in the entire Fair, in competition with

NATIONAL (Axfords)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon ovens, heat entering center; 240 eggs, \$60; 40 eggs, \$15; 630 eggs, \$90; Circular free. Address,

I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

CHOICE FRUIT ROOT GRAFTS !!

Complete assortment of Apples, Pears, Plums, Prunes, Cherries, Quinces, etc. Send for free Price List. Now is the time to order. Address,

PHENIX BROS. & EMERSON,
Nurserymen,

BLOOMINGTON, ILLINOIS.

PASADENA NURSERIES.

A General Assortment of Semi-Tropical and Northern Fruit Trees.

A fine assortment of Canning Varieties and those suited to this climate. Also Forest Trees, Hedge Plants and Ornamental Shrubbery. Address,
BYRON O. CLARK & CO.,
Pasadena, Los Angeles Co., Cal.

THE O. W. CHILDS NURSERY.

FOR SALE.—A first-class, thrifty, healthy stock of Temperate Climate and Semi-Tropic Fruit Trees. Apricot, Peach, Pear, etc., one year old. Orange and Lemon one to four years from bud. Also Seedling Orange Trees. Semi-Tropic Tree Culture a Specialty. Price List Mailed Free. O. W. CHILDS, Proprietor. Address, THOS. A. GAREY, Agent, P. O. Box 452, Los Angeles, Cal.

This paper is printed with Ink furnished by Chas. Eneu Johnson & Co., 509 South 10th St., Philadelphia & 59 Gold St., N. Y. Agent for Pacific Coast—Joseph E. Dorety, 527 Commercial St., S. F.



OUR LITTLE ONES

and THE NURSERY.

The most Beautifully Illustrated Magazine for Little People in the World.

The extraordinary success of this Magazine proves that the people desire the best literary and artistic matter for the instruction and amusement of little children. The stories and poems, all original, are by the

Best Writers for Children.

The illustrations, 380 a year, are made by the Best Artists in the World, expressly for this Magazine. Invaluable as an educator. The cheapest as well as the best.

\$1.50 A YEAR. 15 CENTS A COPY. Newsdealers sell it. Specimen free. The most liberal terms to Agents. Special terms to Schools.

RUSSELL PUBLISHING CO., Boston, Mass.

GILES H. GRAY. JAMES HAVEN.
GRAY & HAVEN,
Attorneys and Counsellors-at-Law,
530 California St., SAN FRANCISCO.

Attention, Book Buyers! Dig Pay to Agents!!

FARMERS, Engineers, Mechanics, Mill Owners, Merchants, etc., will find in RUSSSELL'S UNIVERSAL ASSISTANT AND COMPLETE MECHANIC, a work containing 1016 pages, 600 Engravings, 461 Tables, and over 1,000,000 Industrial Facts, Calculations, Processes, Secrets, Rules, etc., of rare utility in 200 Trades. A \$5 book free by mail for \$2.50, worth its weight in gold to any Mechanic, Farmer, or Business Man. Agents Wanted. Sure sale everywhere for all time. One agent reports \$137.50 earned in 6 days. Another has paid for two farms. For Ill. Contents Pamphlet, Terms, and 28 page Catalogue of nearly 300 Standard Books, address NATIONAL BOOK CO., 73 Beckman street, New York.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The Californian Real Estate Exchange and Mart," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

RIVER BANK NURSERIES.

The undersigned offers for sale a fine assortment of Apples, Pears, Cherries, Peaches, Plums, Prunes, Apricots, Grapes, Small Fruits, Shade Trees, Evergreens, Roses, Shrubbery and Greenhouse Plants, etc. NURSEY corner of Twelfth Street and Berryessa Road, and on Milpitas Road, adjoining John Rock's Nurseries.

L. F. SANDERSON, San Jose, Cal.

SPLENDID! 50 Latest Style chromo cards, name, in case, 10c Premium with 3 packs. E. H. Pardee, New Haven, Ct.

Dewey & Co. { 252 Market St. } Patent Agt's

Patent Channel Harrow.



THIS NEW INVENTION IS SUPERIOR TO ANY HARROW.

Each Section is Independent of the other. Any Sized Tooth Can be Used. The Frame will Last a Lifetime.

ALSO THE REVERSIBLE MOLD-BOARD STOCKTON GANG PLOW.

Cultivators. Weed Exterminators.

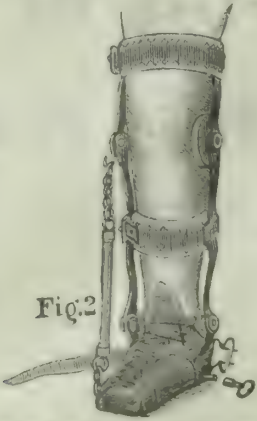
Agricultural Implements.

Manufactured and Sold Only at Our Works,

MAIN STREET, STOCKTON, CAL.

Matteson & Williamson.

CLUB-FOOT SHOE.



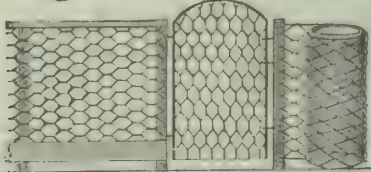
AUTENRIETH'S CELEBRATED

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will fence horses, sheep, and poultry, as well as the most vicious stock, without any special fencing of stock. It is the best fence for farms, gardens, stock ranges and railroads, and is very neat looking, durable, and does not rot. It is made with a combination of steel wire and iron rods, and is covered with a coating of paint to prevent rust. It is superior to Boards or Barbed Wire in every respect. We are the only ones who make it, and it will be found in every part of the world. The Sedgwick Gates, made of wire, are strong and durable, and will be found in every part of the world. We are the only ones who make them, and they will be found in every part of the world. Sedgwick Bros., Richmond, Ind.

Mention this paper.



Is the best Pump in in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches. FOR SALE BY JOHN H. WHEELER, 111 Leidesdorff St., S. F. P. S. A sample can be seen at this office.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. STOCKTON. Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations. A. & J. HAHN, Proprietors.

M. COOKE R. J. COOKE PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to. COOK & SONS, Successors to COOKE & GREGORY

Moore's Prepared



The most successful Poison in use for Squirrel Killing. C. E. WILLIAMS & CO., Proprietors, STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

J. P. SWEENEY & CO.,
Seedsman,

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.



KELLER'S NURSERIES,

Oakland, Cal.

FOR SALE, AT BEDROCK PRICES,

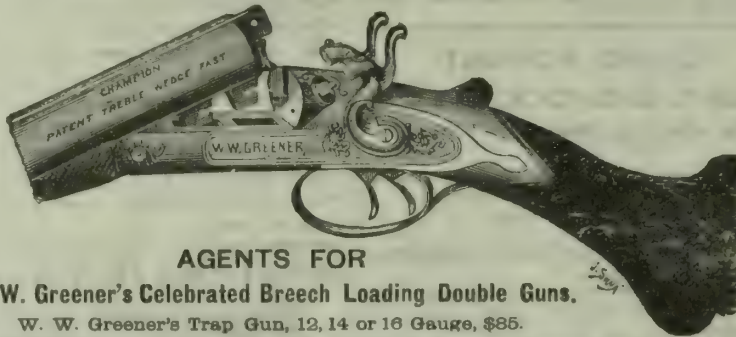
Fruit Trees, Ornamental Evergreen Trees, Plants and Shrubs; also several thousand Gum and Cypress trees, Flowering Bulbs, Roses Fresh Seeds. Please send for catalogue and price list.

P. J. KELLER, Seedsman and Florist,

Nursery near Cemetery; Seed and Floral Store, 509 & 511 Seventh Street, bet. Washington & Clay, OAKLAND, CAL.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

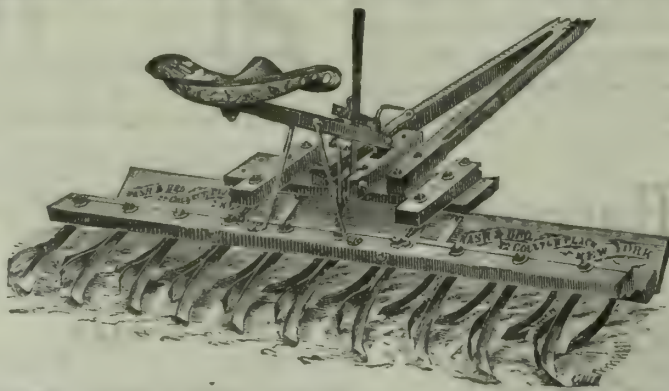
W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

"ACME"

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.



For the Orchard, Vineyard, Nursery and Grain Field.

Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,

22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. R. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.

S. P. BAILEY.

O. E. BADGLEY.

JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - - - Stockton, Cal.,

IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,

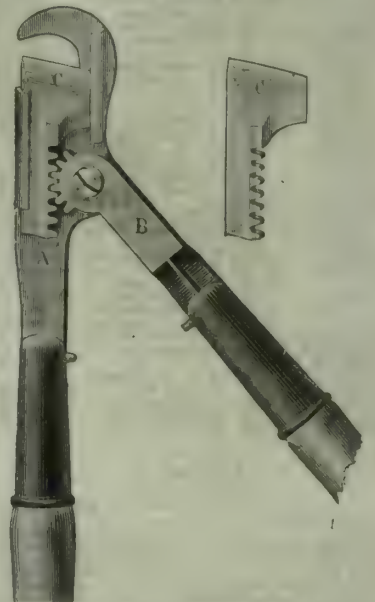
Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Belle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.

We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow. In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.

THE BOSS PRUNER.

Patented January 8, 1878.



The best pruner made. Small size, cuts 1 inch, price, \$3.50. Large size, cuts two inches, price, \$4.50. For simplicity, ease, rapidity and Durability they are unexcelled. Apply to

GEO. WOOLSEY,

Lone City, Amador County, California, General Agent for the State.

W. T. ADEL,

City Carriage Manufactory,

No. 263 First Street (opp. N. Y. Exchange), SAN JOSE.

Family Carriages, Rockaways, Top and Open Buggies,

Light and Heavy Express Wagons,

Made of the best-selected and thoroughly seasoned timber and warranted.

Driving Carts, with open seats and spring shafts, the only cart in the market that takes away the jolt. Send for circular and price list.

Jobbing, Carriage Trimming, Painting and Blacksmithing Neatly Done.

Prices as Low as the Lowest.

Orders Will Receive Prompt Attention

MRS. C. V. TURNER,

Inventor and Manufacturer of the

EXCELSIOR



Perfect Fitting

CORSET,

(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice the above Corset.

Rules for self-measurement sent on application, and Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St., SAN JOSE, CAL.

All parties are cautioned against making or causing to be made the above Corset without my License Stamp under full penalty of the law.

STOCKTON

SAVINGS AND LOAN SOCIETY.

L. U. SHIPPEE, President

FRED. M. WEST, Cashier

Authorized Capital, \$500,000

CAPITAL, PAID UP, \$500,000

Receives Deposits repayable ON TIME and ON DEMAND. Pays interest at the rate of 5 per cent. per annum after 30 days from date of deposit. Buys and sells United States Currency, Domestic and Foreign Exchanges and transacts a General Banking Business.

Silos Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE. RANSOME, 402 Montgomery St., S. F. Send for circular

Only "PEBBLE" Establishment.



Muller's Optical Depot, 185 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDSField, Grass, Flower and Tree Seeds,
CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants
to our unusually low prices. Trade price
list on application.We issue the most complete guide to the Vegetable and
Flower Garden ever issued upon this coast. It is hand-
somerily illustrated, and contains full descriptions of Vege-
tables, Flowers, Grasses, Trees, etc., with full instruc-
tions as to their culture; mailed free on application.SEVIN VINCENT & CO.,
637 Sansome Street, S. F.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD.

For sale at low prices, consisting of the finest market
varieties ofAPRICOTS, ALMONDS,
PEACH, PLUM and
NECTARINES.These Trees are all grown without irrigation, from
natural seed imported from Tennessee, and are much
more hardy and vigorous than Trees grown from the seed
of cultivated varieties. A limited number of Trees of the

CALIFORNIA PEACH

For sale at \$1.00 each. Send for Catalogue and prices
toC. W. REED & CO.,
Sacramento, Cal.

HOLLAND BULBS

ROSES AND
PLANTS

MILLIONS OF THEM

Our Fall Catalogue is the fin-
est and most complete ever
issued. Full instructions for
culture by an experienced
horticulturist. Sent FREE.HIRAM SIBLEY & CO
SEEDSMEN,
Rochester, N. Y. & Chicago, Ill.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.

Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.150,000 Trees in Dormant Bud to be delivered within one
year at the lowest rates. This offer is equal to 1 year
old trees for the price of Dormant Buds. Also, 80,000
June Budded Trees at the very lowest rates.BUDS HAVE ALL BEEN TAKEN FROM BEARING
TREES.Principal Nursery located just south of Colton.
DAVE TURNER.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees
and Shrubs, Shade Trees, Roses, Flowering Shrubs,
Plants, etc. Grown without irrigation, clean and
healthy. The demand is likely to exceed the supply of
some kinds of Fruit Trees. Prices and kinds will be
given on application. Address W. B. PEPPER,
Petaluma, Sonoma County, Cal.

FRUIT TREES FOR SALE

- AT -

Bellevue Nursery.

25,000 Pear Trees, mostly Bartlett; 20,000 Apricot;
15,000 Apple. Also Peach, Plum, Prune, Nectarine, English
Walnut and Orange Trees. The above Trees have made a
good growth, and are free from disease or any scale or other
parasites. For further particulars address P. O. Box 304,
Los Angeles, Cal. MILTON THOMAS.

JAMES HANNAY'S NURSERIES.

East San Jose, Cal.

For sale, a large and general assortment of healthy
well grown Fruit Trees, comprising Apple, Pear, Peach,
Plum, Prune, Apricot, Cherry, etc., of all the leading
varieties now mostly in demand. Address,
JAMES HANNAY, San Jose, Cal.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also,

TREES IN THE DORMANT BUD.

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

THE NURSERY OF

C. M. SILVA & SON

Is the Pacific Coast

HEADQUARTERS FOR THE "HANSELL"

New Extra Early Red) Raspberry, James Vick, Manchester and Finch's Prolific,

And other Valuable New Strawberries, and all other good small fruits, new and old. A large stock of fine

PLUM AND PRUNE TREES.

First Quality of Everything. Free from Scale.

Will issue New Illustrated Catalogue of Small Fruits about November 15th. Send for it. Address,

C. M. SILVA & SON,

Newcastle,

CALIFORNIA.

W. R. STRONG & CO.,

WHOLESALE SEED MERCHANTS.

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. can be obtained at our establish-
ment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a
Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Deal-
ers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for
Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers
attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,

Sacramento, Cal.

ORANGE HILL NURSERIES,

Penryn, Placer Co., Cal.

W. R. STRONG & CO., Proprietors,

Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and
free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Priced
catalogue on application. Address,

W. R. STRONG & CO.,

Sacramento, Cal.

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top,

Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

WAREHOUSES:

115, 117 & 119 Kinzie St.

104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,

CHICAGO, ILL.

SEEDS

GILL'S NURSERIES.

Special Offer of

Blue and Red Gums. Also Monterey Pines and Cypress
1, 2 and 3 years old, in large lots at low rates. Prices
on application. Address

E. GILL, Nurseryman,

28th St., near San Pablo Ave., Oakland, Cal.

50,000 APRICOTS

And a large stock of Peaches, Apples, Plums, Keifer and
Leconte Pears, Grapes and Small Fruits; sizes suitable to
send by mail, express or freight. Also Pear, Apple,
Cherry and Quince Stocks. Grafts put up to order in
large and small lots. Catalogues showing how and what
to plant, with much valuable information, gratis.

Great Northern and Southern Nurseries,

Wilmington, Delaware.

RANDOLPH PETERS.

SANTA CLARA NURSERIES,

San Jose, Cal.

On account of having to move from leased ground the
coming winter, we offer a large and fine lot of the follow-
ing varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurel.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Repluolepis orata.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 to 5 "
Monterey Pine.....	3 to 4 "
Monterey Cypress.....	2 to 3 "
Balsam Fir.....	2 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of
Miscellaneous Fruit Trees, Small Fruits,
Ornamental Shade Trees, Evergreens,
Roses, Bulbs, Greenhouse Plants,
Etc. etc.RICHARD D. FOX,
San Jose, Cal.THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.

ROCK'S NURSERIES.

TREES!

For Sale,

A LARGE ASSORTMENT OF

Thrifty, Well-grown Fruit, Shade and
Ornamental Trees.

NEW AND RARE EVERGREENS,

Palms, Bamboos, Shrubs, Roses, etc. Small Fruits, in-
cluding a large variety of Grapevines, for table, for wine
and for raisins.

STRAWBERRIES

Of newest and best varieties for market and for profit

Descriptive Catalogues will be sent as follows:

No. 1. Fruits, Grapevines, Berries, etc. 3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc. 3 cts.

JOHN ROCK,

San Jose, - - - California.

LOS GATOS NURSERIES.

I offer the trade this season a large and general assort-
ment of Fruit and Ornamental Trees, and Small Fruits.
My Trees are healthy, stately and well grown. Address,
S. NEWHALL, San Jose, Cal.

WILD GRAPE SEED.

I have a small quantity of Wild Grape Seed for sale
and can furnish Wild Grape Roots for grafting. Seed is
worth \$8 per pound, and the Roots \$20 per thousand.
Send to JAMES M. HUTCHINS, Kelseyville, Lake Co.,
Cal. Terms cash in advance.

THE DINGEE & CONARD CO'S

BEAUTIFUL EVER-BLOOMING

ROSES

SPLENDID POT PLANTS, specially pre-
pared for immediate bloom. Delivered
safely by mail postpaid, at all post offices. Splen-
did varieties, your choice, all labeled, for \$1; 12
for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for
\$10; 100 for \$13. WE GIVE a Handsome
Present of choice and valuable ROSES free
with every order. Our NEW GUIDE, a complete
Treatise on the Rose, 76 pp., elegantly illustrated—free
to all. THE DINGEE & CONARD CO.,
Rose Growers, West Grove, Chester Co., Pa.

TREES AND SEEDS TRUE TO NAME.

APPLES.—4 ft. 15 to 20; 5 ft. 20 to 25; 6 ft. 25 to 30; 7 ft. 30 to 35; 8 ft. 35 to 40; 9 ft. 40 to 45; 10 ft. 45 to 50; 11 ft. 50 to 55; 12 ft. 55 to 60; 13 ft. 60 to 65; 14 ft. 65 to 70; 15 ft. 70 to 75; 16 ft. 75 to 80; 17 ft. 80 to 85; 18 ft. 85 to 90; 19 ft. 90 to 95; 20 ft. 95 to 100; 21 ft. 100 to 105; 22 ft. 105 to 110; 23 ft. 110 to 115; 24 ft. 115 to 120; 25 ft. 120 to 125; 26 ft. 125 to 130; 27 ft. 130 to 135; 28 ft. 135 to 140; 29 ft. 140 to 145; 30 ft. 145 to 150; 31 ft. 150 to 155; 32 ft. 155 to 160; 33 ft. 160 to 165; 34 ft. 165 to 170; 35 ft. 170 to 175; 36 ft. 175 to 180; 37 ft. 180 to 185; 38 ft. 185 to 190; 39 ft. 190 to 195; 40 ft. 195 to 200; 41 ft. 200 to 205; 42 ft. 205 to 210; 43 ft. 210 to 215; 44 ft. 215 to 220; 45 ft. 220 to 225; 46 ft. 225 to 230; 47 ft. 230 to 235; 48 ft. 235 to 240; 49 ft. 240 to 245; 50 ft. 245 to 250; 51 ft. 250 to 255; 52 ft. 255 to 260; 53 ft. 260 to 265; 54 ft. 265 to 270; 55 ft. 270 to 275; 56 ft. 275 to 280; 57 ft. 280 to 285; 58 ft. 285 to 290; 59 ft. 290 to 295; 60 ft. 295 to 300; 61 ft. 300 to 305; 62 ft. 305 to 310; 63 ft. 310 to 315; 64 ft. 315 to 320; 65 ft. 320 to 325; 66 ft. 325 to 330; 67 ft. 330 to 335; 68 ft. 335 to 340; 69 ft. 340 to 345; 70 ft. 345 to 350; 71 ft. 350 to 355; 72 ft. 355 to 360; 73 ft. 360 to 365; 74 ft. 365 to 370; 75 ft. 370 to 375; 76 ft. 375 to 380; 77 ft. 380 to 385; 78 ft. 385 to 390; 79 ft. 390 to 395; 80 ft. 395 to 400; 81 ft. 400 to 405; 82 ft. 405 to 410; 83 ft. 410 to 415; 84 ft. 415 to 420; 85 ft. 420 to 425; 86 ft. 425 to 430; 87 ft. 430 to 435; 88 ft. 435 to 440; 89 ft. 440 to 445; 90 ft. 445 to 450; 91 ft. 450 to 455; 92 ft. 455 to 460; 93 ft. 460 to 465; 94 ft. 465 to 470; 95 ft. 470 to 475; 96 ft. 475 to 480; 97 ft. 480 to 485; 98 ft. 485 to 490; 99 ft. 490 to 495; 100 ft. 495 to 500; 101 ft. 500 to 505; 102 ft. 505 to 510; 103 ft. 510 to 515; 104 ft. 515 to 520; 105 ft. 520 to 525; 106 ft. 525 to 530; 107 ft. 530 to 535; 108 ft. 535 to 540; 109 ft. 540 to 545; 110 ft. 545 to 550; 111 ft. 550 to 555; 112 ft. 555 to 560; 113 ft. 560 to 565; 114 ft. 565 to 570; 115 ft. 570 to 575; 116 ft. 575 to 580; 117 ft. 580 to 585; 118 ft. 585 to 590; 119 ft. 590 to 595; 120 ft. 595 to 600; 121 ft. 600 to 605; 122 ft. 605 to 610; 123 ft. 610 to 615; 124 ft. 615 to 620; 125 ft. 620 to 625; 126 ft. 625 to 630; 127 ft. 630 to 635; 128 ft. 635 to 640; 129 ft. 640 to 645; 130 ft. 645 to 650; 131 ft. 650 to 655; 132 ft. 655 to 660; 133 ft. 660 to 665; 134 ft. 665 to 670; 135 ft. 670 to 675; 136 ft. 675 to 680; 137 ft. 680 to 685; 138 ft. 685 to 690; 139 ft. 690 to 695; 140 ft. 695 to 700; 141 ft. 700 to 705; 142 ft. 705 to 710; 143 ft. 710 to 715; 144 ft. 715 to 720; 145 ft. 720 to 725; 146 ft. 725 to 730; 147 ft. 730 to 735; 148 ft. 735 to 740; 149 ft. 740 to 745; 150 ft. 745 to 750; 151 ft. 750 to 755; 152 ft. 755 to 760; 153 ft. 760 to 765; 154 ft. 765 to 770; 155 ft. 770 to 775; 156 ft. 775 to 780; 157 ft. 780 to 785; 158 ft. 785 to 790; 159 ft. 790 to 795; 160 ft. 795 to 800; 161 ft. 800 to 805; 162 ft. 805 to 810; 163 ft. 810 to 815; 164 ft. 815 to 820; 165 ft. 820 to 825; 166 ft. 825 to 830; 167 ft. 830 to 835; 168 ft. 835 to 840; 169 ft. 840 to 845; 170 ft. 845 to 850; 171 ft. 850 to 855; 172 ft. 855 to 860; 173 ft. 860 to 865; 174 ft. 865 to 870; 175 ft. 870 to 875; 176 ft. 875 to 880; 177 ft. 880 to 885; 178 ft. 885 to 890; 179 ft. 890 to 895; 180 ft. 895 to 900; 181 ft. 900 to 905; 182 ft. 905 to 910; 183 ft. 910 to 915; 184 ft. 915 to 920; 185 ft. 920 to 925; 186 ft. 925 to 930; 187 ft. 930 to 935; 188 ft. 935 to 940; 189 ft. 940 to 945; 190 ft. 945 to 950; 191 ft. 950 to 955; 192 ft. 955 to 960; 193 ft. 960 to 965; 194 ft. 965 to 970; 195 ft. 970 to 975; 196 ft. 975 to 980; 197 ft. 980 to 985; 198 ft. 985 to 990; 199 ft. 990 to 995; 200 ft. 995 to 1000; 201 ft. 1000 to 1005; 202 ft. 1005 to 1010; 203 ft. 1010 to 1015; 204 ft. 1015 to 1020; 205 ft. 1020 to 1025; 206 ft. 1025 to 1030; 207 ft. 1030 to 1035; 208 ft. 1035 to 1040; 209 ft. 1040 to 1045; 210 ft. 1045 to 1050; 211 ft. 1050 to 1055; 212 ft. 1055 to 1060; 213 ft. 1060 to 1065; 214 ft. 1065 to 1070; 215 ft. 1070 to 1075; 216 ft. 1075 to 1080; 217 ft. 1080 to 1085; 218 ft. 1085 to 1090; 219 ft. 1090 to 1095; 220 ft. 1095 to 1100; 221 ft. 1100 to 1105; 222 ft. 1105 to 1110; 223 ft. 1110 to 1115; 224 ft. 1115 to 1120; 225 ft. 1120 to 1125; 226 ft. 1125 to 1130; 227 ft. 1130 to 1135; 228 ft. 1135 to 1140; 229 ft. 1140 to 1145; 230 ft. 1145 to 1150; 231 ft. 1150 to 1155; 232 ft. 1155 to 1160; 233 ft. 1160 to 1165; 234 ft. 1165 to 1170; 235 ft. 1170 to 1175; 236 ft. 1175 to 1180; 237 ft. 1180 to 1185; 238 ft. 1185 to 1190; 239 ft. 1190 to 1195; 240 ft. 1195 to 1200; 241 ft. 1200 to 1205; 242 ft. 1205 to 1210; 243 ft. 1210 to 1215; 244 ft. 1215 to 1220; 245 ft. 1220 to 1225; 246 ft. 1225 to 1230; 247 ft. 1230 to 1235; 248 ft. 1235 to 1240; 249 ft. 1240 to 1245; 250 ft. 1245 to 1250; 251 ft. 1250 to 1255; 252 ft. 1255 to 1260; 253 ft. 1260 to 1265; 254 ft. 1265 to 1270; 255 ft. 1270 to 1275; 256 ft. 1275 to 1280; 257 ft. 1280 to 1285; 258 ft. 1285 to 1290; 259 ft. 1290 to 1295; 260 ft. 1295 to 1300; 261 ft. 1300 to 1305; 262 ft. 1305 to 1310; 263 ft. 1310 to 1315; 264 ft. 1315 to 1320; 265 ft. 1320 to 1325; 266 ft. 1325 to 1330; 267 ft. 1330 to 1335; 268 ft. 1335 to 1340; 269 ft. 1340 to 1345; 270 ft. 1345 to 1350; 271 ft. 1350 to 1355; 272 ft. 1355 to 1360; 273 ft. 1360 to 1365; 274 ft. 1365 to 1370; 275 ft. 1370 to 1375; 276 ft. 1375 to 1380; 277 ft. 1380 to 1385; 278 ft. 1385 to 1390; 279 ft. 1390 to 1395; 280 ft. 1395 to 1400; 281 ft. 1400 to 1405; 282 ft. 1405 to 1410; 283 ft. 1410 to 1415; 284 ft. 1415 to 1420; 285 ft. 1420 to 1425; 286 ft. 1425 to 1430; 287 ft. 1430 to 1435; 288 ft. 1435 to 1440; 289 ft. 1440 to 1445; 290 ft. 1445 to 1450; 291 ft. 1450 to 1455; 292 ft. 1455 to 1460; 293 ft. 1460 to 1465; 294 ft. 1465 to 1470; 295 ft. 1470 to 1475; 296 ft. 1475 to 1480; 297 ft. 1480 to 1485; 298 ft. 1485 to 1490; 299 ft. 1490 to 1495; 300 ft. 1495 to 1500; 301 ft. 1500 to 1505; 302 ft. 1505 to 1510; 303 ft. 1510 to 1515; 304 ft. 1515 to 1520; 305 ft. 1520 to 1525; 306 ft. 1525 to 1530; 307 ft. 1530 to 1535; 308 ft. 1535 to 1540; 309 ft. 1540 to 1545; 310 ft. 1545 to 1550; 311 ft. 1550 to 1555; 312 ft. 1555 to 1560; 313 ft. 1560 to 1565; 314 ft. 1565 to 1570; 315 ft. 1570 to 1575; 316 ft. 1575 to 1580; 317 ft. 1580 to 1585; 318 ft. 1585 to 1590; 319 ft. 1590 to 1595; 320 ft. 1595 to 1600; 321 ft. 1600 to 1605; 322 ft. 1605 to 1610; 323 ft. 1610 to 1615; 324 ft.

BAKER & HAMILTON,

Junction Market, Pine and Davis Streets, San Francisco.

Nos. 9 to 15 J Street, Sacramento.

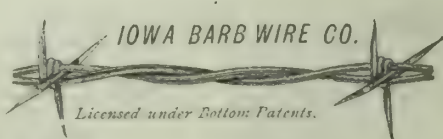
MANUFACTORY: BENICIA AGRICULTURAL WORKS, BENICIA, CAL.

Eastern Office: 88 Wall Street, New York.

IOWA FOUR POINTED BARBED WIRE.

PRICE REDUCED.

It will neither
Rust nor
Decay.



Secure Against
FIRE,
WIND and
WATER.

GALVANIZED OR PAINTED.

15 Feet to the Pound.

IS BARB WIRE DANGEROUS?

It is not, where wire—instead of metal or knife-blade cutting points—is used for the barbs. We base our reply upon a large experience in supplying the trade with barbed wire, thereby occupying a position to learn of any damage caused, extending all through the United States. Our experience will justify us in stating, as an absolute fact, that no more injury is done to stock by the use of wire barb than by the use of any other common kind of fence. We have yet to learn of the loss of a single head of stock caused by the Iowa barb. We attribute this fact to these reasons:

1. It is a four-pointed wire barb, with barbs standing at right angles, and, therefore, always presents a point.
2. It is the only one locked between the two wires, and the barbs cannot work or slip together.
3. It is a wire barb, and picks instead of cutting the flesh.

DURABILITY.

Barbed Wire has not been in use long enough to state from experience how many years it will last; but, as painted wire first put up shows no sign of deterioration, and lines of telegraph wire have been in use 30 years without the quality being impaired, it is probable that a well galvanized steel double-strand wire fence will last from twenty-five to fifty years.

WHICH IS THE BEST KIND OF BARB WIRE TO BUY.

It being conceded from these reasons that it is advisable to use wire, the question that follows is, which kind is the best? This is frequently asked by the farmer, and we will endeavor to answer it without prejudice, and honestly as we believe the facts to be. There are four kinds of wire on the market, which we will designate generally, as follows:

- A four-pointed double wire, with wire barbs.
- A two-pointed double wire, with wire barbs.
- A four and two-pointed single wire, with wire barbs.
- A four-pointed single wire, with metal plate barbs.

From this family of wires we must choose. As regards the difference between a two-pointed and four-pointed barb, we are satisfied that a four-pointed barb is more efficient to turn stock than a two-pointed—provided the kind of four-pointed barb is such as stand at right angles—simply because a four-pointed barb presents a point in any position, whereas, with a two-pointed barb, several may be found in succession standing parallel to each other, and, therefore, presenting a point only in one direction. If any one doubts this, let him attempt to run his hand along on a two-pointed barb wire and then on a four-pointed, and see which offers most resistance. We should, therefore, advise buying a four-pointed barb wire. Having determined upon this, the question still remains, which of the four-pointed wires is the best? The single-strand wire, made of No. 8 or 9 wire, has the defect that it is quite impossible to place barbs upon a single wire so that they will not in time slip and work together. Again, if this were not so, there is no economy in its use, as the increased weight per rod is equal to, or more than the difference in price between that and twisted wire, not to mention the expense of a windlass to wind up and let out the single wire for winter and summer, to prevent breaking by contraction in cold weather. The twisted wire, you will observe, has sufficient spring to preserve an equal tension throughout the different temperatures of the weather, requiring no attention. We, therefore, could not advise buying the single wire.

The four-pointed metal plate barb is usually made by a tight twist, holding the barb only by a twist between the two wires. This tight twisting not only contracts the wire, making it heavy per rod, but is liable to injure the fiber of the metal by twisting so closely. Again, a metal plate barb presents a knife blade, or cutting point, rather than a thorn point, and cuts rather than picks.

Of the various kinds of four-pointed wire barbs, the Iowa Barb is the only barb which is locked between the two wires, and also wound around both wires; the lock prevents it slipping on the wire, and winding around holds the two wires together.

We can, therefore, advise every one who wishes to purchase wire and wants the best, to buy the Iowa barb, as it contains all the favorable features that are required, and none of the objectionable ones. It is made only from the best of annealed steel, fully warranted, either galvanized, japanned or painted; put up in spools of from 90 to 150 pounds each. Remember, it will not exceed 17 ounces per rod.

NUMBER OF WIRES.

Although fences are sometimes made of two wires, to fence against cattle only, we recommend not less than three, and as many more as desirable. Five wires make a good fence—such is used by nearly all the railroad companies.

Gem Belt Seed Sower.

ADVANTAGES OF THE GEM BELT.

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the wagon; therefore, one may be closed when sowing by a fence, ditch or land that is not to be sown. The Distributor of the Gem whirled around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down. The Gem does not throw the seed up into the air, to be blown about by the wind, but throws it sharply to the right or left.

THE REASONS WHY

The Distributor of the GEM BELT SOWER is run by a quarter turn belt instead of gearing. The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast-running parts, and the evenness with which it sows the grain. The GEM sows blue-stoned grain perfectly. The GEM sows about sixty feet wide.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 pounds.....	\$25 00
No. 2 Gem, to run with belt gear, weight 154 pounds.....	30 00
No. 3 Gem, to run with all gears, weight 165 pounds.....	35 00

The GEM SEED SOWER can only be obtained from us, as we are the sole manufacturers.

DOTY'S

Automatic Revolving Scraper.

The Doty's is used in making Roads, Excavating, Ditching, Leveling for Railroads, Canals and Levee Building.



Hundreds of Certificates from those who have used them prove it to be the

Best Scraper Made

SAVES

TIME,

MONEY and

LABOR.



DOTY'S REVOLVING SCRAPER.

TIME.

For it revolves, losing no time to reset for filling.

MONEY.

For it saves one man—the filler.

LABOR.

For it is 50 per cent. easier for both man and horse.

Our Revolving Scraper is now so well known throughout the country that we shall give no long description of it. It has been on trial for the last eight years, and has been steadily growing in favor. It is simple in construction. There is nothing liable to get out of order. No Pulley, no Spiral Springs, Triggers, or Swivels to clog and refuse to work just when most wanted. It is made to handle dirt, and dirt will not choke it up, or stop its working. The material used is of the best quality. The Handles, Sides and back boards are of selected and thoroughly seasoned oak; the Bottom Plates of St. L. Steel Laid Runners, Malleable Iron Grabs. The new, improved Side Bars and Grab Irons will be much liked.

In simplicity, strength, durability and ease of operation, these Scrapers are unequalled. We ask but a trial to prove their superiority, and we know those who once use them will have no other kind. Although the universal favor with which it has been received for the past ten years would seem to be sufficient guaranty that it was good enough, yet the improvements we have made in the grab and side bar will commend themselves to everyone at first sight; while the main features of the Scraper have been preserved. These little changes add greatly to its durability and the ease with which it works.

A boy can handle it. One man drives the team and manages the Scraper. The load is taken up, carried to its destination, and dumped without stopping the team. The earth is not dragged along, but carried by the Scraper, which rises easily upon its steel-laid runners, thus greatly diminishing the draft. It dumps by simply raising the HANDLES, which release the bowl and causes it to revolve, depositing its load, and righting itself for another.

We guarantee the material and workmanship to be as good as here shown, and believe our Revolving Scraper, as now made, is the BEST IN THE WORLD.

PRICES:

30 Inch Steel Bottom weight 130 pounds.....	\$19 00
33 " " " " 145 ".....	20 00
36 " " " " 160 ".....	21 00

EUREKA GANG PLOWS.

The Eureka Gang Plows are the Standard Gang Plows of the Pacific Coast, and are manufactured by the Benicia Agricultural Works, Benicia, Cal. They are simple, durable, pointed and built in draft as well as draw, and none but the most skilled mechanics are employed in their manufacture. There are thousands of them now in use on this Coast, and giving entire satisfaction.

THE GALES CHILLED PLOWS.

Farmers, Read This! Consider, be Wise, and Try a Gale.

The year 1881 was filled with great victories for the NEW GALE CHILLED PLOWS; time and space permits mention of only a few: At the Union Fair of June last, held at Geneva, N. Y., the Gale Plow was awarded Three Premiums. The first Premium in the Plowing Match and Two in the Exhibition of Plows. Also, at the Sugar Grove Fair, near Jamestown, N. Y., in September, the First Prize was given to the Gale Plow in the Plowing Match (two of the committee owning Oliver Plows at the time). At the Seneca County Fair, held at Ovid, N. Y., in October, the New Gale Plow, in very hot competition, won all the Prizes. First, Second and Third in the Plowing Match. Also, the same week, at Perry, N. Y. Wyoming Co., the Gale Plow won the First Prize in the Plowing Match.

Send for Circulars and Price Lists to

BAKER & HAMILTON, San Francisco, Cal.



TWENTY-PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, DECEMBER 2, 1882,

Number 23

Bogus Butter and the Law.

The oleomargarine makers are making a bold show of virtue, we are told, by wrapping their fats in wrappers upon which the law against the adulteration of butter is printed. They wish it understood that they are not only complying with the law, but are doing more; they are improving upon the statute; they are, by their superior virtue, putting to shame the wisdom of the legislators. They are almost too good for anything—except to make bogus butter.

It is true there is a law which is called a "law to prevent fraud and deception," etc., and here is a copy of it:

An Act to Prevent Fraud and Deception in the Manufacture and Sale of Butter and Cheese. Approved March 2, 1881.

The People of the State of California, represented in Senate and Assembly, do enact as follows:
SEC. 1. Whoever manufactures, sells, or offers for sale, or causes the same to be done, any substance purporting to be butter or cheese, which substance is not made wholly from pure cream or milk, unless the same be manufactured under its true and appropriate name, and unless each package, roll or parcel of such substance, and each vessel containing one or more packages of such substance, has distinctly and durably painted, stamped, or marked thereon, in English, the true and appropriate name of such substance, in ordinary bold-face capital letters, not less than five lines pica, shall be punished as provided in Sec. 3 of this Act.

SEC. 2. Whoever shall sell any such substance as is mentioned in Sec. 1 of this Act, or causes the same to be done, without having on each package, roll, or parcel so sold, a label attached thereto, on which is plainly and legibly printed in English, in Roman letters, the true and appropriate name of such substance, shall be punished as is provided in Sec. 3 of this Act.

SEC. 3. Whoever shall violate Sec. 1 or Sec. 2 of this Act shall be guilty of a misdemeanor, and shall be fined in any sum not less than \$10, nor more than \$500, or imprisoned in the county jail not less than 10 nor more than 90 days, or by both such fine and imprisonment, in the discretion of the Court; provided, that nothing contained in this Act shall be construed to prevent the use of skimmed milk, salt rennet, or harmless coloring matter in the manufacture of butter and cheese.

SEC. 4. All Acts and parts of Acts in conflict with the provisions of this Act are hereby repealed.

SEC. 5. This Act shall take effect on and after its passage.

This looks like an effective law, and one might think at first blush that this law, together with the obtrusive obedience of the oleomargarine makers, would be sufficient to cover the case and protect the people from deception. But do not be easily assured of it. Although the oleomargarine makers may continue their branding, etc., it will only avail to a small extent, because the amount which will reach the consumer in the form it left the factory will be comparatively small. The stuff will be worked over in the back rooms and cellars of butter resurrectionists; it will be mixed in with percentages of genuine butter; it will be rehandled in the recesses of the corner groceries, and by the time it reaches the eye of the small purchaser, it will probably nestle in a Pt. Reyes box, or peep out of snowy linen as though it had just arrived in the basket of the rural housewife.

Now the law is supposed to reach even such cases, and by law each of these little parcels should be branded "oleomargarine." But will they be? Will the virtue of the makers reach so far that they will follow and stamp the product of the resurrectionist? Even if they were so perpendicular in their rectitude as to desire to do it, they could not.

The law is weak, in that it is nobody's business to ferret out and prosecute these offenders. Besides all its present provisions the law should provide a system of rewards to informants. Very seldom will a case arise unless there is some incentive to the detective to watch the retailer. The dairymen cannot, in the nature of things, see what is going on in the trade corners. The prosecuting attorney is not employed to hunt up offenders. The individual consumer will seldom be aware of what is going on. There must be an inspector to exercise constant vigilance in this matter, or else there must be an opportunity for amateur detectives to turn honest pennies by complaining of transgressions of the statute.

Probably no men are more aware of the weak points of the present law than the oleomargarine makers, and it is no wonder that they are noising abroad the fact of its existence. If they can spread the impression that there is already law enough on this subject, of course they or

their customers may be saved much trouble. Do not be deceived. The law should be improved so that its provisions may be brought to bear more directly upon the evil.

A COTTON CENTENNIAL.—The first exportation of cotton from the United States to England was made in 1784, and comprised eight bales. Upon arriving at Liverpool it was condemned as contraband, and seized by order of the Privy Council, who held that so large an amount of cotton could not possibly have been raised in America. In 1880 the cotton crop of the United States was 5,737,257 bales! At the last session of the National Cotton-Planters' Association the propriety of celebrating the centennial of the inauguration of the cotton trade was discussed, and the decision reached that a world's cotton exposition should be held at some eligible point in 1884. The selection of

Pastures.

There is some progress continually being made in spreading the area of pasture grasses in this State. Slowly the adaptations of certain grasses to the various soils found in different parts are being shown by experiment. According to a correspondent of the *Anaheim Gazette*, there is satisfactory progress being made on inferior lands which do not pay for cropping out which may be made to grow good pasture grass. He says that in such soil, in the neighborhood of Westminster and Garden Grove, the mixture of alfalfa, salt grass, burr clover, tulle, Bermuda grass, millet, rye grass and bunch grass makes the best of feed. Even the alkali wastes are now coming into value in this connection, and the free use of artesian water is helping the growths. The grass known as blue

A Japanese Temple.

We give on this page a picture of one of the religious edifices of the Japanese—a temple of Buddha. Buddhism was introduced into Japan from China, through Corea, in the sixth century of our era. It was persecuted for a long while, but gradually found favor, and is now the religion of the majority of the Japanese. Its temples are very numerous, and are crowded, not only on holy days, but regular and frequent sermons by day and in the evening are attended by attentive congregations. These sacred edifices are sometimes very large and imposing, and always occupy commanding sites, surrounded by scenes of natural beauty. They are generally built of wood, often of cedar, and the interiors contain quaintly carved and ornamented shrines, on which are placed a variety of images, varying in size from a child's doll to a colossus like that called the Daibutz, near Yokohama, which is a magnificent bronze statue, representing Buddha seated, of excellent workmanship and admirable art, 50 ft. in height and 96 ft. in circumference at the base.

Besides Buddhism there are many religions in Japan. The oldest, which is still the State religion, is Sintoism, the chief feature of which is the worship of the sun, of the elements and of the spirits of deified heroes. By this sect the *mikado* or emperor is regarded as an incarnate deity. The best educated and most intelligent of the people are followers of Confucius, the Socrates of China.

The Transit of Venus.

One of the most important astronomical occurrences of the century will take place on Wednesday next, the 6th of December. To the unaided eye or unscientific mind, it will pass without notice. But to the astronomer the event will be one of the utmost importance. What he hopes to gain by it is a true astronomical unit or celestial yardstick by which astronomical computations can be correctly made. This unit is the exact distance from the earth to the sun. That known, the radius of every orbit, the distance of every star, whose smallest motion is discernible, and the diameter of every planet can be determined.

The work of determining this unit is exceedingly difficult, by reason of its minuteness. It is equal, in that respect, to the measurement of the angle of a single hair at a distance of 800 feet. Even if our instruments were perfect, errors will arise from the uncertainty of even the best trained human eye. Hence many different observations must be made to avoid errors by obtaining a large average. To accomplish this end about 100 transit expeditions have been organized. The importance of correctness in the unit will be seen when it is stated that the nearest fixed star is 366,000 times the distance of the earth from the sun, and an error of, say 250,000 miles in the unit, must make that error 366,000 times as large when applied to the star, or nearly 93,000,000 miles. Hence it is no extravagance of expression to pronounce the present effort an attempt to solve one of the sublimest problems known to science.

HOPS IN CALIFORNIA.—J. D. Grant tells the *Healdsburg Enterprise* some of the strong points in hop growing on Russian river. He says: A good crop can be relied on for every year, and the average price will insure a good profit. In England, New York and Wisconsin not more than two crops are gathered in five years. Not only are climate conditions often unfavorable here, but the hop louse and other insects do much damage. Good land and proper training and cultivation will bring about a ton to the acre; at 20 cents or \$400 a ton, there is big money in the business.



TEMPLE OF BUDDHA IN JAPAN.

a site and the fixing of the date were left with the executive committee, who are about to solicit proposals from the cities most likely to desire the exposition. New Orleans, St. Louis, Baltimore, Cincinnati, Louisville, Richmond, Memphis, Nashville, Charleston, Mobile, Savannah, Montgomery and Atlanta are spoken of in this connection, and it is expected that for the location as high as \$500,000 will be offered by one or the other of the cities named.

SUBSTITUTES FOR HOPS.—Beer drinkers may be sure that they will have to swallow a mixed mess of bitterness as long as hops are high, for brewers will cast about for everything which will do to replace the hop. The *Oil and Drug News* says the brewers have purchased largely of chamomile flowers and calumba root, and this extra drain on the ordinary supply has sent the price of these articles to an extraordinary high figure. As these articles advanced, the brewers have been obliged to look further, and some of them have secured quantities of aloes. These purchases have in many cases been made under cover of an agent.

EXTRA EDITION NEXT WEEK.—We expect next week to issue another enlarged edition, to allow space for the many matters which are awaiting publication.

joint or rye grass is rapidly spreading, and gives the first green feed in the winter. They consider it their best pasture grass. This, with the Bermuda and the bunch grass, will grow in all soils, even the most alkali, with water, and when once started will spread indefinitely, except when stopped by plowing. The time is approaching when most of the waste lands will be fields of living green. The time has gone by for undertaking to farm defective lands. They have a certain value as pastures, and as such will pay as large a per centage on their valuation as the best lands in the county. The dwellers in that region are also satisfied that the period of deterioration of defective lands is past. There was a time when either water, or simple cultivation, by removing the surface covering, and facilitating evaporation, brought up alkali on a considerable part of our lands. The area of good land proof against this seemed at one time to be gradually decreasing. But now the process is reversed. A judicious use of water and cultivation is now restoring land. By use as pastures, with abundance of water, even the wastes begin to have a positive value. Alkali is certainly decreasing.

WHOLESALE prices of coffee in New York are lower now than has been known since the panic of 1857.

HORTICULTURE.

The Fruit Growers' Convention.

Full Reports of Addresses and Discussions

By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS. We shall continue the report from week to week, and issue it, when complete, in pamphlet form.—EDS. PRESS.

[CONTINUED FROM LAST WEEK'S RURAL PRESS.]

Mr. Geiger, of Santa Clara: I endorse what Mr. Jessup said and the last speaker, and a great portion of the letter of Mr. Williamson, in regard to pruning, especially of the cherry tree. The cherry tree is a specialty with me, and has been for the last 35 years of my life, and a man ought to be able to learn something in that length of time. I believe in low training; I believe in thinning out the large branches. Taking a tree from a year old, I cut it down to about three feet, and two or three or four branches will come out, the lower ones below the one you advance as a leader; when they get to be about a foot or 16 inches in length pinch them off, and let the leader go, don't interfere with that; if it grows 20 ft. let it go, but keep everything below that short by pinching when tender. The next year you want to prune your trees; do it about the time the bud is beginning to swell on a young tree; if the leader grows 10 ft., take it all away but about 20 inches. I prefer this system until a tree is about 6 years old. The last speaker says he has been considerably criticised; admit that because this is a grand departure from the old order of doing, but no matter, the proof of the pudding is always in the eating of it; as the last gentlemen said, finer fruit you can find nowhere. These men say you don't get any fruit, your tree all goes to wood. I give that point up, but what I do get will be fruit. You understand in the beginning, I am not working for a big tree, I am working for big fruit, and the fruit is there for any body to see. Well, in order to grow big fruit you must curtail the wood; you must keep the top in subjection; you must keep the root advanced. As the book says, have a small surface to be fed and a large feeding surface; that will give you large fruit—especially if it is a dry season. I rely more upon my pinching process, or spur pruning, than I do upon the knife; by that I consider that I increase my fruit two fold. Well, on the top of the tree, often six years old, there may be a great many little branches come out that are good for nothing; if you let them alone you have got to cut them out, and they are only growing at the expense of the tree. By the time they are six or eight inches long you will pinch them off and throw them bodily into fruit; they never make any more wood; they are foliage-bearers, and take from the tree if they don't get broke off. Every year I cut back short limbs and thin out the wood; that is the only way you can thin out the cherry tree; you thin out the top. You cannot go to work and pick this fruit off; it is impossible. All those larger branches I remove and saw them off, and smooth them over and sometimes cover it over with resin and beeswax and gum shellac, and the scar will have to stay there as long as the tree lives.

Mr. Wilcox, of Santa Clara: I apprehend that if we understood the habits of trees of all kinds, we would find there is no general rule that can be laid down for pruning—for instance, there are certain kinds of trees that bear their fruit on the ends of the stock; if you prune them off you lose your fruit crop. At the same time, I agree with Mr. Jessup in the practice of annual pruning. My first orchard was planted out in 1858. It was in a different climate from that we have here, and under different circumstances, and I had a different soil. There was less moisture in the ground, and required less pruning; but last year I planted out about 2,000 pear trees. I pruned them freely, as is my habit. Those trees now, some of them, are above my reach, they have grown so much; they are growing right in; they bring the tops in together. Now I must certainly prune those trees, or they will have no light or air, and certainly I must do it to give them shape. I won't raise an orchard without doing it, and where I am I think those trees will bear pruning every year (if I lived up on the Sacramento where Mr. Williamson does, perhaps my trees would need very little pruning). I have arrived at this conclusion in regard to pruning. It depends on the conditions altogether about how it should be done. One way will do in one climate or one kind of soil—a dry soil—and a moist soil will require different treatment. My trees are between strawberry rows. As long as I apply water they will grow bigger, and must have pruning. I think there is where the great trouble is—a man takes the rule from his own standpoint without considering all these circumstances.

Mr. Haines: I am deeply anxious that some member would give us some of his experience in apricot pruning. I have a small orchard of apricots. I left too much top upon them—trimmed them high, and the wind trimmed them too low for me. After the apricots had been harvested, I went to pruning those trees. I formed in my own mind the sort of a head I wished to put upon the tree, and pruned everything off in that symmetrical form which I saw. I pruned half of my orchard in that shape. Now, if there is any injury resulting from that, I do know that by that system of pruning the fruit buds will fill better, and it is more apt to

fill in another year with fruit buds. The only disadvantage I can see to that late system of pruning is, after cutting off we only see a few small twigs that are on the top of the tree. Will that successfully heal over? Mr. Jessup has just said that that was his system of pruning the cherry, but apricots ripen later than the cherry, and I, like others, would like to have a little of the experience of gentlemen who have been a long time in the business.

D. C. Vestal, of Santa Clara: I agree with Mr. Jessup in regard to the treatment of cherries, that the tree should be pruned low, and in my judgment they should be cut every year, when the tree is in full bearing. As to the apricot, I carry on a system of summer pinching or pruning in June or July, and I find by that means I keep the tree in subjection and throw the fruit back near the butt of the tree. In this climate we do not need a high pruned tree. I visited Mr. Haines' orchard soon after a cyclone, and I saw the result on his trees. A great many of the trees were broken down. With me I had very little or no trouble in regard to the wind. The pear and nearly all other fruit trees can be treated almost in the same way, in my judgment—that is, with this summer pruning. I have no trouble of any kind with trees I have treated with summer pruning. I believe in a low-pruned tree, and in thinning out the fruit and also thinning out the branches, and in this climate it seems to me that is about the end of that class of business.

Prof. Dwinelle: I rise here to call the attention of the gentlemen to some specimens in the other room that they might otherwise overlook or not understand. Mr. Jessup is a great advocate of the use of a good pruning saw or shear knife as against the pruning shears which are so largely used, and he has brought some specimens, at my request, to show the effect of the use of the common pruning shears, particularly on branches that have attained any considerable size, say half an inch and so on, where it shows brush, you might say, instead of the sort of growth that you want at the end of the branch that you have cut back. I do not know whether he also brought the saw which he uses and, I believe, invented, which to me seems the most perfect implement for anything like a heavy cut that I ever saw. I believe you will find them on the table in the other room. No doubt Mr. Jessup, for himself, will explain his views on the subject. I think that this matter of pruning is of the very first importance. I do not propose to go into details as to such trees as I have had personal experience with, but I do not believe, myself, that there is any fruit tree cultivated for cropping that is not better for judicious pruning. The olive was mentioned here as one that might be neglected. The best French growers do not take that view of it, and I believe that every fruit tree can be pruned with profit when you understand just what its needs are. There is certainly a great variety in the habits of trees as to where they bear, and consequently what wood to cut away, and what time of the year to prune. I was struck here, as I have been struck in reading and in conversation with others, at the variety of views already expressed as to the time of year to do the pruning, and it ranges, I believe, over the whole 12 months of the year. While many say never cut trees in the heat of summer, yet that is the universal practice of others, who produce the best fruit on the other side of the continent. I think there are rules which govern us in any given climate, soil, water supply, and so forth; but the main point is that people do their work frequently in a very rough way; they are not careful about the character of the cut; they are not careful about protecting the cut afterwards; they do not consider whether it is going to expose the tree to sunburn, and various other points, which, if they did have in mind, might enable them to prune in almost any time of year, and by almost any system, if it is a system, and carry it out with perseverance and profit.

Mr. Jessup: In reply to Mr. Dwinelle, I will state I have not that saw here now, as we were using all of ours in the orchard, and I wrote down to the city to have one sent up by express, and I presume it will be here this afternoon, if it is not here already. Now, in reference to the pruning shears, as Mr. Dwinelle says, I am bitterly opposed to the use of pruning shears in an orchard. I think there is as much damage done to the orchards of California to-day by the use of pruning shears as there is by the insect pests, to take the orchards of the State generally. There are a great many advocates of the use of the shears because it is rapid and less expensive, but I think in the end they will find it far more expensive than the use of the knife. There are a great many that advocate it, and say that if the shears are kept sharp and in order they will cut as smooth as a knife. The question for us to consider is not if it can be done, but if it is done. Can you find a man—can you put a man in an orchard that will use the pruning shears and cut as an intelligent pruner will with a knife and saw? You won't find one in a million; there is no such a thing done. I am a mechanic myself, and I can put a tool in as good order as any other man, but I can't produce the result on a tree with the sharpest pruning shears that can be made that I can with a sharp knife; and those specimens that Mr. Dwinelle refers to will show it to any man. There are limbs that have thrown branches out after being cut by the shears, thrown little broom-like rods out promiscuously through the bark—they force themselves out through the

bark without reference to any eye or anything, and have not the capacity of bearing fruit, and never would have if they lasted a hundred years; whereas, if you go with a sharp knife and out in a proper position, the first bud from the cut will take the lead, will run up from two to three or four feet in the proper way.

Mr. Hatch: Are there any of the apricot growers of this vicinity present that can give us their views on the subject? I would like to hear from them.

Mr. Owen: I will tell the gentleman how I treat my trees, and they have performed satisfactorily to me. I treat the apricot similarly to the peach and the cherry in regard to forming the top; I let them branch low, and I prune so as to keep them in shape; I don't let them run too straight; I don't let them run too long, but I train my limbs to keep them at a proper angle, and by so doing they grow up so that you can cultivate without interfering. I don't let them grow too long so as to come over on to the ground; I shorten them to hold the fruit, and don't let any more fruit grow on than they can mature; in this way I have kept my apricot trees in check. As for the time of pruning, summer pruning is certainly preferable; that is my experience, and that has been my experience for the last 30 years in pruning, and I might say that nearly all orchard fruit is improved and bettered by summer pruning.

A delegate: I would like to ask how large is your fruit when you prune?

Mr. Owen: I don't prune my trees when in bearing. I wait until the fruit is harvested—that is the cherry tree, but the apple tree I prune while the fruit is growing, and thin out the fruit and branches of apples and pears, and of prunes and peaches, and even apricots, while the fruit is growing. I am not particular about the month in which I prune. I generally carry my knife or my shears when I am going into the orchard, and I prune at all seasons of the year, without regard to the season at all; but my preference for pruning is in the summer season. I find that the wounds will heal over better. But where you want to produce more fruit—we don't want to do that with us, because the trees produce too much fruit, and we don't have that to do (I have my fruit to thin out)—but if you want to produce more fruit, you shorten in about the time it is forming the terminal bud, whenever that may be—about the time the terminal bud is being formed, when you shorten in, if you want to produce more fruit. But as to the trimming of the apricot tree, for that is what we are on, you should commence when it is young and encourage it to branch out. When you set out your tree, if you can form the top as I have before remarked, it will encourage these side branches to come out. I want to remark right here, setting out a yearling tree or a two-year-old tree, cut it back, and then in the spring when it throws out the side branches let every one of them alone; if they grow so thick you can't see your tree, let them alone until they make considerable growth, and then out afterwards—after the growth is done you can thin out, but as I have before observed, I don't allow my apricot trees to flag; and in that manner my trees stand staunch, the winds don't disturb them, they hold the fruit, the limbs stand out at the proper angle, and they are loaded with apricots from the butt of the tree to the end of the limb, and hold the fruit without the wind tearing the branches off.

Mr. De Long, of Marin: My trees have grown about four years; they have made a heavy growth; have grown heavy at the base; they have grown out, and so the fruit passes from one section right along to the other; the first sections to the tree this year have no fruit on them, all the fruit is on the remaining three sections. Now, I would like to know how to prune to get them in fix?

Mr. Owen: I have just gone through a portion of my orchard and taken off these long branches. I have shortened them in.

Mr. De Long: Do you shorten the last year's growth?

Mr. Owen: I even go into two and three years' growth. I keep them all in, it don't matter if you have to cut off 5 or 10 ft. of the limb. Cut off enough of it if you have neglected pruning and it has got out two or three times as long as it should be; take off enough of it to put it back to its place, and always thin out; the apricot needs thinning out as well as other fruit.

Mr. Johnston: According to the order of business, the time has almost expired for this discussion, but I desire to make one remark if the convention will allow me to do so without leaving the chair. My experience in fruit growing teaches me that four things are requisite in pruning trees: First, a good saw, a sharp knife, a strong arm and an active brain; the first three to execute, and the last to give time and place to act. [Applause.]

Mr. Jessup: If you will allow me one moment I will answer the gentleman here as to the way I prune my trees. If the top is too thick, after the tree becomes grown, I should thin out some of the larger branches, in order to open it up, and then to shorten in all of the main branches of the trees, that is, the lateral branches, every few inches on each side; in shortening in, as Mr. Owen says, no matter how far you shorten in, whether it is one, two or 10 ft., that will leave the tree then in an unshapely condition; then you take those laterals and shorten them in on the same system all the way around; wherever a lateral throws out a sub-lateral, you throw off the top, and so on to every lateral it throws out, and by that way you can thin out the trees to admit light and air and throw the bearing surface back into the tree; if you want to thin it

out, open it out. I find less difficulty in pruning a large apricot tree than I do a small one; I don't want to touch a small one; I can go into a large tree, 8, 10 or 20 years old, and can train it to my satisfaction; then you have got a guide, and can tell the limbs you want to save for the best fruit-bearing surface and for the best appearance; you leave them and remove the laterals, and then you have got the best way of proceeding.

The hour for the discussion of this matter having expired, on motion; the convention adjourned until Wednesday morning at 9 o'clock.

SECOND DAY.

The convention met at 9:30 A. M., Wednesday, Nov. 15th, Hon. Wm. Johnston in the chair. The minutes of the preceding session were read and approved. On motion of Mr. Hatch, it was agreed that the President should appoint the committees recommended in Mr. Cooke's report; also a committee on legislation. The Secretary read the following letter, which, on motion, was made a part of the proceedings of the convention:

Letter from Commissioner Gillet.

NEVADA CITY, November 13, 1892.

DR. S. F. CHAPIN—Dear Sir: It will be impossible for me to attend the Fruit Growers' Convention to meet at San Jose to-morrow. The early and constant rains this fall have interfered a great deal with my vine crop, and I am busy just now, while the weather is clear and cold, drawing my wine, having been prevented from doing it last week both by the wet weather and the election.

I intended to write a paper in relation to the questions set forth in the call for the convention, but time was too short for me to do so. I will therefore confine myself to brief remarks in connection with that subject. The first question reads as follows: Is the extermination of insects injurious to fruit and fruit trees a necessity? I say it is, for I am rather inclined to exterminate those noxious insects, if I can, than have my crop of fruit and my trees exterminated by those insects. I always recognize self-protection as a law of nature.

The second question is: Can such insect pests as infest the orchard, etc., be exterminated? That is the question. Against some of those insects we have found, it is true, good and efficacious remedies, while against others we have found nothing yet; and it is in this view that State and County Boards of Horticultural Commissioners have been created, so as to find the best remedies for fighting, checking or exterminating those enemies of our orchards, and to see that the laws for the protection of fruit and fruit trees be enforced. I say in the affirmative, that those insect pests can be exterminated, or at least their ravages checked; but it will require time, patience and a long study of those very insects' habits to enable us to find efficacious remedies for either checking their ravages or exterminating them altogether. All our hopes lie in practical entomology; but practical entomology is but a science of yesterday; and let me say right here that it is to the honor and credit of our State that in no country has practical entomology made such a marked progress as it has in California. Still there is an immense amount of work yet to be accomplished, and that is the reason of calling the fruit growers in convention and have them to discuss fully and intelligently this momentous question, so closely connected to their interests, and provide for the means of fighting successfully the insects' invasion.

The third question is: In order to protect the horticultural interests of the State, is legislation necessary, or should the present laws for the protection of horticulture be amended and repealed? I say also in the affirmative, that to protect the horticultural interests of the State legislation is absolutely necessary. The present laws do certainly need amending; in which way, that is to the convention to decide. But on one point I will be quite explicit: It is to have the horticultural interest entirely distinct from the viticultural interest, and not have one tacked to the tail of the other. In the interest of both horticulture and viticulture, let us have a separate and distinct organization. There is ample room for both.

Trusting that these views of mine will agree with those of the majority of the convention, you will be kind enough, dear Doctor, to lay before the convention my regrets at not being able to attend their very important meetings. Yours very truly, FELIX GILLET, Commissioner for the El Dorado District.

The paper by Mr. W. H. Jessup on new varieties was here read by the Secretary as follows:

New Varieties of Fruit

The importation of new varieties of fruit trees and plants, and why it should be stopped, is my subject; and why the need of importing old or new varieties are questions that are pretty well settled in the minds of most fruit growers, and the conclusion is not very favorable to a continuance of the practice, for it is condemned by many of the more prudent and observing of them. The most vital reason for discontinuing the practice is that, to the importation of plants, trees and scions, we are indebted for most of the hordes of destructive insects that are now agitating the fruit growers from one end of the State to the other. The phylloxera, scale bug, codlin moth, green aphid, woolly aphid, vine hopper and the cottony cushion scale (said to be the prince of devils amongst all the scale insect family), all of those, I believe, have been imported with plants, trees and scions; and if we continue the practice, there is yet to come the curculio, or plum weevil, yellows, black knot, and no one knows how many more unheard of scourges of the same kind.

And why is it that we do not need any more foreign varieties? The fine chance-seedling fruits brought out, and with many of superb quality, fully answers the question. There is no doubting the fact that we have the advantage of the most favorable conditions to be found in the world, under which fruits may be improved to almost an unlimited degree. We have a mild, genial climate; a strong, vigorous soil, producing strong, healthy plants; with a moderately dry and warm atmosphere during the blooming spring; with gentle breezes wafting the impalpable pollen of one variety, uninjured, for miles, to fertilize and hybridize other blossoms; but little wet, stormy weather during the blooming season to injure or destroy the pollen; instead of being beaten to the earth by cold, chilling rains and destroyed, it is wafted in every direction to fertilize its kind, and aid man in the improvement of varieties.

In addition to all these favorable conditions, nature has furnished us with a faithful helper; yes, one who pays us for the privilege of aiding

us, and one to whom we have given but little or no credit, at least for the aid he has rendered us in this voluntary and self-imposed duty—the honey bee. In my opinion it is Nature's hybridizer and man's helper, carrying the fine, dust-like pollen from flower to flower, never missing one; traveling miles laden with the fine impalpable fertilizer safely lodged in the fine, fur-like covering of his little body, uninjured by rain or dew, to be finally shaken off by quivering wings, and safely lodged in the open pistils waiting to receive it, and the work of hybridizing is complete. I have for years believed that we were, in a great measure, indebted to that industrious and much abused little creature for the fine chance-seedling that have been brought out. That we are wholly indebted to the causes named for all the fine seedling fruits brought to the public notice and exhibited at our horticultural meeting I have not the least doubt. Let that be as it may, we have those favorable conditions, unsurpassed by any other country in the world if we will but avail ourselves of them, and now is the critical moment for us to decide whether we will continue the importation of trees and scions until we complete the list of destructive insects and fungi, or will we discontinue it and rely on our own boundless resources (for both).

While some of the old standard varieties are strong and vigorous, and apparently not deteriorated by their great age, there are others which appear to be losing in vigor and quality—at least it seems so in our climate. This difference may arise from the totally different conditions existing here and in older countries where they have been acclimated. Many hold to the belief that they are all receding from the old standard, and wearing out by a constant grafting in and out for years. Nevertheless, they are endeared to us by their great age and our early recollections, and we would be loth to part with them; nor is there any need of doing so, as we have them and all the insect pests brought with them. But with all their faults we love them still.

But why should we continue to import those same varieties? Many of them are weak, sickly plants, at the best, coming from a climate so totally different from ours. We all know the difficulty of acclimating a plant reared in a climate differing as widely as ours does from that of the East or Europe; and the same reasons will apply with equal force in the matter of new varieties.

While our own new seedling varieties are strong, vigorous, healthy and thoroughly acclimated, I have been over 32 years in California, and have been a close observer of the horticultural products of the State, and I have yet to see the first feeble, sickly or stunted native seedling. Every encouragement should be offered by the horticultural societies of the State for the production of new native varieties, and every fruit raiser should allow all the seedlings to fruit that he can afford. The better and cheaper plan to do this is to allow the young trees to attain to two or three years' growth, and then top graft, leaving one limb of native tree to fruit; and if found to be worthless, it can be readily removed, and nothing is lost. On the other hand, if it is found to be worth cultivating, it can be worked from.

(TO BE CONTINUED.)

THE STOCK YARD.

California Stock Feeding.

In his report as a member of the Arid Lands Commission, to which we alluded last week, Judge T. C. Jones makes the following deductions from his observation of our prevailing methods of cattle feeding, etc. He says:

The system of feeding and management of this most important class of farm stock, so far as respects its influence upon the productiveness of the soil, is about as bad as it can be, if we except a portion of the dairies and a few herds of blooded cattle. The stock, as a rule, is without shelter throughout the year, which, on account of the wonderful mildness of the climate, is not injurious to the cattle. But with the large majority there is no feeding, summer or winter, or pasturing on cultivated grasses. Such grazing as the native forage plants yield is really of what may be denominated high excellence, but only during a small portion of the year, as we were told by the most reliable and practical graziers, not exceeding in average years four months. The native grasses and plants begin to grow, say in the latter part of November or beginning of December, but contain, as we learn, little nutritive value before April, and by the latter part of July they are mostly dried up and withered. Upon this dried forage, with the fat-producing seeds of some of the plants (as the bur-clover), the cattle subsist until, say January, and from that time to April upon the new grass that has started up from the seed since the rains. The consequence is that a large majority of the stock is found to be very low in flesh before the good grazing period arrives.

It is stated in the valuable work of Mr. John S. Hittell, entitled "Resources of California," that

Nineteen out of twenty of the cattle of California never get any food save such as grows indigenously with the open country, and they always suffer for it. From March to July the pasture is abundant and excellent, and the cattle are fat from July to October in ordinary years. The grasses and clovers, though dry and brown, are nu-

tritious, and the cattle still remain in good condition; but from October to January they grow lean rapidly, and almost every year a considerable number die by starvation. In 1856, 70,000 head died in Los Angeles county alone by starvation, one-third the entire number in the county, which has now (1879) but 27,000 in all. In 1863 and 1864 the loss by starvation was estimated at 200,000 to 300,000.

In the spring of 1863 Santa Barbara county had 97,000 head, and only 12,000 head in the spring of 1865.

Effect of this System.

As stated by Mr. Hittell, during this period, from March to July, the cattle are fat, or more accurately, they become fat by the latter part of this period, and the rapidity with which fat is accumulated, say during the months of May and June, is extraordinary; but it is observable that the muscular system, so severely impaired during the long period of poor keep, is not restored, and therefore the cattle which are fat are not fleshy, and do not weigh as cattle of the same age and quality that are well kept through the year.

The fact here stated is clearly demonstrated by the appearance of the beef in every butcher shop, which, as a rule, in summer and early autumn, shows an unusual quantity of fat inside and outside the quarters. But in depth and thickness the lean flesh is surprisingly deficient, as it is also in what is called the marbled characteristic, that is, the mixture of fat with the lean, so essential to excellence in beef.

The quality of the beef produced under this system is moderately good. It is as tender as the flesh of the same grade of cattle in the Mississippi valley, but it is not of high excellence in flavor, as might be expected from the character of the herbage upon which the cattle feed, which at the period of its highest excellence is, as wild grasses are generally found, without the agreeable perfume of the cultivated varieties.

It is well settled that grazing is essential to the production of the highest quality in juiciness and flavor, as well in mutton as in beef; therefore, in Great Britain, the cattle that are intended to furnish Christmas beef for wealthy epicures are "made" on grass alone, or in exceptionally severe weather in winter the cattle are allowed a little hay of the best quality. But they are never fed oil-cake or turnips, because of the supposed injurious effect upon the flavor of the flesh.

The same observations will apply to the products of the dairy, especially to the butter. California butter is sweet and well made. In no part of the country can less bad or rancid butter be found, or butter more generally well worked and properly salted. But with all this it lacks flavor—the high flavor of the Chester county (Pennsylvania) butter, or butter of other districts whose pastures abound in blue grass, white and red clovers, sweet-scented vernal grass, etc.

But we have observed a marked difference in the quality of these products when beef cattle have been fed corn, pumpkins, and the wild oats hay cut in proper time, and when the same, with carrots, beets, bran, shorts, etc., have been fed to cows, and especially where they have had a run on what is here called Australian rye grass, but which is really, we suppose, the same as the rye grass so generally cultivated in Great Britain and some of our Eastern States.

The alfalfa, too, so universally esteemed here, is beneficial in increasing the quantity of these products, though there is a difference of opinion in regard to its influence upon the quality, some insisting that it imparts an objectionable flavor to the milk and butter, while others insist that this is not the case. It certainly improves the color of the cream and butter.

Influences Upon the Soil.

From what has already been said, it is obvious that the system of breeding and grazing cattle in California is most seriously detrimental in its influences upon the productiveness of the soil.

In the first place, the cattle, during a large portion of the year, subsist on dry herbage, containing the most mesger per centage of nutritious or fertilizing matter, so that if all the excrement were saved and applied in the most judicious manner, where it was most needed, it would be of little value. But when we reflect that nearly all the cattle in California are out of doors night and day throughout the year, and a large portion on ranges that never expect to be cultivated, we see at once that the arable lands of the State, excepting those in a very few locations, derive but little benefit from the manure made by the large number of cattle (estimated at nearly 1,500,000) now grazed in California.

OZONE, says R. B. Warder, has been largely advertised within a few months as a new preservative for all kinds of animal and vegetable substances. The gas is produced by the combustion of a fine, dark powder of cinnamon odor. This substance consists of sulphur mixed with a little carbonaceous matter. On burning, only .09% of ash remains. The so-called "ozone" is sulphurous anhydride, whose destructive action on the germs of fermentation has long been well known.

TORPEDOES DOOMED.—The principle of the induction balance of Prof. Hughes has been utilized by Captain McVoy, in constructing an instrument by which the presence of a torpedo, anchor, electric cable, metallic portion of a wreck, or other metallic body in the water is detected by a telephonic communication. On approaching such a body, vibrations are produced in the instrument.

SHEEP AND WOOL.

The Market for Mohair.

Kitching Bros., of New York, have sent us a copy of their circular to mohair-breeders, from which we take the following: As mohair is now likely to become of more importance as a staple to manufacturers in the United States, it is requisite that producers should be encouraged in its production, and that they should obtain all correct and valuable information possible in relation to its uses, value, etc. As we are continually receiving letters asking for information relating to mohair, we take this mode of distributing some reliable information, which is of importance, and shows conclusively that the industry of producing mohair will not prove successful unless the greatest attention is given to improving the animals with pure stock, and producing superior hair. We know of one manufacturer who has used more or less hair the past year, all imported, on which he pays a duty of 12 cents per pound, and 10% ad valorem, and would not use any hair of American growth because he could not obtain it good enough. Another to whom we have been selling of late at 35 cents to 40 cents, writes us under date of March 24th, as follows: "The mohair that we are importing at 60 cents per pound cost is sort No. 36, and is cheaper than any lot of American mohair to be found in the market. We give you further particulars in another letter." In explanation of the above we beg to say that all mohair and wool has to be assorted into different qualities before being used, and that this sort of No. 36 is imported in that condition all ready for use, so that you will understand the further remarks he makes in more recent letters, extracts from which we will quote:

"We enclose you herewith a statement of a mohair purchase No. 10 (this refers to a purchase of American hair), which shows that No. 36 cost 57 cents, No. 30 cost 43 cents, to which added 2 cents per pound for assorting and handling, will bring No. 36 up to 59 cents and No. 30 up to 45 cents per pound. Now, the lot that we are importing is all No. 36, and is to cost us not over 60 cents per pound in New York; so you see we are not paying any more for the mohair stock when we purchase it assorted than when we buy from you unassorted, and sort it ourselves." We would here remark that the lot of American hair above referred to, purchased of us, cost 40 cents. "Another very important point is that in purchasing a lot of 5,000 to 10,000 pounds already assorted we have no loss, such as strings, clips and invisible waste, and we do not have to carry any carding stock for sale." The carding stock is the inferior part of the fleece, which cannot be combed, consequently they cannot use it, and are obliged to sell it again. "Now, if you can furnish us with assorted mohair, we will pay you 57 cents to 60 cents for No. 36, and 45 cents to 47½ cents per pound for No. 30." March 29th: "We acknowledge the receipt of your favor of the 27th inst., and would say that in purchasing mohair of domestic growth we are governed entirely by the cost at which we can import mohair of similar grade, but at the same time we would be willing to pay two or more cents per pound additional for domestic mohair, as an encouragement to the grower to ship to the New York and Boston market, where he could obtain it without the delay of waiting for importations. The greatest drawback attending the domestic mohair at the present time is that the quantity of full-blood mohair grown in this country is so limited that we cannot obtain enough of it from one grower's clip to make six pieces of goods exactly alike, which is a very important matter when we receive an order for 10 pieces of goods, or perhaps more, of same grade. From 26 purchases we have made of domestic mohair we have only obtained 2,627 pounds of No. 36, or full blood; consequently, to obtain a quantity of this grade grown from one flock, we ordered it from abroad, and are getting 6,500 pounds out of a lot of over 100 bales, with the privilege of taking the whole of this sort from the lot. If the domestic growers realized the fact that they could realize 50% more, without any more expense than they are now under, by raising full blood and No. 1 grades (by using only the imported sires), instead of the present low grades that are now being sent to the market, we have no doubt that the domestic mohair could be grown in this country equal to that imported; but until these suggestions are acted upon the domestic mohair grower must be content with a third or fourth class article, which in dull seasons will always remain a drug in the market."

Kitching Bros. add: The industry has increased. From the very small consignments of years ago we now receive it by the thousands of pounds. During the years '79, '80 and '81 there was really no demand for the article, and the growers were about discouraged, for many had their clip on hand during these years, and were tempted to dispose of their flocks. We were continually in receipt of letters from the owners making inquiries respecting the prospects, etc., and we have endeavored to encourage the growers to hold on, as a demand for the article would surely come. During the past year it has come into permanent use in this country. Two or three mills are engaged in producing fabrics requiring mohair exclusively, and now the trouble will be to obtain a proper

supply. They require good hair. The poor, or short and kempy stuff, there is also a market for now, and we hope that this will prove permanent, and we think it is likely to. We can, therefore, with the fullest confidence, encourage all growers to increase their flocks, always breeding up to the highest standard, and can assure them of a permanent and steady market.

ARBORICULTURE.

The Cork Oak (Quercus Suber).

EDS. PRESS:—Cork, from Latin *Cortex*, bark, is made from the bark of a species of live or evergreen oak, which grows abundantly in Spain, Portugal, France and Italy, Portugal producing the larger amount for shipment.

When the tree is about 15 years old, the bark-ing or peeling can begin, and afterward every eight or ten years. The quantity of the cork will increase as the tree grows older, but the quality of the cork not materially improved. Those thus peeled are said to live 150 years.

Time of peeling, July and August. After being stripped in wide, long slabs it is cut into lengths and widths convenient, and soaked in water and pressed out straight by heavy weights, and dried before a fire, then pressed in bales for shipment. The stopper makers cut it into long narrow strips and then in suitable lengths, and rounded by a sharp knife for bottles.

American ingenuity invented a machine that can equal the work of 20 men in rounding the corks. But the hand-made are yet considered superior. The ancients are said to have known of it and some of its uses. But not till the days of glass invention and bottles in the 15th century was it used much as stoppers.

The annual crude shipment is now estimated to be about 6,000 tons, and an equal amount used at home. There are large amounts used for other purposes besides cork stoppers. Nothing has yet been found so reliable for life-preservers, for which thousands of tons are used. There is no doubt but this beautiful evergreen oak could be grown as an ornamental and forest tree in our milder climates, and in a few years amply supply our own demands, unless the Yankees should, as with the India-rubber, invent too many uses for the bark. The best or most advanced experiments I know of this tree here in California is this: About 22 years since, the late B. D. Wilson, of San Gabriel, received from the Patent Office, Washington, a few of the acorns of the cork oak, which he planted, except seven acorns, which he gave to his neighbor, C. G. Hutchinson. They all germinated and promised to be great oaks in the future. Mr. Wilson had a very industrious hired man, who went into the garden to hoe up the weeds, and readily recognized the impropriety of live oaks growing just there, and chopped up the last one of them. Mr. Hutchinson gave away five of his, keeping two for himself, as he had little room to spare. The five given away were likewise found guilty of looking like the common live oak, and suffered the death penalty by the hoeman, and now these two witnesses of Mr. Hutchinson's are all that remain to bark for all that family of trees. Though they have been crowded, and moved to make room for some of assumed superiority, they now have attained the years of majority, and have a fixed character and vote among trees. The larger of the two is now full 40 ft. high, with circumference at top of the ground of 6 ft. 2 in., and fine straight body 20 ft. up to the first limbs. These bore acorns the 18th year—would probably, under more favored circumstances, have borne them earlier; have been once peeled of bark, and now have the second covering of cork bark about one and one-half inches thick at base, and growing slightly thinner on upward, till not more than one and one-eighth inches thick. The bark is a dark, ashy gray, with some seams longitudinal that resemble the partings in the fleeces of fine merino wool. The acorn is similar to that of common oaks; the crown cup differs only by having a heavy fringe around the rim (acorns weigh 79 to 1 lb.). Mrs. C. M. Roland, at La Puente, in this county, has some young trees growing from acorns of these trees that are yet in their infancy. This may meet the notice of some other parties who will let their barking trees be heard from. So far, I do not remember noticing any except these.

B. W. CROWELL.

Mission San Gabriel, Nov. 20, 1882.

A PRINTING PRESS RUN BY SOLAR HEAT.—Among the attractions of a recent fete in the Tuilleries Garden, in Paris, was an apparatus for the concentration and utilization of solar heat, and, though the sun was not very brilliant, this apparatus set in motion a machine which printed several thousand copies of a newspaper entitled the *Soleil Journal*. The sun's rays are concentrated in a reflector, which moves at the same rate as the sun, and heats a vertical boiler, setting the motive steam engine at work. About 15 years ago Prof. Mouchorn, of Tours, began the construction of an apparatus for the utilization of solar heat, and his experiments have been continued by M. Pitre. A company have now constructed a number of apparatus of different sizes. It is to be evident that in a country of uninterrupted sunshine the boiler might be heated in 30 or 40 minutes. A portable apparatus could boil two and a half quarts an hour.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

History of the Grange.

Once again the anniversary of the establishment of our Order is at hand, and it is particularly fitting at this time to look back over the years and see what we have accomplished, and how we stand. Fifteen years ago, on the 4th of December, the Order of P. of H. was organized in the city of Washington. The circumstances connected with the origin are as interesting as they are varied. Never before had the interests of the farming and rural population of this vast commonwealth been fostered by such an organization. Similar interests frequently encourage association. The belief that the future welfare and advancement of our agricultural interests demanded close alliance and organization induced the founders to persevere until the organization was completed. The Secretary of the National Grange, Bro. O. H. Kelley, a prominent gentleman of Itasca, Minn., must be credited with being one of the most prominent moving spirits figuring in the organization. This gentleman was given a commission in 1866 by Isaac Newton, then Commissioner of the Department of Agriculture, to visit the Southern States of the Union and make observations relative to the agricultural needs, conditions and prospects of that section. While on this mission, and seeing the general prostrate condition of the people, the war having proved disastrous to general industries, this gentleman immediately opened up a correspondence with friends in the North concerning the idea of a secret society of agriculturists, as an element to restore kindly feelings among the people. The idea was favorably received, and as a means to a more successful issue, it was decided to give ladies full membership—in a word, place them on an equality with men.

Returning to Washington in the winter, others were interested in the movement. From this on the work preparatory to the organization of the Order was rapid and successful. A ritual was drafted, the skeleton of the Degree of Maid being the first written. Correspondence was sent out to prominent agriculturists in various parts of the country asking for suggestions. The idea of the establishment of such an Order met with considerable favor, and many valuable suggestions were received, thus avoiding many false steps. In this case, as in all others, the idea that in much counsel there is wisdom, was exemplified. The matter of appropriate names for the grand and subordinate bodies was one long in being settled. Something applicable to the farm was wanted. The vocabulary was well nigh exhausted. Such epithets as "Rustics," "Mushrooms," "Fungi," and "Sons of the Soil" were suggested for the general name, and "Garden," "Grove," "Arbor," or simply "Homes," instead of "Lodge," as the name of the subordinate organizations. Finally, the names of Grange and Husbandry were decided upon, being used according to "Webster's Unabridged." It is said the name "Grange" was taken from a novel which was advertised at that time. Up to the middle of November of 1867 all the meetings held were decidedly informal. Previous to the meeting held December 4th the name "Patrons of Husbandry" and the motto "Esto Perpetua" were chosen.

The year 1867 closed with active work progressing towards making the principles of the new Order known, and in perfecting the organization already effected. Early in February a circular setting forth the aims and objects of the Order was issued. Secretary Kelley now started on a tour through Pennsylvania and the States of the Northwest for the purpose of organizing Granges and introducing the new Order. From that time the success of the Grange has been assured.

The principles appealed at once to a very large proportion of our population. Many obstacles have been overcome. As another has said: "It started without the prestige of

wealth, fame or official position; with no man of national or wide State reputation among its founders; so hard pressed for funds that it began its existence by running in debt."

The history of the early progress of the Order is interesting and instructive. At the end of the first year but 10 or 11 Granges had been organized, and the membership was but little over 600. At the end of the third year the membership was about 5,000, and there were 88 Granges. In 1871 there were 125 Granges organized; 1872, 1,362; 1873, 7,668; 1874, 11,941, during which year 24 State Granges were organized.

In 1875 885 new Granges were organized. At this time the weeding out and consolidating process began, and Secretary Kelley in his report on the 10th annual session of National Grange, held at Chicago, November 16, 1876, says "885 new Granges have been organized during the last fiscal year, and 24,800 since the origin of the Order. Of the number, 650 have surrendered their charters, 550 have had their charters revoked at the national office, 7,000 are known to be delinquent in payment of dues to their respective State Granges for one quarter or more, 800 have consolidated with other Granges, leaving 15,800 paying subordinate Granges and a total paying membership of 550,000 in the United States. At the eleventh annual meeting, held at Cincinnati, 160 new Granges were reported to have been organized, and at the 12th annual session, held at Richmond, Va., 69 new Granges.

During the year ending Sept. 30, 1880, 44 Granges were organized; the following year there were 57. With the fiscal year ending

Meeting of the National Grange.

Last week we gave a telegraphic outline of the proceedings at the opening session of the National Grange, at Indianapolis. We now continue, sketching the leading items of procedure, leaving a fuller transcript of important matters until the receipt of more extended advices.

On the evening of the first day a social meeting was held, which was well attended. Governor Porter delivered a welcome address. He spoke for some time about the benefits of the Grange, and was roundly applauded. Congressman Aiken, of the sixth district of South Carolina, responded on behalf of that State. He was followed by H. Eshbaugh, of the State of Missouri. Next came Robert Mitchell, for Indiana, and J. H. Brigham, for Ohio. August Cooper Bristo, of New Jersey, read a poem on "The Old World Righted." E. H. Hilburn, of Canada, spoke for half an hour on behalf of the Grange interests in the Dominion of Canada. He was followed by C. L. Whitney, associate editor of the Cincinnati Grange Bulletin. Dr. J. M. Blanton, of Virginia, spoke for sometime and caused much merriment by his good-humored remarks. After some music by the choir the meeting adjourned.

The following is a complete list of the members present up to the evening of the first day: B. R. Harrison, Helena, Ark.; Daniel Flint and wife, Sacramento, Cal.; John J. Ross, Milford, Del.; H. R. Deadwiler, Dare's Creek, Ga.; E. A. Gillen and wife, White Hall, Ill.; Aaron

The evening session was devoted to the conferring of degrees, which was conferred on 187 of the members.

Third Day.

In the morning additional reports were heard from Masters of State Granges who did not arrive in time to report the previous day. After their reports were given, the regular business of the Grange was resumed. A great deal of material was placed in the hands of appropriate committees, which is to furnish them work for the coming year. A large portion of it looked to the legal questions which affect the Granges over the country. Grand Master Armstrong, of New York, reported for the Committee on Commerce that that body had appeared before the Congressional Committee on Commerce and properly presented the questions relating to railroad business, which was put into their hands for such presentation. It was also recommended that the bill known as the Reagan bill, now before the National Congress, be endorsed by the Convention. The report was referred to the proper committee.

C. B. Whitney, of Cincinnati, was, after a lengthy discussion, appointed associate editor of the Grange Bulletin, the official organ of the Order.

In the afternoon Lieutenant Dunwoody, of the Signal Service, addressed the Convention.

Mrs. Governor Porter entertained the lady members of the Grange in the afternoon at the Grand Hotel.

Fourth Day.

The morning session was occupied in hearing reports of committees, which consisted principally of adverse reports to proposed legislation.

The report of the committee on the advisability of admitting in the State Granges members who reside in counties where there is no Grange brought on a lengthy debate. The adverse report of the committee was finally sustained. Commissioner Loring's letter, regretting his inability to be present, was read. A resolution asking the Grange to memorialize the United States Senate to pass a bill already passed by the House elevating the Agricultural Commissioner's position to a place in the Cabinet occupied the afternoon session.

The evening was spent socially by the members of the convention at the residence of Gov. Porter, on North Tennessee street.

Fifth Day.

An invitation was read from the United States Commissioner of Agriculture, requesting its attendance in Washington next January. The Master of the convention was instructed to select three delegates to represent the Grange. Following this was a paper on "Railroad Transportation," which occupied nearly all the balance of the session. It is as follows:

Report on Transportation.

All excessive taxes levied upon products of labor necessarily increase their cost to the user, or diminish their value in the hands of the producer. In the former case demand lessens, in the latter production is discouraged. In both traffic is impeded. Transportation charges have the nature of a tax, but in so far as they are just, traffic easily adjusts itself to the condition, for it has new fields, with new demand, and by operation of natural laws, the products of labor seek the highest market through the cheapest transportation. Thus, when these interests have harmonious adjustment, the producer may be stimulated to increased effort, the carrier may have full reward for service rendered, and ultimate use may be augmented, commerce extended, industry encouraged, and natural gain may accrue to all interests involved. When this result attends fair division of service, it promotes general prosperity, and where secured to the people of any country, becomes an element of wealth. When this beneficent adjustment prevails over a wide extent of territory having diversified products, profitable interchange is made, and wider range of desire gratified. Commerce ministers to the tastes, interests and wants of men. It is a civilizing influence. With the people of this country it strengthens the bond of union. Between us and foreign nations it begets kind relations while ministering to the pleasures of all. But it is fluctuating, unstable, sensitive to change, and if not regulated by the principles of justice, its mission fails. And when it makes successful usurpation of power it becomes an instrument of extraordinary discouragement, and may even destroy industries from which it had derived support.



BIRTHPLACE OF THE GRANGE—OFFICE OF WILLIAM SAUNDERS, WASHINGTON, D. C.

Oct. 1, 1882, 72 were organized in the United States, and 14 more since then.

Thus has the Order of Patrons of Husbandry grown. Much credit must be given to the influence of woman in connection with this Order, for without them, probably, it never would have been known. Without woman's co-operation it could not have made its wonderful progress, and only while their membership is retained can we expect to continue it successfully.

Birthplace of the Grange.

As pertinent to the anniversary of the date of the organization of the Order of Patrons of Husbandry, we give an engraving of the building in which the idea of organization was first embodied in due form. In John G. Wells' book, "The Grange Illustrated," from which we reproduce the engraving, we take the following paragraph:

On the evening of the 4th of December, 1867, at the office of Mr. Saunders, then on Fourth and a-half street, between Missouri avenue and the old canal, there were assembled less than 10 persons, and there and then the National Grange was organized, and the following officers elected for five years: William Saunders, District Columbia, Master; J. R. Thompson, Vermont, Lecturer; Anson Bartlett, Ohio, Overseer; William Muir, Missouri, Steward; A. S. Moss, New York, Assistant Steward; Rev. A. B. Grosh, Philadelphia, Chaplain; William M. Ireland, Philadelphia, Treasurer; O. H. Kelley, Minnesota, Secretary; Edward P. Faria, Illinois, Gatekeeper. At this meeting no lady officers were elected, although provision had been made for them in the constitution, but at a subsequent meeting the four officers, Ceres, Pomona, Flora and the Lady Assistant Steward, were elected, as well as the Executive Committee.

Jones, South Bend, Ind.; D. W. Jones, Manchester, Is.; William Sims and wife, Topeka, Kan.; J. L. Neal, Harrodsburg, Ky.; Daniel Morgan, Louisiana; Governor Fred Robie and wife, Gorham, Me.; H. O. Devries and wife, Mariottville, Md.; James Draper and wife, Worcester; Cyrus G. Luce, Gilead, Mich.; Thomas Tunis Smith, St. Paul, Minn.; Put Darden and wife, Fayette, Miss.; H. Eshbaugh and wife, Hanover, Mo.; George A. Wason and wife, New Boston, N. H.; Isaac W. Nicholson and wife, Camden, N. J.; W. A. Armstrong, Elmira, N. Y.; W. H. Clark and wife, Watertown, N. C.; J. H. Brigham, Delta, O.; R. P. Boise and wife, Salem, Or.; Leonard Rhone and wife, Center Hall, Penn.; J. N. Lipscomb, Chappelle, S. C.; T. E. Harwell, Asen Hill, Tenn.; A. S. Rose, Salado, Tex.; A. B. Franklin and wife, Townshend, Vt.; J. M. Blanton and wife, Farmville, Va.; R. W. Baylor and wife, Summit Point, W. Va.; S. C. Carr and wife, Milton Junction, Wis.

Second Day.

The morning session was devoted to hearing reports from the different States. In the afternoon the standing committees were appointed. We notice that Bro. Flint serves on the following committees: Finance and Dormant Granges, and Sister Flint on the Committees on Credentials and Good of the Order. The following are some of the more important committees:

Cooperation—Eshbaugh, of Missouri; Devries, of Maryland; Baylor, of West Virginia; Rose, of Texas; Deadwiler, of Georgia.

Transportation—Armstrong, of New York; Lipscomb, of South Carolina; Robie, of Maine; Smith, of Minnesota; Gillen, of Illinois.

Good of the Order—Brigham, of Ohio; Baylor, of West Virginia; Cheek, of North Carolina; Mrs. Nicholson, of West Virginia; Mrs. Flint, of California.

Agriculture—Darden, of Mississippi; Luce, of Michigan; Armstrong, of New York; Blanton, of Virginia; Rhone, of Pennsylvania; Neal, of Kentucky.

Education—Harwell, of Tennessee; Smith, of Minnesota; Rose, of Delaware; Mrs. Eshbaugh, of Missouri; Mrs. Robie, of Maine.

Within the present century a new system of inland transportation has had origin and surprising development. Its invested capital today is nearly as great as the whole assessed value of the land, improvements, money and manufactures of all the Union a half century ago. Its lines traverse every State, intersecting and intertwining, as the ramifications of commerce have directed. They extend in unbroken connection from ocean to ocean, though thousands of miles intervene; they reach from the great lakes to the gulf; they interlace a continent, and in their cold embrace grasp the commerce of every region. The system thus extended and ramified has brought unnumbered blessings, and has unlimited capacity for good with corresponding capacity for evil. It has grown and developed with surprising rapidity, and without regulating restraints, until now it has become the indispensable agent of commerce while executing its behests, its hard master when the will of its directors so inclines. Its immeasurable possibilities challenge admiration, and they have not yet reached full development. Its slender threads, interwoven like the spider's web, in like manner entrap the products of industry to satisfy the predatory instincts of managers. That they may serve wisely to extend and amplify trade no one doubts; that they do not is equally clear. Viewed as a system, the railway lines of this continent are a marvel, while their management is a menace to the freedom of a people, the products of whose industry give profit or loss, according to the degree of pressure in transit, more or less, as a power wholly irresponsible may decide.

Such is the history, development and character of our railway system and its management; but there is more to contemplate if we would meet the peril it brings and await disasters clearly portended.

Corporations that control railway transportation are moved by impulses and desires in no way different from those that direct individual acts, but they seem strangely unmindful of responsibilities and impatient of restraint, which is even more necessary to their welfare than for the people who ask that wholesome regulation be provided. Railway corporations assail the integrity of Legislatures when they attempt to dictate construction, as they do, and they offend morality when they employ bribes, as they do, to influence legislation. Permeated with lust of power, they cannot feel throbs of the public pulse beating with quickened measure because of anxiety to establish regulations that may serve as safeguards against dangers clearly foreseen in the exercise of power that commands legislators, who yield obedience; power that invites a court to hold sittings in railway offices, and has compliance; power that violates every sense of right in its amazing exactions; power that offends decency and invites contest when it flaunts its arrogance in the challenge, "the public be damned."

The people, patient and long suffering as they are, cannot yield. They must still be supreme. They desire no contest, but if it must come, they will triumph at any cost. The creature cannot be greater than the power that creates. It will not do to trust the varied industries of this country to co-operations that throttle them when the operation turns temporary profit to their coffers. It will not do to subject commerce to the discriminating desire of masters who say, "at this point it suits us to develop, at that to repress"—masters who may subtract a 100,000,000 from the value of agricultural products the day after returns from a fruitful harvest are completed, and it is no fiction to say this subtraction has more than once been made. If this was done by the general Government it would be overturned. It would be regarded as unbearable; yet railway managers may add five cents a bushel to transportation charges for corn and wheat from the grain fields of the West to the seaboard after an abundant harvest is gathered, and the thing is done. These grains have not one cent of added value in foreign markets, the ultimate destination of the surplus, yet there has been more than a hundred million subtracted from their home value, no matter whether they are transported or not.

There is something wrong when corporations organized for a public service can direct the profits of labor to their coffers with no regulating force to intervene; something to correct them when a Ceres springs from monetary resolve; something to regulate when individual wealth, by absorption, swells from a modest competence in a few years, a score or less, to a hundred million, to two hundred million. That these things have happened is matter of common notoriety. What shall be done to save for their use what the people earn may not at present be entirely clear, yet it is certain that a way to reach the attainment is possible, that it is feasible, and that we cannot afford delay. There must be governmental supervision, if not control, of railway transportation. Happily, several States, moved by instincts of self-preservation, have established Supervisory Commissions, an important step, because of the publicity that will thus be given to methods hitherto concealed, and consequent enlightenment that will serve to illuminate farther progress. Regulation by the general Government, in so far as it may be applied without impairment of vested rights, will be another very important step, and it should be taken at once.

Still another influence, most potent in its effect, is the improvement of water channels until they attain the highest degree of usefulness. We therefore command judicious measures plan-

ned to make the Mississippi river available for all commerce that may seek its channels, even though the improvement may cost many millions more than have been appropriated. We commend the wise forethought that has induced citizens of New York to abolish tolls on its canals, and will view with favor any suitable measures employed by the general Government to obtain possession of the Erie canal and subsequent enlargement of its capacity to meet the needs of a commerce rapidly growing, whose benefits, diffused as they will be by cheap transportation, will justify the cause of making a ship canal from Lake Erie to tide-water, and maintaining it forever free from tolls. With these regulating influences the problem of railway control must reach partial solution; and for the rest we ask that certain elementary principles of management be established by law, for instance, fixity of rates, publicity of accounts, absolute prohibition against all discrimination as between individuals or localities, such rules to be provided and enforced by the States interested and by the general Government, as these respective rights may require.

W. A. Armstrong, N. Y.; J. N. Lipscomb, S. C.; F. Robie, Me.; T. T. Smith, Minn.; E. A. Gillen, Ill.

Address of the Master of the National Grange.

The address of W. M. J. J. Woodman, at the session of the National Grange, is a masterly document, and is being received with much satisfaction everywhere. We give herewith certain leading portions, and will present other extracts as space allows:

I am confident that the harmonious action, well-digested measures, and practical work of our last session, has inspired confidence among our members, and strengthened the subordinate Granges throughout the land. It has also removed prejudices, by making the principles which underlie our Order better understood, and, consequently, better appreciated. It has raised our organization to a higher plane of usefulness, enlarged its influence and demonstrated to the world that this farmers' movement—the first of its kind that has ever come to the farmers' aid—is worthy the support of not only every farmer in the land, but of every lover of good society, good government and general prosperity; and that every well-directed effort put forth by this body to elevate agriculture, by advancing the interests and bettering the condition of those who till the soil, cannot fail of success.

Let it not be forgotten that all there is of our great brotherhood is in the subordinate Granges. There all strength and power lies, and from them all means for work, and all authority for action emanates. No member can be advanced to a higher position and maintain it, if his record and standing in his subordinate Grange is questionable. Whatever a majority of these Granges asks of this body through their representatives here will be granted, as far as there is authority to act, and I can say with pride and satisfaction—whatever may have been said and written to the contrary, notwithstanding—that never, to my knowledge, has a petition, resolution, or memorial been presented to the National Grange from any subordinate County or State Grange that has not been duly considered; and in no instance has the submission of an amendment to the Constitution of the Order, or change in the laws, been asked for by any considerable number of State Granges, that the request has not been granted. It is right and proper for subordinate Granges to instruct their representatives to the State Grange, and for State Granges to instruct their representatives here; and I cannot believe that any members of this body here have ever disregarded the instructions of their State Grange. The government of our organization is a pure democracy, and in this its great strength and permanency rests. Every member stands upon an exact equality, all alike eligible to any office in the Order; and the higher degrees which are conferred in the State and National Granges are open and free to all alike. An organization based upon principles so just, with objects and aims which challenge the admiration of the world, cannot fail.

The great purposes which we aim to accomplish cannot be too often repeated or too well understood. We aim to make the daily lives of men and women better, and nobler, and truer, and holier, and happier; to encourage education, social and moral culture, and a better development of the noble faculties of our natures; to provide for ourselves and our families comfortable homes, unincumbered farms, and a fair remuneration for our labor; to beautify our homes and increase their attraction for our children, and their love for them and our profession, and thereby induce the boys to stay upon the farm; to prevent family jars, dissensions and separations, to lessen neighborhood strife and disagreements, and prevent litigation, by providing for the settlement of matters of difference between neighbors by arbitration in the Grange; to increase the profits of our farms by better cultivation, greater diversity of crops, closer study of the market and better understanding of the laws of trade; to "systematize our labor," and our business, and "practice economy in all things,"—discarding "the credit system, the mortgage system, the fashion system, and every other system tending to prodigality and bankruptcy;" and thus bridge over the chasm between labor and its results with joys and blessings, which make labor pleasant, healthful and honorable, and the laborer contented and happy; to encourage home manufactures, and every branch of productive industry—bringing the producer and the consumer into the closest and most intimate relations, and thus create a home market for our surplus products; to encourage the building of railroads and canals, and the improvement of our rivers and harbors, and thereby secure cheaper transportation for our products to market; and to demonstrate to the world that agriculture is a science and farming a profession, and all who are engaged in it closely allied in interests and sympathy, and can co-operate in an organization for their own mutual benefit and protection, as well as those engaged in the other avocations of life. Such is a brief summary of the principal objects and purposes we are endeavoring to accomplish, and are accomplishing through the influence of our organization.

How to Improve Grange Meetings.

The Grange will prosper more as its members habitually at meetings discuss intelligently and helpfully agricultural and domestic questions of specially direct interest to farmers and their households. Choose first a topic likely to create a lively interest without provoking hard feelings on the part of any members.

Let members write out during the present long winter evenings a short but well considered paper to start up a discussion and bring out the views of others present. In this method an exchange of opinions will be made between each other that will be of lasting benefit and sharpen the desire of many of the best members to attend the Grange regularly.

Others not given to writing can carefully consider in their minds the most telling points to be expressed in discussing some particular subject, during their leisure or even working hours; and so be prepared as soon as occasion offers to stir up an impromptu debate that will interest and be of value to a meeting that otherwise might go for naught.

It is an important point that, to start with, the speaker, whoever it be, should have the subject so well considered that the time of the listeners will be paid for in good thoughts and ideas, however homely delivered. Thereby an interest will be secured inspiring to others to speak upon the subject.

The Master can do much by encouraging this kind of exercise on the part of his members from time to time, and in pleasant ways urge patrons to speak upon all opportune occasions. Especially should the modest sisters, the young and the new members, be kindly led into discussions.

TEMESCAL GRANGE.—There was a goodly attendance at the last meeting. Bro. A. D. Nelson, of Butte county, who was visiting his son-in-law, ex-Councilman Walter, of Oakland, was heartily welcomed. Warming up with the progress of the meeting, he gave a good sample of his weighty Grange speeches, which was listened to with interest. Several members expressed strong and decided opinions concerning the R. R. treatment of the Mussel Slough settlers, with emphatic sympathy for them and a sincere desire to aid them in obtaining their just rights. Bros. Webster, Carrington and Wolle were appointed a committee to examine into the matter further, and report information and resolutions for further consideration. Kind words and action of the Grange prevailed for P. M. Dr. Ezra S. Carr, a noble and talented member, now in feeble health at Pasadena. The next meeting occurs on the first Saturday evening in December. On the third Saturday the meeting will open at 1 o'clock P. M., an hour earlier than usual, on account of the election of officers for 1893.

News in Brief.

DIFFICULTY is experienced at Eureka in obtaining timber sawed at the mills for ship building purposes.

THE recent sale of the Hamilton Palace collection has enabled the Duke of Hamilton to resume control of his estate.

A COMPANY with a capital of \$750,000 has been organized at Pittsburg, Pa., to manufacture spikes and nails out of steel.

THE Sultan of Morocco has authorized Spain to take possession of the ports of Santa Cruz, Delmar and Pequena on the coast of Morocco.

THE Dublin police maintain that they are on the track of the murderers of Lord Cavendish and Under Secretary Burke, and appear sanguine of effecting their arrest.

THE Grand Junction in the Grand River valley, on the Utah extension of the Denver and Rio Grande railway, 425 miles from Denver, has opened for business.

THE School Directors at Nevada City recently refused to admit four Chinese pupils to the public school, and now the lawyers of that city are preparing to make a test case of it.

CREMATION has established a firm foothold in Italy. At a convention just held in Modena there were representatives of twenty-seven cremation societies established in different Italian cities.

THE general condition of English financial affairs is now tolerably good, the only disturbing element coming from the New York stock market, and as a consequence, American railway stocks are slumped.

HERMAN ALLEN died at Whitehall, N. Y., recently after a peculiar illness, lasting 12 years. He appeared to have dropsy, and was insane at times. A post mortem disclosed that his liver had entirely wasted away.

RUSSIA has concluded a new loan for \$40,000,000, which brings up the total of her outstanding debt to \$2,765,000,000. What is most noteworthy is the fact that her debt has almost doubled since 1872, the annual deficit in her finances averaging \$120,000,000, whereas 20 years previous it was only \$55,000,000.

A MERCHANT of Chicago, Saturday night, awakened by the ringing of his telephone bell, proceeded to his store with which the telephone was connected, where he found burglars at work. He exchanged shots with them and drove them off. It was found that they had blown open the safe, the detonation having caused the telephone to ring.

AGRICULTURAL NOTES.

CALIFORNIA.

CONTRA COSTA.

PRUNES AND NUTS.—Antioch Ledger, Nov. 25: We recently purchased some prunes at one of the stores in town, and upon expressing our surprise at their size and delicious flavor, were still further surprised at the statement that they were raised and cured by Mr. Walton, on Marsh creek. They are of the Hungarian variety, and are the finest we ever saw. The firm that has them on hand sold all they could spare to a San Francisco firm, and informs us that the demand exceeds the supply. This being so, why should not our orchardists set out more of these trees? The prune is one of the finest and most healthy fruits grown, and in its dried or cured state can be shipped to all the markets of the world. The demand for almonds and other nuts is also good, and those who have raised them hereabouts have been generally successful. This also should engage the attention of our orchardists.

LOS ANGELES.

AGRICULTURAL ACTIVITY.—Commercial: Mr. Seward Cole, of Cabuenga, reports great activity in plowing and sowing in that fine agricultural region. The Brea Rancho will be nearly all planted to wheat and barley this winter, and the Los Feliz rancho will be largely planted, while all small land owners will increase their acreage considerably. The recent rains have afforded plenty of moisture for plowing, and the plows are very busy putting in golden grain to await the coming showers. Mr. Cole is cultivating about 500 acres in an excellent and profitable manner. Col. A. H. Miller will put in 1,000 acres of barley adjoining Mr. Cole. In the valley in an almost continuous field will be 10,000 acres of wheat barley and oats. In the west end of the San Gabriel valley, to the north and east of Pasadena, a remarkable activity prevails. About 4,000 acres are being plowed that were never plowed before. About half of this land will be sown to grain and the rest planted to orchards and vineyards. Among the vine-planters will be the Woodbury brothers, who will add 650,000 vines to their present vineyard. Mr. J. M. Hill will plant 75,000 more; Col. J. Banbury, 45,000; while about 20 other settlers will plant from 10,000 to 20,000 apiece. Mr. Crank will add 200,000. Farther east 500,000 vines will be planted by Mr. C. C. Hastings, so that the northwest part of the valley will in a few weeks add 2,500,000 vines to the present number in that section, while the San Gabriel Wine Company will on the south add a million more, making of new vines 3,500,000 to be planted this winter, in less than half the geographical area of this valley. This year will make San Gabriel the largest vineyard growing valley in the State, with 7,000,000 vines of all kinds. A large number of apricots, pears, prunes, citrons and miscellaneous fruits will also be planted. Our readers abroad will bear in mind that these valleys are but a small part of the county of Los Angeles, which is an opulent empire of itself, and only in part developed. By and by it will be the admiration of the world.

GRAPE SHIPMENTS.—The grape season is about over. Messrs. Woodhead & Gay have concluded not to ship any more this season, as they have become too ripe to ship well. There will still be grapes in the local market until Christmas. An enormous quantity of this fruit has been shipped this season, averaging in price about three cents per pound.

MERCED.

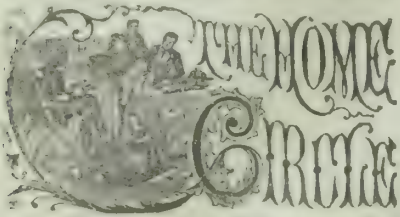
MILK DAIRY.—Argus, Nov. 25: We visited the dairy of Mr. A. C. Hall on Wednesday last. It is situated on the bank of Bear creek, in northeast part of Merced. The place is owned by Wm. Atwood and is the most convenient situation as well as the most pleasant for the purpose it is used of any in this vicinity. Mr. Hall has 25 milk cows, and the corral and barn are neat and clean and kept in the best order. The ground floor of the barn is covered with sand, and no pains are spared to keep everything as tidy as it is possible for such a place to be kept. The cows are fed on good fresh hay and pumpkins. The proprietor, Mr. Hall, told us that he had already fed several tons of the latter to his cows this season, and still we saw at least five tons lying on the floor of the barn. Great pains are taken in chopping them for feed.

NAPA.

EARLY SEEDING.—Farmers in this part of the valley are very busy at present, plowing and seeding, making the most of the fair weather. One rancher living near town has already about 100 acres seeded to wheat. Some farmers had large crops of corn which did not ripen before the rains came, and the loss on these fields will be considerable. The aggregate of this cereal in this valley seriously damaged by rains is large. Some is yet in the field. Owing to the recent advance of barley in the San Francisco market, many farmers will be tempted to sow a large acreage to that grain this season. Barley has ruled low for several years; now it commands \$1.61 to \$1.66 per cental.

SHERRY OVEN.—Joseph Mathos has at the present time 35,000 gallons of wine baking in his sherry oven, which will be taken out next February. Four months' treatment is required for the perfection of this wine. His new stone fire-proof cellar, commenced three years ago,

(CONTINUED ON PAGE 429.)



Three Good Doctors.

The best of all the pill-box crew
Since over time began,
Are the doctors who have most to do
With the health of a hearty man.

And so I count them up again,
And praise them as I can;
There's Dr. Diet and Dr. Quiet,
And Dr. Merryman.

There's Dr. Diet, he tries my tongue,
"I know you well," says he;
"Your stomach is poor, and your liver is sprung;
We must make your food agree."

And Dr. Quiet, he feels my wrist,
And he gravely shakes his head,
"Now, now, dear sir, I must insist
That you go at ten to bed."

But Dr. Merryman for me,
Of all the pill-box crew!
For he smiles and says, as he fobs his fee,
"Laugh on, whatever you do!"

So now I eat what I ought to eat,
And at ten I go to bed,
And I laugh in the face of cold or heat;
For thus have the doctors said:

And so I count them up again,
And praise them as I can;
There's Dr. Diet and Dr. Quiet,
And Dr. Merryman.

—S. W. Duffield, D. D.

A Thanksgiving Story.

[Written for the RURAL PRESS by I. H.]

"I must write to Mary to-night," said Mr. Ellet, as he rose from the breakfast table.

His wife looked up, and answered, with something like a sob in her voice:

"Oh, Henry, we cannot have them this year. I am sorry to disappoint the children, but I could not bear it."

"No, dear," he said, gently; "I am sure they will not expect it." Then, as he bent to kiss the tearful face, he added: "Try to remember, darling, that we have still much to be thankful for."

"I will—I do; but there are some days very hard to bear, and that will be the worst of all."

Brought up in New England, Thanksgiving day had been to Mrs. Ellet the great festival of the year. Such pleasant memories gathered round it as she recalled the happy days of her childhood at the old homestead far away, the dear old grand-parents who had yearly welcomed home their children from far and near, the merry troop of cousins who had filled the house with glee. Coming to California after her marriage, she had tried even in her city home to keep up something of the spirit of the day. Her husband's sister, who lived in a neighboring town, was always invited to come with her whole household to the annual feast, and no effort was spared to make the day full of happiness to all.

By a strange coincidence, her two little daughters had been born on the same day of the month, though in different years, and last year Thanksgiving day had fallen on the double birthday. How well she remembered its happy hours, from the early dawn, when two little white-robed figures had stolen into her bed-room for a birthday kiss, to the evening, after the joyful children's party, when they had knelt at her knees to thank God for all the blessings He had given them.

And now there were two little green mounds in the cemetery watered by a mother's tears; there was an empty room beside her own; a silent house where no little footsteps came and went, and in her heart an aching void nothing earthly could ever fill. What wonder that she dreaded the coming of Thanksgiving, with its sad contrast between the past and the present?

She went upstairs after her husband had gone out to his business, and opened the door of the "children's room," as she did every morning. It had pleased her to keep it just as it was before her darlings had been taken away. The sunlight fell upon the low white bed, there were flowers in a vase on the table, a canary in his gilded cage poured out his morning song of gladness.

It was one of those beautiful November days peculiar to our California climate, when the air is full of a spring-like softness; the window was open, and she sat down beside it, buried her face in her hands, and gave way to her own sorrowful thoughts. Presently the sound of childish voices in the next yard arrested her attention. She did not know the family who had lately come to live in the humble little cottage next door, but she had seen a sweet-faced little woman who seemed to be the mother of a flock of children—two or three sturdy boys, a creeping baby, and another a very little older, and two little girls just the ages of her own. These she had seen with a pang almost of envy. They were talking together under her window now.

"But why can't we have any new dresses?" asked the youngest, nearly ready to cry.

"Oh, Nellie, don't you understand?" It was a patient, motherly little comforter. "It is because mamma was so sick. It took all the money, every bit, to make her well. Wouldn't you rather have mamma than all the new dresses in the world? I'm sure I would."

"Well, if she hadn't got sick we would have had her and the new dresses, too. I don't see what made her sick. I want a new dress, and I want to go to grandpa's, and I'm not happy one bit."

"Then you are not good," said the elder sister; "you know what mamma says, people can always be happy if they are good. Come, now, Nellie, mamma will fix our old dresses and make them look ever so well, and if we can't go to grandpa's she will do something to make us a good Thanksgiving."

"I don't want any Thanksgiving," the little one still complained; "I don't see why we can't have things like other people."

"Poor baby," said Mrs. Ellet, with a sigh, and then she left the window and went and knelt down beside the little bed. She was not consciously praying, but how many of our silent thoughts are really prayers to which our Father sends a gracious answer? For as she knelt there her husband's words came back to her. Was she unthankful? Was she selfish in her sorrow? Might there not be something still for her to do in making other little children happy, now that her own needed no ministry of love from her?

A sudden thought flashed over her. She arose and opened a closet door; there were her precious things, the garments worn by her little girls; she had never meant to part with them. She chose two pretty plaid dresses they had scarcely worn, the lace ruffles were still in the necks as they had been sewed there in preparation for a Sunday which had never come on earth for them. She checked her tears as she folded them with tender, trembling hands. Then the pretty gray cloaks were laid beside them, and the dainty little hats. Why should she keep them now? She found a box that would hold them all, and on a slip of paper she wrote these words: "Dear Madam, will you allow your little girls to accept a small present from a sorrowing mother who would like to make them happy?" The note was placed in the box, and Nora was called from the kitchen and sent to carry it to the lady in the little brown cottage.

In a short time she returned with a message: "Would Mrs. Ellet allow the lady to see her for a few minutes?"

She could scarcely refuse, and she went down to receive her visitor. Such a pretty little woman, with a soft, sweet voice and blue eyes full of tears as she took Mrs. Ellet's offered hand. "I could not help coming to thank you for your kindness; the children are almost wild with delight—but I do not know that it is right to accept what it must be hard to give."

"It is not hard," was the answer; "wait till I tell you what I overheard this morning." And then followed the conversation of the two little girls. Something in Mrs. Ellet's manner won the confidence of her visitor, and before they parted she had heard all the story there was to tell. The mother's illness in the summer had taken all their money, as the children had said, and soon after the father had lost his situation as book-keeper to a wholesale house by the failure of his employer.

"He is willing to work to do anything for me and the children," said the little woman, with pardonable pride, "but it is so difficult to find a position, even with such recommendations as he has. He is working now as a porter for a small salary, and we have a hard struggle to keep out of debt."

"What was it the little girls said about going to their grandfather's?" Mrs. Ellet asked.

"Oh, we have always gone to my father's, in the country, to spend Thanksgiving; but it is a little extra expense, of course, and this year we cannot afford it."

Mrs. Ellet's hand went to her well-filled purse. "Please let me send you this time. Do not refuse me. It will help me to bear my own burden."

What could the other woman say?

When she was gone there was still another duty to fulfill. Could she try to make these little strangers happy, and forget those who were nearer to her? A letter was written to the sister in the country, and in it were these words: "Come to us, dear Mary, as you have done for so many years, and though the gladness of our home is gone, we will do what we can to make it a true Thanksgiving day for all the blessings still left to us."

When Mr. Ellet came home in the evening, heard the day's history, and read the letter to his sister, he was less surprised than he would have been if he had not known what a true-hearted and conscientious woman he called his wife.

And so Thanksgiving day came, and instead of sitting down alone to brood over their sorrow, these two opened their doors and their hearts to all who had any claim upon them, finding for themselves at the same time unlooked for comfort and blessing. The little cousins missed the dear children who had always welcomed them, and walked with quiet step and spoke in gentler tones; the sister, who from a mother's love could guess a mother's grief, was the best comforter who could have been found; and a long, quiet talk with her was full of consolation.

And in the evening Mr. Ellet said to his wife:

"I have something for you to do to-night that I am sure will give you pleasure. I met Jones to-day in a terrible stew; his bookkeeper has left him at a day's notice. 'What on earth am I to do,' he said; 'I don't know where to find any one without advertising, and that will bring a thousand poor fellows on my head at once, and I shall have to disappoint 999, and probably choose the worst of the whole lot.' So I told him to go home and eat his turkey with a quiet mind, and you would send him a protege of yours in the morning, armed with recommendations testimonials and all."

"Oh, Henry, do you really mean it?"

"Really and truly; so now if there is a light in the little brown house showing that they are at home, you had better run in and tell them."

In after years the friendship thus begun between the two households grew to be something very strong and true; and many a time did Mrs. Ellet say to her husband again as she said that night: "Dear, I could not have believed that there was still so much happiness possible for me on earth."

Walnut Creek.

A Chapter of our Civil War History.

[Prepared for the Press by Mrs. CLARINA I. H. NICHOLS.]

Anna Ella Carroll.

[Concluded from last week's RURAL.]

The Military Committee, through Senator Howard, in the 41st Congress, third session, unanimously reported that "Miss Carroll did cause the change of the military expedition from the Mississippi river," etc., and the same committee, in the 42d Congress, second session, as found in the memorial, reported through Hon. Henry Wilson, the evidence and bill in support of the same. Again, in the 44th Congress, the Military Committee of the House favorably considered this claim, and Gen. A. S. Williams was prepared to report, and being prevented by want of time, placed on record that this claim is incontestably established, and that the country owes to Miss Carroll a large and honest compensation, both in money and honors, for her services in the national crisis. "In view of all these facts, this committee believe that the thanks of the nation are due Miss Carroll, and that they are fully justified in recommending that she be placed on the pension rolls of the Government, as a partial measure of recognition for her public services, and report herewith a bill for such purpose, and recommend its passage."

In speaking of this report in a letter to a friend, Miss Carroll says: "It is a complete recognition of my public service on the part of military men, both Confederate and Union brigadiers belonging to the Military Committee."

Statement of Hon. B. F. Wade,
Chairman of the Committee on the Conduct of the War, made April 4, 1876:

Dear Miss Carroll:—I had no part in getting up the committee; the first intimation to me was that I had been made the head of it. But I never shirked a public duty, and at once went to work to do all that was possible to save the country. We went fully into the examination of the several plans for military operations then known to the Government, and we saw plainly enough that of all the time taken to execute any of them would make it fatal to the Union. We were in the deepest despair, until, just at this time, Col. Scott informed me that there was a plan already devised that, if executed with secrecy, would open the Mississippi and save the national cause. I went immediately to Mr. Lincoln and talked the whole matter over. He said he did not wish to doubt that the plan was feasible, but said there was one difficulty in the way—that no military or naval man had any idea of such a movement, it being the work of a civilian, and none of them would believe it safe to make such an advance upon only a navigable river, with no protection but a gun boat fleet, and they would not want to take the risk. He said it was devised by Miss Carroll, and military men were extremely jealous of all outside interference. I pleaded earnestly with him, for I found there were influences in his Cabinet then adverse to his taking the responsibility, and wanting everything done in deference to the views of McClellan and Halleck. I said to Mr. Lincoln: "You know we are now in the last extremity, and you have to choose between adopting and at once executing a plan that you believe to be the right one, and order the army or order to the opinions of military men in command and lose the country." He finally decided he would take the initiative, but there was Mr. Bates, who had suggested the gun-boat fleet, and wanted to advance down the Mississippi, as original y designed; but after a little he came to see that no result could be achieved in that mode of attack, and united with us in favor of the change of expedition. He was determined that, if placed at the head of the War Department, he would have your plan executed victoriously, as he fully believed it was the only means of safety, as I did.

Mr. Lincoln, on my suggesting Stanton, asked me how the leading Republicans would take it; that Stanton was so fresh from the Buchanan Cabinet, and a many things had told of the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so, to take the proposed movement. It was determined that as soon as Mr. Stanton came in the Department Colonel Scott should go out to the western armies and make ready for the campaign in pursuance of your plan, as he has testified before committees. It was a great work to get the matter started. You have no idea of it. We almost fought for it. If ever there was a righteous claim on earth, you have one. I insisted he was our man withal, and brought him and Lincoln into communication, and Lincoln was entirely satisfied; but so soon as it got out, the doubters came to the front: Senators and members called on me. I sent them to Stanton, and told them to decide for themselves. The gun-boats were then nearly ready for the Mississippi expedition, and Mr. Lincoln agreed, as soon as they were so,

Housekeeping.

One of the best things about housekeeping is that it requires the exercise of the highest faculties of the human mind; we see women every day who are statesmen in the wise management of affairs, calm, independent and self-possessed in emergencies. Some of the best traits of character are constantly cultivated.

If any class of women can be said to have virtues thrust upon them, it is the housekeepers of our day. If every woman would set before her as an aim that is worthy of all that is strongest and best in her, to conduct a well ordered home, a good deal of happiness and real beauty would be gained. How many faces, once lovely, are transformed by the addition of those wicked little lines about the eyes and mouth, which come from having fretted over necessary work?—work, too, which, if properly engaged in, would not injure the doer.

There are times, probably, when the happiest wife and mother thinks with longing of Thorau's housekeeping at Walden Pond, and admires his resolution in throwing the fragments of limestone with which he had ornamented his desk out of the window when he found they must be dusted every day; but there is absolutely no use in fretting over petty annoyances, and since the danger of falling into the habit is great, every sensible woman will endeavor to look on the bright side of all her troubles. Suppose the baked potatoes should be eaten the moment they are done, and an important member of the family, knowing the dinner hour, is late; don't worry over the matter; every such little worry indulged in is like a chisel deepening the lines already formed by some real trouble. Everybody, it is feared, knows women who never seem really to rouse up to enjoy anything, unless it is a misfortune, and who remind their guests of the dinner Charles Lamb describes, where roast lady was served with every course.—E. W. B., in *New York Post*.

An Honorable Man.

Recently there appeared among the dispatches from Washington one to the effect that Lewis W. Ayers, of Clifford, Pennsylvania, had requested that his name be stricken from the pension roll, as he did not consider himself entitled to a pension. Though suffering from disability, it did not seem to him that any soldier is honestly entitled to a pension who is able to work and provide a living for himself and family, and this he has been able to do most of the time, since his discharge from the service. This request is as singular as it is honorable. It is certainly refreshing to find a man, having anything of a claim at all, who does not want a pension. This is in such striking contrast to the unthinking majority of politicians, who consider everything right in politics, that the correspondent from the capital city thought it important enough to telegraph over the country. There are so many now, in the time of monopoly and Star Route thieving, that think anything is right as regards the Government, providing they can be sly enough not to be detected. The action of Mr. Ayers comes like a ray of sunshine out of a cloud. It shows us that there is still some honor and magnanimity left. It gives us a better idea of humanity, and convinces us that the swindlers of our Government and their noble(!) and high-fed counsel, who deem it a privilege to do the dirty work in upholding them and trying to throw dust in the eyes of the law and the people are only a class. In this signal action there is honor of the highest type shown, and it would be well were there more men of this kind.

HELPING MOTHER.—There is a time before boys become strong enough to labor hard at farm work when they could do much to "help mother" with her too arduous duties; nor would we have them stop when they are big enough to hold a plow or ride the mowing machine. It is not necessary to mention the many, many ways that boys can "help mother" wonderfully; there are certain duties peculiar to every farm household, and there are others that differ widely; so each boy should be on the lookout for the best way to lend his assistance. In general, a mother has too much running about the house to do, and I think if a boy were to try to "save steps" for her he would be doing her an inestimable favor. Hard work at sewing and mending, at washing and ironing, at cooking and scrubbing is hard work, but will not many a mother say with me that it is the continual running about the house, here and there, up stairs and down, that tries her most? Some day mother will be bowed down in sickness and her body may be racked with pain; how gladly you will then help her; how eagerly run at her slightest nod! But why not do this for her now, and thus, it may be, ward off the sickness and pain that comes from overwork?

BURNING GAS WITHOUT FLAME.—At a late soiree of the Secretary of Chemical Industry, held at Owen's College, Mr. Fletcher, of Warrington, England demonstrated the possibility of the combustion of gas without visible flame, the heat obtained from a quarter inch gas pipe being sufficient to fuse iron into drops.

DOES THE SUN LOSE ITS HEAT?—In a paper read by Dr. C. W. Siemens before the English Royal Society lately, the ground was taken that all the heat and energy sent from the sun find their way back to the great solar center, which thus suffers no diminution of its forces.

Young Folks' Column.

Lena's Thanksgiving Dinner.

(Written for RURAL PRESS by M. L. H. A.)

Thanksgiving day was Lena's birthday. For two weeks Lena had begged her father to let her have a birthday party. At last her father asked her which she had rather do, give a birthday party to her rich friends, or give a large Thanksgiving dinner to 50 poor children.

Lena thought a while, deciding that she would rather give a Thanksgiving dinner.

"Because," said she, when her father asked which she was going to have, a dinner or a party, "my friends are rich and can get all they want, while these poor children are so poor they can hardly get enough to eat."

"Generous-hearted Lena," said he, "you shall give the largest Thanksgiving dinner ever given in this city, and you shall invite a hundred poor children if you want to."

The next day, Wednesday, was the day before Thanksgiving day. The servants and everybody were busy except Lena, and as she had nothing to do, she went to her room and sat down to think.

All at once a bright look came over her face, and she said, "Who is going to invite these poor children, and why could not I give each one a basketful of provisions to take away with them?"

She forgot that she had said this aloud.

But the next moment her father came in and said to her, "Lena, I heard what you said a moment ago, and if you still want that wish, you can have it."

"Oh!" cried Lena, "how shall I thank you?" "I have received my thanks already," replied her father.

Lena was silent a moment, and then said, "Who is going to bring those poor children here to-morrow?"

"Well," said her father, "I have a friend whom I told to bring them here." Here ended the conversation. Thursday morning when Lena arose and looked out of her window, everything looked so beautiful that she exclaimed, "Oh, how pretty everything looks; just the kind of a day to have for Thanksgiving day!"

Her guests began to arrive about half-past 11 o'clock. They were poorly clad, but they had clean faces, smooth hair, and happy, loving hearts.

After they had all arrived, they sat down to dinner. After dinner they played, and had a very pleasant time. They all united in declaring it was the best time that they had ever had. Lena's Thanksgiving dinner was a success.

When Lena's friends heard that she was not going to give a party, they all declared that "they never saw anybody so mean," but Lena did not care for their remarks. For when she saw her guests going home with cheerful faces, and each one with a basket on their arm, she felt that kindness was not without its reward. Stockton, Cal.

Bless His Heart.

In a very elegant palace car entered a weary-faced, poorly dressed woman with three little children, one a babe in her arms. A look of joy crept into her face as she settled down into one of the luxurious chairs, but it was quickly dispelled as she was asked rudely to "start her boot."

A smile of amusement was seen on several faces as the frightened group hurried out to enter one of the common cars. Upon one young face, however, there was a look which shamed the countenances of the others.

"Aunt," said the boy to the lady beside him, "I am going to carry my basket of fruit and this box of sandwiches to the poor woman in the next car. You are willing, of course?"

He spoke eagerly, but she answered: "Don't be foolish, dear; you may need them yourself, and perhaps the woman is an impostor."

"No, I'll not need them," he answered, decidedly, but in a very low tone. "You know I had a hearty breakfast, and don't need a lunch. The woman looked hungry, auntie, and so tired, too, with those three little babies clinging to her. I'll be back in a minute, auntie; I know mother wouldn't like it if I didn't speak a kind word to the least of these when I meet them."

The worldly aunt brushed a tear from her eye after the boy left her, and said, audibly: "Just like his dear mother."

About five minutes later, as the lady passed the mother and the three children she saw a pretty sight—the family feasting, as perhaps they had never done before. The dainty sandwiches were eagerly eaten, the fruit basket stood open.

The eldest child, with her mouth filled with bread and butter, said, "Was the pretty boy an angel, mamma?"

"No," answered the mother, and a grateful look brightened her faded eyes, "but he is doing angels' work, bless his dear heart!" And we, too, said: "Bless his dear heart!"

You often say, "How much good I would do with my money, if I were as rich as that man, or the other." How much good do you do now with what you have? "Oh, if I had only time what would I not learn?" How do you spend the time you have?—*Scattered Seeds*.

What a Kansas Girl Did.

I am a young girl, fourteen years old, and I will tell you what out of door life in Kansas has done for me. We came to this State when I was eight years old. I had been sick all my life, and could never go to school more than two months at a time without being so sick that I must have a doctor.

We first went to southeastern Kansas, but I was not better there. Then we came to Graham county, and I rode an Indian pony and helped to drive some cattle all the way. I wish I could make such a trip every season. I have herded cattle every summer since we have been out here, and sometimes in the winter. Now I am a great big girl, larger than my mamma, and my health is nearly perfect.

I do not have much time to get lonesome, for besides herding, I milk five cows twice a day, help feed the calves, and do a great many other chores. I find a great many things besides fleas and mosquitoes out here. Two years ago I caught a young antelope, and I catch a good many jack-rabbits.

I read about the little girl who made money out of chickens. I think she did well, and I will tell how I am making money out of two dollars that had been given to me in silver dimes, quarters and half dollars for pocket pieces. I bought a little tiny pig, and fed it milk out of a tin cup at first, and it grew very fast. When it was large, I traded it for a heifer calf that was four years old. She has brought three calves, and her first calf had a calf this spring. So you see I have five head of cattle.

I traded two steer calves this spring for heifers, so my little herd are all females now. I am not rich, but it is a little more than the two dollars I brought to Kansas.

GOOD HEALTH.

Cause and Cure of Rheumatism.

Common rheumatism is a disease which affects the joints, the hinges of the body, in such a way that the slightest motion of the ailing parts gives pain. A creaking hinge is dry and turns hard. A single drop of oil to moisten it makes a wonderful change, and it instantly moves on itself with the utmost facility. All kinds of rheumatism are an inflammation of the surface of the joints. Inflammation is heat; this heat dries their surfaces; hence, the very slightest effort at motion gives piercing pain. In a healthy condition of the parts, nature is constantly throwing out a lubricating oil, which keeps the joints in a perfectly smooth and easy-working condition. Rheumatism is almost always caused—indeed, it may be nearer the truth to say that it is always the result of a cold dampness. A dry cold or a warm dampness does not induce rheumatism. A garment, wetted by perspiration or rain or water in any other form about a joint, and allowed to dry while the person is in a state of rest, is the most common way of causing rheumatism. A partial wetting of a garment is more apt to induce an attack than if the entire clothing were wetted; because, in the latter case, it would be certainly and speedily exchanged for dry garments. There are two very certain methods of preventing rheumatism. The very moment a garment is wetted in whole or part, change it or keep in motion sufficient to maintain a very slight perspiration until the clothing is perfectly dried.

The failure to wear woolen flannel next the skin is the most frequent cause of rheumatism; for a common muslin or linen or silk shirt of a person in a perspiration becomes damp and cold the instant a puff of air strikes it, even in mid-summer. This is not the case when woolen flannel is worn next the skin.

The easiest, most certain and least hurtful way of curing this troublesome affection is, first, to keep the joint affected wound around with several folds of woolen flannel; second, live entirely on the lightest kind of food, such as coarse bread, ripe fruits, berries, boiled turnips, stewed apples and the like. If such things were eaten to the extent of keeping the system freely open, and exercise were taken, so that a slight moisture should be on the surface of the skin all the time, or if in bed the same thing were accomplished by hot teas and plentiful bed clothing, a grateful relief and an ultimate cure will very certainly result in a short time. Without this soft and moist and warm condition of the skin and an open state of the system, the disease will continue to torture for weeks and months and years.

Inflammatory rheumatism may, for all practical purposes, be regarded as an aggravated form of the common kind, extended to all the joints of the body, instead of implicating only one or two. For all kinds, time, flannel, warmth, with a light and cooling diet, are the great remedies.—*Hall's Journal of Health*.

UPPER ROOMS HEALTHIEST.—At a recent sanitary Congress in England the Hon. F. A. Russell said that it was found that in the upper rooms of a house a drier atmosphere prevailed than was found in lower levels. Such rooms are also more comfortable in cold or foggy weather. The practical conclusions seemed to be that invalids and delicate persons should generally be placed in high and sheltered situations, in the highest rooms of a house, and by no means on the ground floor; that every house ought to be built on arches, or thoroughly ventilated underneath.

DOMESTIC ECONOMY.

ELECTION CAKE.—Take three pounds of sifted flour, leaving out a pint to put in with fruit, and mix in warm, fresh milk till it is stiff batter; weigh one and a half pounds sugar, one pound of butter; mix them to a cream, then mix one-half of this with the batter of milk and flour, and one-half pint of good home-made yeast; beat very thoroughly together, when light, which will take several hours in winter (better mix at night and stand in a warm place till morning), add the remainder of butter and sugar with six eggs and one pound of raisins, one glass of brandy, cinnamon, mace or nutmeg, according to taste, and a little soda. It should rise the second time before putting in pans for baking. The more such cake is beaten the finer and lighter it will be.

CHOCOLATE PUDDING.—A very delicate chocolate pudding is made of one quart of milk boiled with one ounce of grated chocolate. Sweeten to suit your taste and flavor with vanilla. After it has boiled so that the chocolate is thoroughly dissolved and mixed with the milk, take it from the fire and let it cool. In about 20 minutes, and possibly in less time, it will cool enough to stir in the beaten yolks of six eggs. Put in a pudding dish and let it bake until it is of the consistency of baked custard. While it is baking beat the whites of the eggs to a stiff froth, adding six tablespoonfuls of powdered sugar; then spread this over the top of the pudding, and let it brown quickly.

TO FRY CALF'S BRAINS.—They should first be washed in three or four waters; the skin should be removed, and then they should be boiled in salt and water with a little vinegar added to it. Boil them for from 10 to 15 minutes; take them out then, and let them lie in cold water till you are ready to use them. Make a batter of the yolks of eggs and fine cracker crumbs; cut the brains in slices, dip them in the batter and fry them in very hot fat—either butter and lard mixed or beef drippings. Garnish with fried parsley, if convenient. Small beets boiled and cut in rings make a good garnish also.

GYPSY PIE.—Cut shreds of any kind of cold meat and put them in the bottom of a buttered pudding dish; cover with finely chopped onions, and a light seasoning of salt and pepper; above this put a very thick layer of quartered apples, sugar and lemon; then a thin layer of meat and onion; fill up with apple, sugar and lemon; cover with puff paste and bake till brown in a slow oven. Thinly sliced ham or veal is very nice for this pie, but beef may be used or lamb. It is sometimes called "medley" pie. Very little onion should be used.

LAMB WITH RICE.—Boil a cup of rice soft, adding a little milk at the last, and season to taste with salt; put in a buttered baking dish, and in the center lay your cold meat in good shape, and nicely trimmed; put some bits of butter over the rice; some gravy over the meat, if you have any, and a thin layer of rice on top; cover close and put in the oven till thoroughly steamed through; then remove the cover and brown. Beef may be treated the same way. A teaspoonful of curry powder mixed with the gravy before it is poured over the meat is a great addition.

MINCED VEAL.—Mince cold veal with fat and kidney. Add pepper and salt, and a little cayenne; also a small onion and a little parsley, chopped fine, some minced cold ham and a few whole oysters. Put these into a deep pie dish, lined and edged with pastry. Beat up the yolk of one egg, with water enough to moisten the meat, and pour it over. Cover it with grated bread crumbs about an inch deep. Stick very small pieces of butter on it, and bake it in an oven till it is all a light brown.

A SAVORY STEW.—Take the remains of a cold fowl, cut in pieces and put in a stew-pan. Add two ladlefuls of soup, one tablespoonful of anchovy sauce, one tablespoonful of flour, and sufficient water or stock to cover the meat; one large cut onion (first fried in butter), cayenne pepper and pickled oysters. Stir it and stew gently for two hours. Cover it close, and when serving up squeeze half a lemon over the whole.

FRUIT CAKE.—A good common sort of fruit cake is made of five cups of granulated sugar, three small cups of butter, one cup of milk, six eggs, one wineglass of wine and one of brandy, 10 cups of flour, two nutmegs grated, two pounds of raisins, one pound of English currants and one quarter of a pound of citron. This cake keeps well.

TAPIOCA CUP PUDDING.—This is very light and delicate for invalids. An even teaspoonful of best tapioca soaked for two hours in nearly a cup of new milk; stir into this the yolk of a fresh egg, a little sugar, a grain of salt, and bake it in a cup for 15 minutes. A little jelly may be eaten with it.

ONION FLAVOR.—If you wish to give a delicate and yet distinct onion flavor to the dressing for a fowl, boil the onion till tender, changing the water twice; then chop it in very small bits, just as if it were raw. Roast goose and wild duck gain to most palates by having the dressing thus flavored.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 258 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$1 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

Advertising Rates	1 week.	1 month.	3 mos.	12 mos.
Per line	25	80	\$2.20	\$5.00
Half line (1 square)	\$1.50	\$3.00	10.00	24.00
One inch	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, December 2, 1882

TABLE OF CONTENTS.

EDITORIALS.—Rogus Butter and the Law; Pastures: A Japanese Temple; The Transit of Venus, 421. The Week; The Danger in False Butter; The Dairymen's Movement, 428.

ILLUSTRATIONS.—Temple of Buddha in Japan, 421. Birthplace of the Grange, 424. Diagram of Elevation of D. O. Shattuck's Dairy Barn; Ground Plan of Mr. Shattuck's Barn, 428. Misses' Street Costumes, 428.

HORTICULTURE.—The Fruit Growers' Convention, 422-3.

THE STOCK YARD.—California Stock Feeding, 423.

SHEEP AND WOOL.—The Market for Mohair, 423.

ARBORICULTURE.—The Cork Oak (*Quercus suber*), 423.

PATRONS OF HUSBANDRY.—History of the Grange; Birthplace of the Grange, 424. Meeting of the National Grange, 424-5. Address of the Master of the National Grange; How to Improve Grange Meetings, 425.

AGRICULTURAL NOTES, from the various counties of California, 425-9.

NEWS IN BRIEF, on page 425 and other pages.

HOME CIRCLE.—Three Good Doctors (Poetry); A Thanksgiving Story; A Chapter of our Civil War History; What the Wrinkles Tell; Chaff, 426. House-keeping; An Honorable Man; Helping Mother, 427.

YOUNG FOLKS' COLUMN.—Lena's Thanksgiving Dinner; Bless His Heart; What a Kansas Girl Did, 427.

GOOD HEALTH.—Cause and Cure of Rheumatism; Upper Rooms Healthiest, 427.

DOMESTIC ECONOMY.—Election Cake; Chocolate Pudding; To Fry Calf's Brains; Gypsy Pie; Lamb with Rice; Minced Veal; A Savory Stew; Fruit Cake; Tapioca Cup Pudding; Onion Flavor, 427.

MISCELLANEOUS.—The Pinkeye; A Lake County Dairy, 428. The Fashions in San Francisco; Misses' Street Costumes, 428.

Business Announcements.

Agricultural Implements—Geo. A. Davis & Co., S. F.
Sewing Machines—Mark Sheldon, S. F.
Nurseries—Felix Gillet, Nevada City, Cal.
Trees—C. W. Reed & Co., Sacramento, Cal.
Cards—E. F. Eaton & Co., Northford, Conn.
Ostriches—J. Protheroe, New York.
Angora Goats—R. Peters, Atlanta, Georgia.
Belt—Magnetic Electric Belt and Truss Co. S. F.
Saws—S. Males Agr'l Co., Hamilton, Ohio.
Songs—Oliver Dixon & Co., Boston, Mass.
Terra Cotta—Gladding, McBean & Co., S. F.
Writing Desks—E. G. Rideout & Co., New York.
Watches—E. G. Rideout & Co., New York.

The Week.

It is Thanksgiving week, and rejoicings are in tune with the occasion. We can but reaffirm the truths on this theme which we endeavored to emphasize in our last issue, and to hope that in the thousands of homes into which the *RURAL* is welcomed there may be abundant reason for joy and thanksgiving.

Our paper this week is largely devoted to what is now certainly the most pressing agricultural topic, the manufacture and sale of false butter. In order to contribute to a general understanding of the points at issue and to spread the knowledge of the proposed protective movement among the dairymen, we have given our leading space to a consideration of the subject. We wish, as far as possible, in our choice of matter for publication to strike while the iron is hot, and for this reason our journal has rather an oily appearance this week. Other weeks will lead in other themes.

Advices from all parts of the State indicate activity in agricultural operations and in trade in farmers' supplies. It certainly bids fair to be a notable year in the industrial history of California.

The Danger in False Butter.

In our essay before the San Francisco Microscopical Society, which was published with engravings in the *RURAL PRESS* of Nov. 18th, we confined ourselves chiefly to the compilation of authorities to show that the imitation butter made from beef fat could be distinguished with the microscope from the genuine product of the dairy. There was incidental reference to the danger which might arise in the use of the substance as food, but that branch of the subject was avoided, for the sake of bringing out more clearly the fact that a distinguishing test exists, and which could be applied by one skilled in the use of the microscope. The manufacturers of oleomargarine have attempted, through the daily papers of this city, to combat the claim by rude personal allusions, which we considered beneath our notice, and, by citing certain authorities on their own part, to throw discredit, if possible, upon the disinterested testimony which we advanced. Upon this matter there is much to be said.

First, it may be admitted, for sake of argument, that if the oleomargarine is derived from fresh fat of healthy cattle, there is little, if any, danger of introducing into the human system germs of parasitic organisms, or of disease, by its use as food. It is the use of this material which the process described in the inventor's patent contemplates, and when the manufacture is thus conducted, the kindest words which can be said of the product is that it is a wretched counterfeit of a well-known article of food—a flagrant adulteration, which is an imposition upon the consumer, and a menace to the prosperity of a time-honored and legitimate line of food production.

Hoping to disarm criticism, the manufacturers of counterfeit butter at the East secured the services of certain experts, hoping to release their product from the stigma thrown upon it by conscientious and skilled investigators, who had no interest in the matter, except to serve the public good with the knowledge they possessed. They procured microscopic examination of such specimens as they supplied, and when men set out to impose upon the public, as they did at the East when oleomargarine came first upon the market, they certainly would not be foolish enough to furnish their experts anything but the proper materials to examine. In this way they secured some very handsome testimonials as to the character of their wares, which have done service for years at the East, and are now being revamped for the delectation of California readers by the journals which enjoying a share in the profits of foisting this fraud upon the people of this State.

But the manufacturers were not content with furnishing material for examination; they entrapped some reputable men into a sort of a wholesale endorsement of the process and its product, by pretending to take them into their confidence, but really confining them to the theoretical, or rather to the ideal operation of their business. They submitted hypothetical cases, and called for their opinion upon them. In effect their catechism was something in this wise: "We take the fresh fat of this magnificent stall-fed ox; we receive it from the animal upon this beautiful marble slab; we comminute it in this polished steel hasher; we heat it gently in this fragrant vat; we express the oil with this ponderous press; we agitate the oil with this fresh country milk, colored with this harmless material; we salt with this pure salt, and work it and pack it in this new oak firkin. Now, our able friend of industry, what do you think of our process?" Of course the expert replies: "I see nothing in your process but what is cleanly and healthful." And the verdict goes to the world as an unqualified endorsement of false butter.

While this testimonial of the expert is being fogged the community, the manufacturers find the supply of this ideal fat quickly exhausted, or else it has become too valuable to suit their ideas of a business profit. The slaughter-houses of the metropolis are scraped clean of grease; barrels are set up in all the slaughter-houses of the interior to catch the fat which formerly went to the soap and chandlery establishments; cellars are ransacked for ancient and unsalable butter, which is deodorized; the wandering collectors of soap fat find that the "butter-makers" pay more than the soap-makers, and, in short, every available source of grease which can be refined, deodorized and reduced to a soft condition is sought out and captured. The testimonial of the man who admired the ox is plastered on the doctored soap fat, and the firkins are trucked out to the consumer.

Thus we have seen how this mass of expert evidence was obtained and how the testimonials were abused. We do not say that any of the experts were purchased; they may have been, but it was hardly necessary, the supply of gullible individuals is large everywhere. But does their testimony avail against the declarations of men who have no interest to serve except the public good and their own conception of scientific truth? Is this greed of a few individuals to stand against the general hate of the community for a counterfeit food, and against the prosperity of a legitimate industry engaging thousands of men and millions of capital invested in lands, herds and homes?

But the evidence of a dangerous character in the false butter which we have thus far presented has been of indirect character. We have something more definite. First, by way of

general introduction, let appear the following from the *Boston Herald* describing a microscopic examination of oleomargarine:

Yeast, which in an uncooked state is reckoned a rank poison, was found sprouting in considerable quantities, and spores of fungi were very prevalent. Among the last named were *peronospora curta*, a genus which belongs to the commonest molds of decaying substances, molecules, about 1-2000 of an inch in diameter, mastigocladus larrinosus (branching), large patches of lichens, a cellular plant, standing between the algae and the fungi, spores of oögonium, a common fungus, bacterium, small rods about 1-50000 of an inch in diameter and 1-30,000 of an inch in length, etc. In addition there were brought to view a portion of a hemisphaera, a worm found in water, a dead hydracanth, which also comes from water, epithelial cells, small portions of the degeneration of muscular fibers and fatty cells, pieces of striated muscular fibers, pieces of hair (not red), eggs from some small parasite, and other objects too numerous to mention. Enough was brought to light to prove to the satisfaction of the examiners, at least, that oleomargarine is very far from being a pure article of food. Dr. Dollinger, the celebrated English scientist, indorses the idea that, however disguised, oleomargarine is nothing but raw fat, and that those who use it run the risk of infection from certain contagious diseases.

In the *Southern Clinic* for 1880 there appeared a very careful review of oleomargarine by Rev. Mr. Huber, who is described as "a very competent microscopist and thorough scientist." He approaches the subject from all sides, and closes with the following conclusions:

1. That oleomargarine, when made according to the original Mege process from pure, clear fat, contains nothing injurious or objectionable. But it is no butter. In its microscopical appearance, as well as in its nutritive and dietetic qualities, it differs materially from natural butter.
2. The main objection to oleomargarine lies in the fact that the fat is not subjected to a heat sufficient to destroy the germs of septic and putrefactive organisms.
3. It is extensively adulterated. Lard and impure fats are used in its manufacture. If such fat comes from diseased animals it is all the more dangerous for the reason just stated.
4. There is no danger of trichinae or of eggs of tapeworms being introduced through oleomargarine into the human system. But there may be introduced the echinococci—the intermediate stage of the tape-worm—which would not be killed by 124° F., and, introduced into the stomachs of men, will there develop into tapeworms. The long tapeworm which inhabits the intestines of men lives in its intermediate stage in the hog. And as lard, notwithstanding the solemn declarations of oleomargarine manufacturers, seems to be used in their factories, there may also be a possibility of introducing this tapeworm into the human system; but I think the danger not very great.

The above is as fair and moderate a statement of the danger as can be made. There is no use of making the showing worse than it is, as no doubt some eager opponents of the substance have done. It is bad enough in its lightest evils.

We have not space to multiply testimony on the points advanced above, though witnesses are abundant, but we must show what the French people themselves have done with this oleomargarine, which was discovered by one of their own citizens, and is now proclaimed in this country as such a valuable contribution to the food supply. The fact of the matter is, the French are too nice about their diet to tolerate such abominations, and their great inventor, M. Mege-Mouries, has to go abroad to find people who gulp down food of any kind in order to get his product eaten. Why, in France they have banished it even from the diet furnished to outcasts at the public expense—too bad even for paupers. The subject was fully investigated in 1880 by a commission of six experts appointed by the French Academy of Medicine, and their report was received by the Academy May 11, 1880. From this report, as translated by Dr. D. E. Salmon, of the U. S. Veterinary Commission, we shall take the following telling extracts:

The daily manufacture in Paris and its suburbs exceeds 16 1-2 tons, but a small portion of it is consumed in France. A large proportion of it is sent to Holland, whence it finds its way to the colonies and to England.

The slaughter-houses of Paris do not furnish sufficient suet for their use, and consequently it is bought in the country districts, where the first extract is made. Often decomposing fats are used, because sufficient for melting is not obtained in a single day. The product of this melting comes to Paris, where it is transformed into oleomargarine.

The steward of the asylum of Sainte-Anne said they used the oleomargarine with butter. At first they tried to substitute it for butter in all the dishes, but they were obliged to limit its use because of the complaints of the inmates and of the employees boarded in the establishment. Dishes called "au beurre," like macaroni, rice, fruits, "pures" of potatoes, omelets, eggs in all forms, fish and fresh vegetables, take an intolerable taste. It is used without complaint for stews and dry vegetables like peas, lentils and beans; cabbages are passable, fried potatoes are good, but potatoes in all other forms are bad.

The sister in charge of the cooking said she economized the fats of soups and roasts, and used the oleomargarine as little as possible. If used in weak soups, it could not be added while cooking, or the soup would have an acrid taste and smell; it was, therefore, added the moment the soup was served, and then it would rise to the surface. The strong odor and taste develops in cooking; thus a dish warmed over, which was passable before heating, is often no longer eatable the next day. It is very objectionable for preparing white sauce.

M. Billod, physician and director at Vauluse, said the administrative table had caused such repugnance that it was necessary to dispense with the use of margarine. It was now limited to stews and large dishes of vegetables.

The mixtures which at present constitute margarine, and which are necessarily very variable, afford the patients a variable fatty alimentation—that is to say, in an injurious condition; and as the absorption of fatty bodies does not occur with the same facility as that of other aliments, the employment of margarine is to be regretted from this new point of view.

M. Lailler, pharmacist at the asylum of Quatre-Mares, leads us by another way to the same conclusion. He has taken equal weights of pure margarine and of butter, and suspended them in diverse liquids, rigorously maintaining the same conditions. He has always observed that margarine forms an

emulsion with greater difficulty than butter, and that the globules of the latter are smaller, and do not separate with the same facility from the liquids. After relating culinary experiments, he says: "The fatty layer which floats on soups made with margarine is more apparent and less divided than that which floats on soups made with butter."

This is only another form of expressing the fact signified by the cook at Sainte-Anne.

M. Magnin, of Ville-Evrard, also writes: "For 200 lbs. of potatoes, 10 lbs. of margarine is required, which only makes poor nourishment—potatoes without fatty matter. Margarine does not unite with the food, but floats over it in the form of an oily layer."

Beyond taste and appetency, then, there is a very different and important fact, which results from these observations. The mode of absorption of fatty bodies has long been discussed, but now there is accord in admitting that they must form an emulsion first. If margarine, then, becomes an emulsion with difficulty, if the globules formed are not of the extremely small size of butter globules, if these globules return rapidly to oil, the conditions for the absorption of margarine are very inferior to those for butter, and it would be a matter of regret to see it substituted for butter, above all for sick people, because it is to be feared that the absorption of fats, which, of all the matters of digestion, are those of which the absorption is most limited, would only occur with greater difficulty.

Thus the French Commission reached a conclusion against oleomargarine from two points of view: It is refractory and unsatisfactory in the hands of the cook, and, therefore, unpalatable to the consumer; it is pronounced by the physicians to be difficult of digestion, and, therefore, unwholesome. Is anything more needed to turn the buyer against this sham and counterfeit? If so, we will give it at another time.

The Dairymen's Movement.

Meetings of dairymen were held in several counties on Saturday last to select delegates to attend the general convention to be held in this city December 12th. There is a general disposition to take firm stand for the protection of dairy industry, and it seems probable that the coming convention will take measures to see that the law for the marketing of the stuff on its merits or on its demerits shall be complied with; also that merchants shall not have a chance to make a commission on sales of genuine butter, and at the same time speculate in oleomargarine; also that the people shall be fully informed of the dangers attending the use of the imitation article. Oleomargarine is a substance which needs only to be known to be hated by Californians, for our people are not so given to cheap makeshifts in the way of food, especially when the material has at least a suspicion of an unclean origin.

There seems to be a disposition among the dairymen forming the local societies to make the organizations permanent. This will be an excellent idea. There is every reason why the dairymen should assemble and confer and act together as well as the fruit growers. It is a good time now to organize, do the present work, and then keep the ranks in order for the next action.

A meeting of the dairymen of Sonoma and Marin counties was held in Petaluma Saturday evening. A temporary organization was effected, with J. R. Jewell, of Petaluma, as Chairman, and D. L. Dixon as Secretary. The following were selected as delegates to represent Sonoma and Marin counties in the State Convention of Dairymen, to assemble at San Francisco December 12th: Messrs. Wright, of Santa Rosa; J. R. Jewell, of Petaluma; Cassa, Martin, of Marin; H. P. McCleave, of Tomales; D. S. Dickson, of Petaluma, and Hollis Hitchcock, of Bodega. Considerable interest was manifested. There was a large attendance, and another meeting was called for December 11th, when a permanent organization of the association will be effected.

A meeting of dairymen of Santa Clara county was held at the store of Lemoine, Turel & Co., San Jose, on Saturday. Col. Younger was elected Chairman of the meeting, and Capt. Chamon de St. Hubert Secretary. Col. Younger briefly explained the object of the meeting, which was more fully explained by Rush McComas. He said oleomargarine threatened the dairy interests of this country; that it is a villainous compound; that it brings no benefit to anyone. It is now manufactured in San Francisco, and a persistent attempt is being made to force it on the public. In the East it is now being mixed with cheese. The following signed the roll of membership: M. M. Cahalan, Robt. Syer, Wm. Knapp, T. Harrison, T. Snell, A. Farrington, Quinn, John Hassler, Ed. Corral, W. Castle, T. J. Sinnott, Rush McComas, S. B. Hamilton, Coleman Younger, E. Ladd, Chamon de St. Hubert, A. Farrington and J. M. Greenfield. Rush McComas, M. M. Cahalan and Wm. Quinn were elected delegates to the State Convention, which will be held in San Francisco, December 12th. It was decided to meet again the 16th of December, at which time the society will be fully organized.

The dairymen of the Gilroy region also met on Saturday, but the details of their proceedings have not yet reached us.

A GANG PLOW.—The Los Angeles *Mirror* tells of quick work with a big plow. It says: Bath & Fosmire received an order from Supervisor Haakon last Wednesday for an eight-gang plow. Work was commenced that evening, and by 11 o'clock yesterday morning it was completed. It is said to be the biggest gang plow ever made in Los Angeles.

The Pinkeye.

We are undergoing another visitation of the pinkeye among the horses, and this year there is far more trouble in the country than a year ago, when the city stables were turned into equine hospitals. Now the farming districts of the bay counties are suffering, and it is especially vexatious to have the animals disabled when everything is ready for active field work. The disease in its ordinary type is of comparatively short duration, and yields to proper remedies and care. It is timely now to reproduce a sketch of the disease and its treatment, which we prepared a year ago, and we do so in answer to the request of many readers who have applied for advice on the subject. First, we shall avail ourselves of the writings of Dr. N. H. Paaren, a leading veterinarian of the West, in the *Chicago Live Stock Journal*.

A form of influenza, to which the vulgar and unmeaning name of pinkeye has been given, has prevailed among the horses over a large extent of the United States, mainly in the cities, during the past two months. It has very generally been supposed to be a new disease, and has been so announced by the newspapers. The novice in vain looks through the index of his book on horse diseases, and concludes that since no such name can be found therein, it must be a new disease. However, the name is an old one, supposed to have originated somewhere in New England many years ago. But its use did not become general, and it was almost forgotten what it really meant, when some wise man again took it up and applied it to the present prevailing disease, one of the symptoms of which is a catarrhal affection of the eyes. The disease is, however, not confined to the mucous membrane of the eyes. It is a disease in which all the mucous surfaces have a tendency to become more or less implicated. Therefore, not only does it extend to the interior of the air cells of the lungs, but it also more or less affects the mucous membrane of the digestive canal. In its progress throughout the extent of the nasal membrane it often affects the sinuses of the head. When the mucous membrane of the eyes and the eyelids become prominently affected, the eyelids swell and are nearly closed, and the highly injected color of the membranes thus produced may have given origin to the name of pinkeye.

By far the larger number of horses affected suffer very little. Some of them recover within a week, and most of them within a fortnight. But the prostrating nature of the disease leaves the animals weak for a time after, and rest and good nourishment are generally all that is required to restore them. Horses that are in poor condition, exhausted from over work, or are kept in unhealthy, damp, or crowded quarters, generally suffer most. The disease, under such conditions, runs its course slower, fatal complications are apt to set in, and it requires more care and exertion to carry them through.

No measures can be suggested which would entirely prevent or ward off an attack of this disease. But precautionary measures may be adopted, such as thorough cleansing and disinfection of the stable, and the establishment of proper ventilation—by which is not meant the admission of cold air or a draft through open doors or windows immediately in front or behind the horse. The food should be sound and of the best quality, and one meal a day—preferably the evening ration—should consist of ground, steamed or scalded oats, with an admixture of bran and some ground flaxseed. As the disease, even in its milder form, is of a rapidly debilitating nature, it will be well to use some vegetable tonic, such as ground white willow bark, of which a handful may be given morning and evening, mixed among the food. With a view of relieving the congested state of the mucous membranes of the head and upper air passages, it would be well to steam the head once or twice daily by means of scalded bran and hay seed, placed in a deep bag hung over the animal's head. If the horse can be spared from work, so much the better; but moderate, light work, at a slow pace, will not materially interfere with the favorable progress towards convalescence, if the weather permits; but when not in motion the animal should be covered with a blanket, and if there is any soreness of the throat and coughing, it will be well, in addition, to cover the neck and head with a hood. If the appetite is much diminished, or if the horse evinces difficulty in swallowing sufficient food to enable him to perform his work, or if he misses one or two meals, he should remain indoors, as under these conditions there is danger of serious complications. To relieve the irritation of the throat, some stimulating liniment should be applied twice a day, such as a mixture of one part of aqua ammonia and three parts of common olive or lard oil. The most common complications are bronchitis, inflammation of the lungs and pleurisy. The advent of either of these complications may be known by the general signs of a febrile condition—a staring coat, shivering of the body, general dullness, loss of appetite, hurried breathing, a quick and small pulse and cold extremities, followed by increased heat of the body. No time should then be lost in administering remedies, such as four ounces of solution of acetate of ammonia, one ounce of sweet spirits of nitre, and half an ounce of fluid extract of belladonna, which should be carefully and slowly administered in one dose in half a pint of flaxseed tea, and re-

peated thrice daily. At the same time strong embrocations should be applied along the throat and to the sides of the chest—such as a liniment made of equal parts of aqua ammonia and common olive oil, or a soft poultice of best ground mustard (not grocery mustard) Setons, rowels and strong blisters should never be applied in this disease. The nose and eyes should be sponged several times daily with warm water. The animal should have all the flaxseed tea or slippery elm tea it will drink; and when the appetite returns, the food should consist of boiled or steamed barley and oats, with small admixture of flaxseed meal, and, besides, some sliced carrots, apples, cabbage leaves, etc., and clean, sweet, aromatic upland hay, in preference to timothy hay.

During convalescence, or when the animal recovers from a severe attack of this disease, it will be proper to support the strength by the use of vegetable and mineral tonics, such as a

the *Country Gentleman* a review of the disease, from which we take the following points: The disease exists as an epizootic in the spring and fall of some seasons, and it may be said to be sporadic at all times. It begins with rigors or shivering, fever, and swelling of limbs and eyelids, with flow of tears down the face. The animal is dull, loses appetite, and lifts the limbs from pain, shifting them often. After the limbs are considerably swollen the pain mostly ceases. The redness and swelling of the eyelids give rise to the name "pinkeye." The bowels are torpid and faces covered by a shiny mucous, and the evacuations are dark-colored. There is sometimes a cough present, and some disturbance in the breathing, but not serious unless aggravated by cold, neglect or metastasis. It is not necessary to speak here of internal temperature, pulse, etc., as the ordinary reader would not be any wiser. As a disease pure and simple, it is not dangerous or

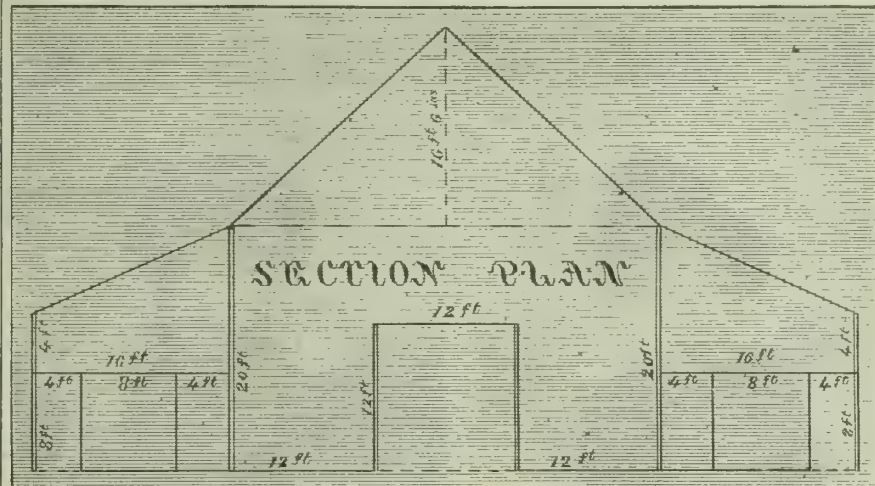
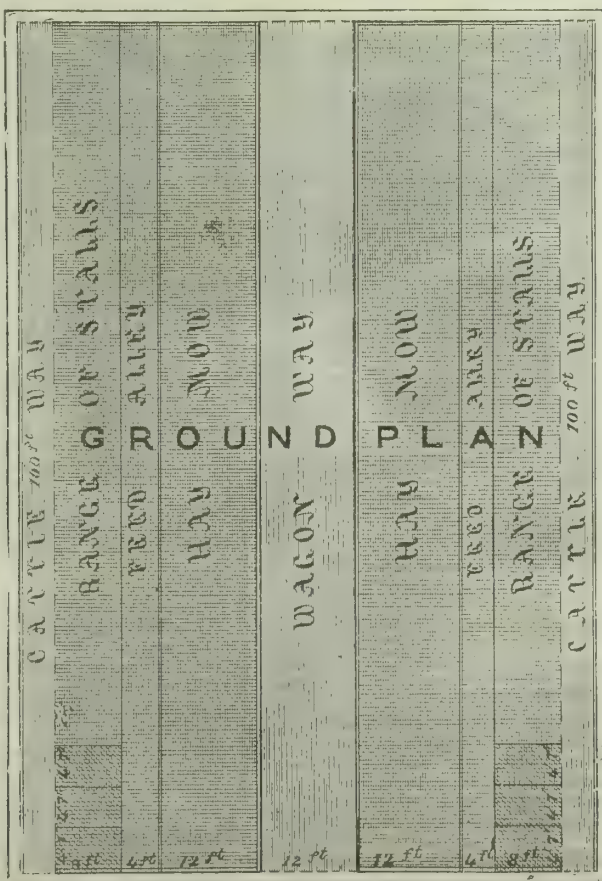


DIAGRAM OF ELEVATION OF D. O. SHATTUCK'S DAIRY BARN.

powder composed of one drachm of carbonate of iron, and two drachms each of gentian root and elecampane, which may be mixed among each ration of food. If loss of appetite and great debility or prostration prevail, with swelling of the limbs, etc., the following medicine may be given every three hours: Take half a drachm of quinine, half a drachm of carbon-

obinate in proper hands. The animals recover in from four to ten days. Of course, if any complications set in, it may require longer time, or be fatal, depending upon the type of disease associated with it. It may, however, in some seasons, owing to certain conditions, climate and general surroundings of animals, take on a fatal character. Owing to a tendency



GROUND PLAN OF MR SHATTUCK'S BARN.

ate of iron, and two drachms each of fennel seeds and marshmallow root; mix together in powder, and give such a powder every three hours, by making it into a thick paste (electuary) with a little molasses, and apply the dose by means of a smooth, flattened stick of wood, upon the root of the horse's tongue.

During the progress of this disease, the bowels are generally more or less costive; but instead of laxative or purgative medicines, which only tend to still more prostrate the animal, give only loosening diet, such as above recommended, with occasional injections, *per rectum*, of lukewarm soapuds.

The directions here given, of course, only have reference to ordinary cases. If, by the means recommended, no benefit is derived, but on the contrary the disease assumes a serious aspect, by the advent of serious complications as are peculiar to it, no time should be lost in summoning skilled professional assistance.

Dr. E. Moore, veterinary surgeon, writes for

following drench three times per day will be necessary: Sweet spirits of nitre, spirits of camphor, of each 2 ounces fluid extract of belladonna, 1/2 drachm; fluid extract of foxglove, 20 minims; water, one-half pint. It is well to dissolve in the drinking water one-half ounce of powdered sal nitre twice or thrice daily.

A Lake County Dairy.

(Written for the *RURAL PRESS* by A. H. POE.)

I will give you a little account of observations I have taken in regard to the dairy interests of Lake county. Mr. D. O. Shattuck, living at the head of Bachelor valley, is milking 35 cows at the present time, but expects to increase his stock to 75 next year. Mr. S. is a good farmer, and his cows all look well and give a good flow of milk. They are pretty well improved and bred up until there are many of them half Jersey—in fact, I have not seen any dairy cows that could beat them in appearance. Mr. Shattuck gave me statistics of their produce, which are as follows: Average per week, five pounds of butter to each cow; multiply that by the number of cows and then the number of pounds by 30 cents per pound and see what a neat sum you will have for the butter clear, to say nothing about the calves and pigs he will raise from the skim milk and butter milk.

Mr. Shattuck says his cows will eat six tons of hay each during the year. He has 90 acres in alfalfa, 45 of which was cut this season; the other will do to cut next year.

I will send diagram of a dairy barn Mr. Shattuck has built for holding feed and for sheltering his cows. The center opening consists of a drive-way for the purpose of unloading hay in the spaces marked "hay mow," on each side of the drive-way. The small spaces called "feed alley," on each side of the hay mow, are only imaginary, being only four foot spaces left between the hay mow and the mangers for the convenience of feeding the cows without having to carry the hay a great distance. After these mows are filled up to a height of eight feet, then hay can be put back over the cattle stable until it reaches a height of 12 ft., which will bring it to a level with the upper floor of the drive-way. From the drive-way the hay will be lifted to the floor above by pulley and derrick fork.

This building will hold about 250 tons of hay. In its construction there was used 35,000 ft. of lumber and 20,000 shakes, and will cost \$2,000. It was designed and built by Mr. J. W. Hartford, of San Francisco, and is a credit to the builder and the owner. There is a good and substantial frame-work, which is supported by heavy columns of square timbers, and contains 396 braces. It is floored throughout with solid two-inch plank.

The milk-house is built of lumber with double wall, filled between with sawdust, and has a cement floor. It keeps the milk very cool. The churn is a large square box, with a shaft through the center, which is hung in a manner similar to a grindstone. One end of the shaft extends outside of the dairy, and has a small drum attached. Then there is an inclined wheel set so as to work on the shaft drum, which turns the churn. Two large dogs are used on the wheel. Taking in all together, it is a very good and cheap arrangement. Mr. Shattuck also has a very convenient horse-power for pumping water for his cows, and they are always supplied with the best of fresh water. The result of all this care and attention is the very best quality of gilt edge butter, which finds a ready market, and at remunerative prices.

CARE OF GOAT SKINS.—An Eastern tanner and dyer of goat skins gives the following suggestions for the preliminary treatment of skins: Before or after slaughter, the hair should not be washed in any way. When killed, the skin should be taken off with the greatest possible care, leaving as much flesh on the hide as possible. The skin should not be too closely dressed; and the hide should always be favored in preference to the carcass. Lay the skins singly on rack; in the shade to dry, and salt them well; and when perfectly dry pile or bale with the skin side up, keeping as dry as possible; for, if allowed to become damp, the skins will mould and the hair loosen and fall out.

LUMINOUS PAINT FOR RAILROAD CARS.—A party of gentlemen recently made a trip on the Southeastern railway, in England, with the object of testing the luminosity of a railway car, a portion of the interior of which had been coated with Balmain's patent paint. The weather being dull, the zinc plates, which had received three coats of the paint specially hardened, were less sensitive than would have been the case, had sunshine struck directly upon them; but notwithstanding, on entering Blackheath tunnel, an agreeable, equally diffused light proceeded from the ceiling of the compartment and the two ends, the advertisements on which were seen clearly. The hands of a watch were also easily discerned, and the headings of newspaper articles read. Containing no phosphorus, the paint was without smell.

PERSONAL.—We notice by an Illinois paper that our friend, G. C. Pearson, formerly of Vallejo, has been elected President of the Danville Historical Society. The honor is well placed, but we are not at all content to have Mr. Pearson making history for Illinois; his place is in California. Send him home, ye Danvillians!

The Fashions in San Francisco.

What to Wear—Observations on Fabrics, Prices, Styles, Etc.

SAN FRANCISCO, Nov. 20, 1882.

Editors Press:—It would be much easier for me to tell you what is *not* fashionable than what is. There is such a bewildering variety in the dressmaking and millinery line that an abundance of wealth would be required to buy all the varieties seen. I allude to the last "sweet things" in millinery, of course.

Gros grain has been suppressed utterly, and a sort of surah silk and surah satin have taken its place. These satins, also, come much cheaper than the gros grain, only costing \$2.50 or \$3 a yard. They wear much better and retain their luster to the last. I recently saw a gros grain that had been washed in Spanish bark water, and also a piece of moire silk, and they looked like new; but there is great uncertainty in getting a gros grain. It requires as great care, and you run as great a risk, as in the selection of a husband.

A Less Expensive Black Silk Dress

Would be a plainly trimmed skirt of surah and a polonaise, very bouffant at the sides and back, of brocaded silk, at \$1.25 a yard. That or brocaded velvet is as much in vogue as ever. The velvet would cost a little more than the other. Plain velvet is used very little, if at all, in costumes. You can, moreover, combine brocade, satin or plush with plain silk or woolen material. In some cases they make plain gored skirts of brocaded silk, and the upper part of cloth.

A tasteful way to make a silk and wool dress is to have a shirred or pleated front, with side panels and box-pleated back of woolen goods. Now see the varieties you may have in the way of

Upper Garment for Such a Skirt.

First, you can have a pointed basque, front and back, with panniers to it, or a short polonaise, or a military jacket, slashed up so as to form deep tabs, all braided, buttoned and frogged at the same time, or a corduroy plush or rough cloth jacket, single or double breasted. Plush costs from \$1.90 up to \$10 a yard; that for \$2.50 is beautiful. I recently visited four or five prominent dry goods establishments, and you shall have the benefit of what I gleaned there.

The shop windows are full of camel's hair and cashmeres, in all colors, ranging from 50 cents to \$1.00 a yard, and are 40 inches wide at least. Any of these would make a stylish, inexpensive winter suit, trimmed with a broad band of plush around the skirt six inches deep, and wide collar, cuffs and pockets of the same on the jacket. A felt, with wide rolling brim, big bird on the left side, long plush ribbon ends in the back, would complete this charming winter toilette, and to "pile on the agony" have a little muff of plush, with long loops of ribbon falling to a great length on one side, and a bird or bird's head placed on the cluster of loops.

A decided novelty in dresses are the

Embroidered Dress Patterns.

In cashmere, in all colors. They cost from \$12 to \$80. I saw one made in such an exquisite style the other day. It had slightly-gathered flounces of the embroidery, alternating with single box-plaitings to the waist. The upper garment was a pointed basque in front, and draped to fall low on the skirt in the back. A small velvet bonnet, same shade as the dress (which was gray), had a velvet puff around the front and a cluster of small ostrich tips at the left side, and narrow velvet ribbon strings of darkest shade of maroon tied at the right side; it was one of the handsomest costumes seen on the street this fall. Another way of making up these embroidered dresses is to have a group of plaits running up and down the skirt, with the embroidery laid on flat in the spaces left between the groups; then trim the polonaise and cuffs with the embroidery. A charming little cape, composed of three rows of the trimming shirred in at the neck to fit, completes this imported costume.

A handsome dress of rifle green ladies' cloth had a deep band of green plush on the skirt, above a double box-pleated flounce, and a deep plush cape reaching to the elbow, finished at the throat with long ribbon loops, a muff of same material and hat to match. Such a dress would not cost over \$25 or \$30 at most.

Braided suits are seen in great variety, costing \$15 and upwards. They are nearly all made with trimmed and braided skirt and a tight-fitting jacket.

There has been a great

Reduction in Flannel Suitings.

Some selling as cheap as 75 cents a yard, yard, 60 inches wide, and up to \$1.75. That is for American goods. The imported goods are \$3 a yard.

For wrappers and house sacks the fancy striped and checked flannel is preferred to the plain. For flannel dresses, both pleated and blouse waists are seen with trimmed or pleated skirts, and a few have open jackets and plain tucked skirts.

Jerseys made of black, navy blue and pale blue are much liked for well-grown misses; these are buttoned in the back and worn with pleated skirts, a folded scarf covering the point of joining around the hips. This scarf may either correspond with the skirt in color or the Jersey. All of the "Langtry fashions" are likely to be revived.

The New Colors in Dress Goods

Are olive and hunter's green, fawn color, Napoleon, navy blue, terra cotta, green-gray; navy blue with delf red is a favorite color mixture; also golden-brown color. Navy blue and cardinal are as much admired as ever.

Single breasted jackets are scarcely as popular as those made double and lapping well across. The most dressy of these are of garnet, dark red, sea-blue and rifle green velvet, faced with silk and completed with extremely large metallic buttons; flounces and ruffles on skirts are faced with gay color, and the large cuffs and collar correspond.

Usters

Are made very long, some plain and some trimmed with a deep side pleating around the bottom. They are trimmed with frogs all the way up the front or with two rows of big buttons. Japanese and coat sleeve are equally popular.

Spotted and tiger striped plushes are not seen this season; they were the most hideous things ever invented. Some handsome ulsters are made of small plaid and large; big buttons, Japanese sleeves, cords looped across to ornament the back; very handsome buttons can be

The hat should match it in color, and be of felt, with a furry edge. Two long plumes placed on the edge of the turned up rim make a becoming frame for the face, and a large bird, the larger the more fashionable, should be placed where the feathers start from. Hungarian, or

Military Basques.

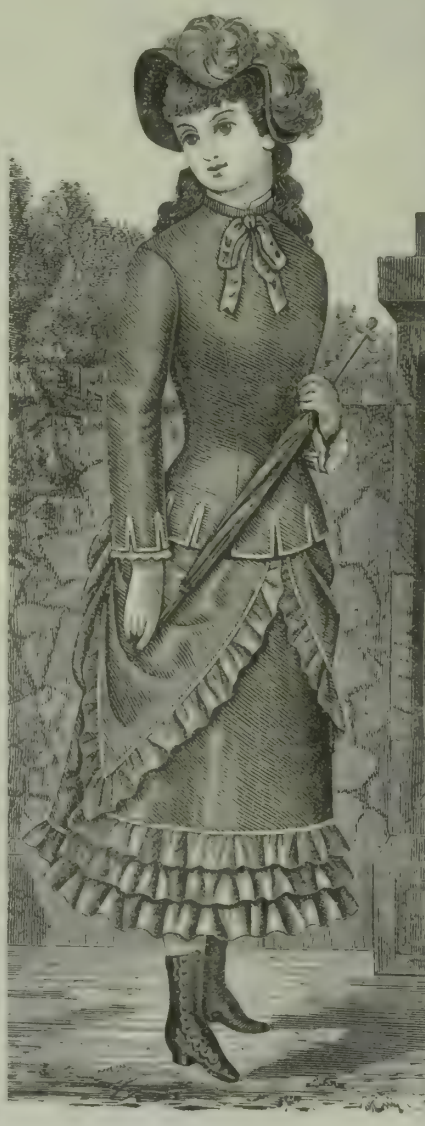
Are immense favorites. They are same length all around, cut up so as to form deep square tabs; high standing collar, frogged and buttoned up the front, and trimmed on the sleeve and around the tabs with cord or flat military braid. Others are made perfectly plain. They look the best over profusely trimmed skirts very bouffant in the back. A small hoop gives an elegant look to the heavy skirts, that otherwise would cling too closely to the figure. Ladies who have given a fair trial would not do without it.

It seems to take the terrible, dragging weight of heavy garments off the hips, and renders walking agreeable. One should be careful to wear flannels underneath, and a good warm flannel skirt reaching to the top of the boot, otherwise it would prove a source of great danger to the health. No one should wear any of those wadded abominations called "winter

Fig. 1.



Fig. 2.



MISSSES' STREET COSTUMES.

had for these wraps costing only 50 cents and \$1 a dozen.

The Russian paletot is

A Very Popular Garment

Just now. It is made of cashmere and ladies' cloth, with an exceedingly full ruche of same extending around the neck, very close, twice down the front and all around the bottom. They are magnificent made of rich black velvet, bordered with fur, opening over a rich skirt of brocade.

Besides these long garments, there are shown short wraps called visites, trimmed with passementeries and wonderful fringes falling over Spanish and guipure lace. Matelasse cloaks are bordered with long fur.

Furs.

There is sold on the street in this city black fur, with or without white points, about three and one-half inches wide, which would trim an old cloak to look very nice for one season. The price is 25 cents a yard. It is to be had in light gray, also, but not so wide.

Very deep capes reaching to the waist, of black fur, with muff to match, will be very much worn this season, and are not expensive. Cost, about \$20.

A modest dress is made of seal-brown plush, perfectly plain, slightly gored skirt, Hungarian jacket, slashed all around, and satin belt and bunch of long loops of ribbon at the left side in front; a heavy cord borders the bottom of the skirt, or a tiny knife pleating of satin, not more than an inch wide, completes this rich and simple dress.

skirts." They only add an intolerable sense of weight to the rest of your clothes, and very soon become a nuisance, because they "crock" everything they touch.

Shirring is not so much seen on the last new dresses.

Embroidery is the rage on everything.

Satin ribbons from one to two inches wide are seen on all dresses.

Plush, when not too much worn, dyes beautifully, and so does velvet.

Corduroy and ribbed plush are very fashionable. Long pile plush is not used for cloaks, bonnets or dresses.

Handsome wine-colored velveteen makes a nice basque to wear with gray or black silk or woolen skirt; long buttons.

Small buttons have disappeared.

Buttons show as many shapes as kinds and colors.

Two rows of small round buttons, made of fretted gold, are worn upon young ladies' house basques and jackets, and those of jet and metal are of dull and brilliant effect combined.

A new flat button, edged with steel, has a center set in cameo style.

Buttons for cloaks are very large and flat. Some have a relief figure of a bird in gold or silver.

The loose-wristed glove will be the favorite for another season. They come in such shades as crushed strawberry, brick, tan, copper, Russia leather tints, and red-brown and black, from 75 cents to \$3.00 a pair, with and without stitching on the back.

LISEITE.

Misses' Street Costumes.

The engraving, Fig. 1, illustrates a tasteful and stylish costume for a miss. The costume is made of cashmere and surah, the surah being used for the handsome scarf drapery, the deep sailor collar and cuff facings, and the cashmere for the remainder of the toilet. The body is a deep round basque, to which is joined a kilt that lengthens it to costume depth. The plaits of the kilt are stayed underneath with tapes, and a wide, blind sewed hem finishes the lower edge. A curved center seam, low side backs and shapely bust and under-arm darts fit the body closely and beautifully. A broad scarf of surah is draped in graceful wrinkles about the figure, covering the seam joining the kilt to the body. It is tied in a loose knot, and its ends are closely gathered in Turkish sash fashion and tipped with heavy tassels, and fall effectively low at the left side. At the right side the scarf is prettily upheld by a loosely wrinkled cross-piece, through which it is passed and then tacked permanently. A standing collar of cashmere and a jaunty sailor collar of surah are permanent and stylish additions to the neck, and pointed cuff facings form pretty ornaments for the wrists of the closely shaped coat sleeve. Buttons and buttonholes close the fronts of the body, and lace ruffles are worn as lingerie at the neck and wrists. This style of costume is especially charming for cloths, flannels, camel's-hair and soft woolen textures, and requires little or no decoration, neatness and simplicity of completion brightening its jauntiness. The scarf and collar may be of the dress goods, and will prove equally as stylish as when contrasting material is used. Braid trimming is effective on such a costume, and may be disposed in plain rows about the kilt and scarf, and in ornamental designs upon the sleeves and fronts. Silk and satin material are also suitable for dressy costumes, and may be trimmed with lace or embroidery if elaborateness be desired. The end of the scarf may be finished without tassels, any pretty ornaments taking their place. The pattern to the costume is in eight sizes for misses from 8 to 15 years. The jaunty hat has a straight band of velvet about the crown, and a cluster of tips curling from the left side of the front.

Fig. 2 shows another misses' costume. A soft woolen suiting was selected for its construction. The skirt is of the popular four-gored style, and has a pretty foot-trimming, which consists of three slightly over-lapping gathered ruffles of the material, the upper one being set on under a tiny band of satin. The front drapery comprises two pointed wing-like portions, which are softly wrinkled by plaits in their back edges. They meet at the top of the center of the front and then flare jauntily. A ruffle of the material, set on under a tiny band of satin, borders the edge of the wing draperies in harmony with the finish on the skirt. The back drapery is tastefully draped by plaits in the side edges and a tape at the center, and has its side edges below the plaits turned over pretty triangular revers. The pattern to the skirt is in 8 sizes for misses from 8 to 15 years of age. The basque is nicely conformed to the figure by a dart in each side of the front, and a low side-back gore at each side of the back. The closing is made at the back with buttonholes and buttons, and the lower edge is cut in small uniform tabs that are neatly bound with satin. A standing collar encircles the neck, and the sleeves are finished to correspond with the bottom of the basque. A bow of ribbon droopes from the throat and completes the decorations. The pattern to the basque is in 8 sizes for misses from 8 to 15 years of age. Costumes of this style are pretty for school, house, street or church wear, according to the materials selected for their construction. Two fabrics may be combined in them with pleasing results. The skirt may be ornamented with ruffles, box or side plaitings, braids, flat bands, or any preferred garnitures, and the draperies may likewise be decorated or plainly finished. All varieties of seasonable dress goods are well adapted to both garments, and the finish should be whatever will best accord with the material or material's selected. The hat is quite picturesque, and is artistically ornamented with ostrich plumes.

* The Costumes illustrated in this issue are taken from Butterick's patterns. Fig. 1 is No. 8293 of their catalogue and Fig. 2 is No. 8313.

RESPONSIBILITY.—Nothing takes the pride of labor and its results out of a man like divesting him of responsibility. The minute you make a machine out of a man into whom God has breathed the breath of life, and given brains and sympathy to, that minute you deprive him of the greater part of his usefulness. This is why public employees and the employees of large establishments are so spiritless and indifferent. The red tape by which they are surrounded, and hampered, and depressed, takes away all their individuality; it makes them mere wooden men, whose places can be filled for less money by cucumber pumps. If you want to get all there is in a man out of him, invest him with a sense of responsibility, make him feel as if he was an intelligent creature, and responsible for what he does or does not. To this fact may be attributed the intellectual superiority of the graduates of smaller shops, where red tape is unknown. But don't mistake by thinking red tape and system are synonymous. Red tape is system carried to an unintelligent and unreasonable extreme. System is order in its highest degree; that is, combined with good sense.—*Phila. Enterprise.*

BAKER & HAMILTON,

Junction Market, Pine and Davis Streets, San Francisco.

Nos. 9 to 15 J Street, Sacramento.

MANUFACTORY: BENICIA AGRICULTURAL WORKS, BENICIA, CAL.

Eastern Office: 88 Wall Street, New York

IOWA FOUR POINTED BARBED WIRE.

PRICE REDUCED.

It will neither
Rust nor
Decay.



Secure Against
FIRE,
WIND and
WATER.

GALVANIZED OR PAINTED.

15 Feet to the Pound.

IS BARB WIRE DANGEROUS?

It is not, where wire—instead of metal or knife blade cutting points—is used for the barbs. We base our reply upon a large experience in supplying the trade with barbed wire, thereby occupying a position to learn of any damage caused, extending all through the United States. Our experience will justify us in stating, as an absolute fact, that no more injury is done to stock by the use of wire barb than by the use of any other common kind of fence. We have yet to learn of the loss of a single head of stock caused by the Iowa barb. We attribute this fact to these reasons:

1. It is a four-pointed wire barb, with barbs standing at right angles, and, therefore, always presents a point.
2. It is the only one locked between the two wires, and the barbs cannot work or slip together.
3. It is a wire barb, and pricks instead of cutting the flesh.

DURABILITY.

Barbed Wire has not been in use long enough to state from experience how many years it will last; but, as painted wire first put up shows no sign of deterioration, and lines of telegraph wire have been in use 30 years without the quality being impaired, it is probable that a well galvanized steel double-strand wire fence will last from twenty-five to fifty years.

WHICH IS THE BEST KIND OF BARB WIRE TO BUY.

It being conceded from these reasons that it is advisable to use wire, the question that follows is, which kind is the best? This is frequently asked by the farmer, and we will endeavor to answer it without prejudice, and honestly as we believe the facts to be. There are four kinds of wire on the market, which we will designate generally, as follows:

- A four-pointed double wire, with wire barbs.
- A four-pointed double wire, with wire barbs.
- A four-pointed single wire, with wire barbs.
- A four-pointed double wire, with metal plate barbs.

From this family of wires we must choose. As regards the difference between a two-pointed and four-pointed barb, we are satisfied that a four-pointed barb is more efficient to turn stock than a two-pointed—provided the kind of four-pointed barb is such as stand at right angles—simply because a four-pointed barb presents a point in any position, whereas, with a two-pointed barb several may be found in succession standing parallel to each other, and, therefore, presenting a point only in one direction. If any one doubts this, let him attempt to run his hand along on a two-pointed barb wire and then on a four-pointed, and see which offers most resistance. We should, therefore, advise buying a four-pointed barb wire. Having determined upon this, the question still remains, which of the four-pointed wires is the best? The single strand wire, made of No. 8 or 9 wire, has the defect that it is quite impossible to place barbs upon a single wire so that they will not in time slip and work together. Again, if this were not so, there is no economy in its use, as the increased weight per rod is equal to, or more than the difference in price between that and twisted wire, not to mention the expense of a windlass to wind up and let out the single wire for winter and summer, to prevent breaking by contraction in cold weather. The twisted wire, you will observe, has sufficient spring to preserve an equal tension throughout the different temperatures of the weather, requiring no attention. We, therefore, could not advise buying the single wire.

The four-pointed metal plate barb is usually made by a tight twist, holding the barb only by a twist between the two wires. This tight twisting not only contracts the wire, making it heavy per rod, but is liable to injure the finer of the metal by twisting so closely. Again, a metal plate barb presents a knife blade, or cutting point, rather than a thorn point, and cuts rather than pricks.

Of the various kinds of four-pointed wire barbs, the Iowa Barb is the only barb which is locked between the two wires, and also wound around both wires; the lock prevents it slipping on the wire, and winding around holds the two wires together.

We can, therefore, advise every one who wishes to purchase wire, and wants the best, to buy the Iowa barb, as it contains all the favorable features that are required, and none of the objectionable ones. It is made only from the best of annealed steel, fully warranted, either galvanized, japanned or painted; put up in spools of from 90 to 150 pounds each. Remember, it will not exceed 17 ounces per rod.

NUMBER OF WIRES.

Although fences are sometimes made of two wires, to fence against cattle only, we recommend not less than three, and as many more as desirable. Five wires make a good fence—such is used by nearly all the railroad companies.

Gem Belt Seed Sower.

ADVANTAGES OF THE GEM BELT.

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the wagon; therefore, one may be closed when sowing by a fence, ditch or land that is not to be sown.
The Distributor of the Gem whirles around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.
The Gem does not throw the seed up into the air, to be blown about by the wind, but throws it sharply to the right or left.

THE REASONS WHY

The Distributor of the GEM BELT SOWER is run by a quarter turn belt instead of gearing.
The advantages of the chain are smoothness of movement, noiselessness while running, durability of the fast-running parts, and the evenness with which it sows the grain.
The GEM sows the seed about sixty feet wide.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 pounds.....	\$25 00
No. 2 Gem, to run with belt gear, weight 154 pounds.....	30 00
No. 3 Gem, to run with all gears, weight 165 pounds.....	35 00

The GEM SEED SOWER can only be obtained from us, as we are the sole manufacturers.

DOTY'S

Automatic Revolving Scraper.

The Doty's is used in making Roads, Excavating, Ditching, Leveling for Railroads, Canals and Levee Building.



Hundreds of Certificates from those who have used them prove it to be the

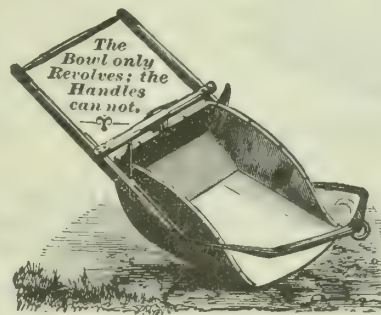
Best Scraper Made

SAVES

TIME,

MONEY and

LABOR.



DOTY'S REVOLVING SCRAPER.

TIME.

For it revolves, losing no time to reset for filling.

MONEY.

For it saves one man—the filler.

LABOR.

For it is 50 per cent. easier for both man and horse.

Our Revolving Scraper is now so well known throughout the country that we shall give no long description of it. It has been on trial for the last eight years, and has been steadily growing in favor from the first. It is simple in construction. There is nothing liable to get out of order. No Pul' Rods, Spiral Springs, Triggers, or Swives to clog and refuse to work just when most wanted. It is made to handle dirt, and dirt will not choke it up, or stop its working. The material used is of the best quality. The Handles, Sides and back boards are of selected and thoroughly seasoned oak; the Bottom Plates of Sts. L. Steel Laid Runners, Malleable Iron Grabs. The new, improved Side Bars and Grab Irons will be much liked.

In simplicity, strength, durability and ease of operation, these Scrapers are unequalled. We ask but a trial to prove their superiority, and we know those who once use them will have no other kind.

Although the universal favor with which it has been received for the past ten years would seem to be sufficient guaranty that it was good enough, yet the improvements we have made in the grab and side bar will commend themselves to everyone at first sight; while the main features of the Scraper have been preserved. These little changes add greatly to its durability and the ease with which it works.

A boy can handle it. One man drives the team and manages the Scraper. The load is taken up, carried to its destination, and dumped without stopping the team. The earth is not dragged along, but carried by the Scraper, which rides easily upon its steel-laid runners, thus greatly diminishing the draft. It dumps by simply RAISING THE HANDLES, which releases the bowl and causes it to revolve, depositing its load, and righting itself for another.

We guarantee the material and workmanship to be as good as heretofore, and believe our Revolving Scraper, as now made, is the BEST IN THE WORLD.

PRICES:

30 Inch Steel Bottom weight 130 pounds.....	\$19 00
33 " " " " 145 "	20 00
36 " " " " 160 "	21 00

EUREKA GANG PLOWS.

The Eureka Gang Plows are the Standard Gang Plows of the Pacific Coast, and are manufactured by the Benicia Agricultural Works, Benicia, Cal. They are simple, durable, painted and finished in first-class style, and none but the most skilled mechanics are employed in their manufacture. There are thousands of them now in use on this Coast, and giving entire satisfaction.

THE GALES CHILLED PLOWS.

Farmers, Read This! Consider, be Wise, and Try a Gale.

The year 1881 was filled with great victories for the New GALE CHILLED PLOWS; time and space permits mention of only a few: At the Union Fair of June last, held at Geneva, N. Y., the Gale Plow was awarded Three Premiums. The first Premium in the Plowing Match and Two in the Exhibition of Plows. Also, at the Sugar Grove Fair, near Jamestown, N. Y., in September, the First Prize was given to the Gale Plow in the Plowing Match (two of the committee owning Oliver Plows at the time). At the Seneca County Fair, held at Ovid, N. Y., in October, the New Gale Plow, in very hot competition, won all the Prizes—First, Second and Third—in the Plowing Match. Also, the same week, at Perry, N. Y., Wyoming Co., the Gale Plow won the First Prize in the Plowing Match.

Send for Circulars and Price Lists to

BAKER & HAMILTON, San Francisco, Cal.

Agricultural Notes.

(CONTINUED FROM PAGE 425.)

will be finished in time for next season's vintage. This building, 40x95 ft. in size, will be two stories high. Work on the second story has already commenced. The stones used in the construction of this cellar are obtained six miles from town, on the old Soda Springs road, and are dressed on the ground. Some of them, as laid in their course, weigh two tons. The proprietor, Mr. Mathos, has laid every stone in the face of the walls. Three men are kept at work in the yard. The building is one of the most substantial ever constructed in the valley, and will last for centuries. Another season Mr. Mathos will place in position improved machinery for crushing grapes and racking wine. The building, when completed, will cost about \$20,000.

SORGHUM SYRUP.—Last week the Jessen Bros., who are the lessees of a portion of Mrs. Bruck's farm, known as the Stark place, situated six miles above St. Helena, commenced making syrup from sorghum cane grown upon the premises mentioned. They expect to make between 200 and 300 gallons of very fair syrup, and intend another year to increase the quantity materially. This year they had 26 acres planted to the cane.

VINEYARD LAND.—St. Helena Star: We have been told that land is too high to be profitable. I. J. Newkirk bought 30 acres two years ago and planted it to vines. This year—at two years of age—he picked over 100 tons of grapes from it, worth over \$3,000, or a little more than enough to pay back the price of the land, which cost \$3,000. The place could not be bought for \$20,000 at this writing.

A MANURE PIT.—H. A. Pellet, who has made many improvements to his fine place this year, has just added something that all thrifty farmers will want—a manure pit, where all the refuse of the place may be saved for the replenishing of the land. It is 13x20½ ft. in size, about six feet deep and exceedingly well built, having cement walls and floor, so as to be water-tight. The floor has a slant, inclining to a well at one end, where, with the aid of a wooden pump, the juices as they settle are raised to the top and poured over the mass to again percolate through it. This is a step in the right direction for California farming, and its general imitation will go far toward relieving our people of the reproach of wastefulness which attaches so generally to all new countries. When a man spends a couple of hundred dollars to save the manures of his place, depend upon it he intends not only to stay there and to remain in the business, but also to make himself as comfortable as possible in it and develop to their fullest extent the bounteous helps which nature has provided so abundantly for it.

SAN BENITO.

WORK AND GROWTH.—*Democrat*, Nov. 24: The late rains having been sufficient to prepare the ground for plowing, the farmers are busily engaged putting in their next year's crop. Some have grain now standing over six inches high. Almost every farmer along the San Benito is plowing and sowing as fast as possible. The prospects for good crops of hay and grain the next harvest could not be better. The new feed is growing rapidly and stock is doing well. The farmer and stock raiser of this county have certainly a bright prospect ahead.

SANTA BARBARA.

A GOLETA DAIRY.—*Independent*: One of the most promising small dairies in this portion of the county is that of F. E. Kellogg, Jr. His cows are all well selected and mostly of the Jersey breed, so well known for their good butter qualities. He raises abundant fodder, hay, corn, pumpkins, beets, etc., and stall feeds them, and will keep them in full milk at the time when pastured cows usually begin to fail. All the dairy arrangements and fixtures are admirably designed to give the stock every advantage and to save labor and prevent waste. The quality of butter made by Jasper Lane, who has charge of the dairy, is well known and appreciated.

SANTA CRUZ.

FARMERS' ASSOCIATION.—*EDITORS PRESS*: The 14th annual meeting of the association was held at the Court House on Saturday, Nov. 28, 1882, at 1 o'clock P. M., President J. S. Mattison in the chair. The minutes of the last meeting were read and approved. Mrs. Martha Wilson, E. B. Cohoon, H. Gashee and Joan Doyle were elected members of the association. J. S. Mattison, who has been President of the association since its organization, declined to be considered a candidate for President. The following officers were then elected to serve for one year: President, F. A. Hihn; First Vice-President, W. W. Waterman; Second Vice-President, C. B. Cohoon; Treasurer, Martin Kinsley; Secretary, Roger Conant; Trustees, F. A. Hihn, W. W. Waterman, Mrs. Martha Wilson, E. Dakin, J. Francis. The following committee was appointed to secure, if possible, an appropriation from the next Legislature: F. A. Hihn, C. L. Anderson, Martin Kinsley, Mrs. Wilson and Mrs. Kooser. The following committee was appointed to revise the constitution and by-laws: J. S. Mattison, E. Dakin and W. W. Waterman. The association is taking a new life, new members are joining at every meeting, and there seems to be an earnest desire on the part of all to make it a thoroughly live institution. It is proposed to hold a fair every year that will reflect credit on the association and Santa Cruz. Measures are being taken to secure a lot, on which will be

erected suitable buildings for fair purposes, which will be of a permanent character. We feel that we are getting back to the old days, when the proceedings of the association were watched with the greatest interest and felt throughout the entire community. — ROGER CONANT, Sec'y.

SOLANO.

THE VACAVILLE LAND SALE.—The following is the list of purchasers and prices at the late Vacaville sale by Easton & Eldridge, to which reference was made last week: Twenty-four acres sold at \$150 per acre, to E. P. Williams, of Vacaville; 13 acres at \$145 per acre, to H. A. Lenore, San Francisco; 14 acres at \$140, to same; 21 acres at \$150, to H. P. Chadbourne; 22 acres at \$147.50, to same; 23 acres at \$150, to R. A. Campbell, of Cisco; 17 acres at \$145, to C. P. Reeves, of Suisun; 52 acres at \$152.50, to J. M. Daggart, of Lagoon Valley; 33 acres at \$147.50, to J. W. Burnham, of Vaca Valley; 20 acres at \$125, to H. A. Lenore, San Francisco; 20 acres at \$137.50, to H. P. Chadbourne; 20 acres at \$137.50, to R. C. Chapman; 20 acres at \$120, to J. A. Bradley, of San Jose; 27 acres at \$125, to Dr. Dobbins, of Vacaville; 26 acres at \$125, to J. A. Bradley, of San Jose; 20 acres at \$125, to E. Hitchings; 20 acres at \$130, to same; 56 acres at \$140, to E. P. Sanborne, of Vacaville; 15 acres at \$125, to P. Riordan, of Vacaville; 20 acres at \$120, to Mr. McCauley, of San Francisco; 19 acres at \$117.50, to H. A. Lenore, of San Francisco; 40 acres at \$115, to same; 62 acres at \$112.50, to R. E. Burton, of Vacaville; 17 acres at \$90, to E. Hitchings; 27 acres at \$85, to H. P. Chadbourne, and 21 acres at \$30, to same.

SONOMA.

EUCALYPTUS ROOTS.—*Petaluma Argus*, Nov. 24: The planting of eucalyptus or Australian gum trees in California has been quite extensive. The tree was a favorite, both because of its rapid growth and luxuriance of foliage. While it is evidently a desirable tree to plant for the rapid production of firewood and other uses for which it may be fitted, it is doubtful whether it is profitable as an ornamental tree or for planting along fences as a wind-brake to lands used for cultivation. It is evidently a venomous feeder upon moisture and soil nutriment. In evidence of this there may be seen at the *Argus* office the extremity of an eucalyptus root from the farm of J. W. Cassidy, near this city. Mr. C. informs us that this tree stands about 30 feet from his cistern. The root that reached the cistern was not more than a quarter of an inch in diameter; and yet this tiny root threw out a perfect network of small roots and fibers in the cistern, which when spread out makes a solid mat four feet across. With such feeders to lap up moisture and sustenance from the soil, it is not to be wondered that these gum trees outstrip all other trees in growth. Neither should it be a matter of surprise that other trees and vegetation does not thrive in the immediate vicinity of eucalyptus trees.

FEED.—*Cloverdale Sentinel*: Our ranchers inform us that the growth of grass is more forward now than in February of last year. This has been the most favorable season experienced for years, and stock of all kinds is in good condition.

STANISLAUS.

EARLY SEASON.—*News*, Nov. 24: Our farmers are nearly a month further advanced with their plowing than in ordinary seasons.

TULARE.

CARP FOR KING'S RIVER.—*Visalia Delta*, Nov. 24th: During the past week Mr. E. Jacob took 20 carp from the fish pond of Mr. Bohwell on Kaweah river, and took them to King's river, below Chrisman's ferry, near Lemoore. They were there placed in the river in a box about six feet long; for, as they are yet small, it is necessary to protect them from the ravenous lake trout until they are large enough to take care of themselves. The fishermen there will look after these carp until they have attained sufficient size to be turned loose. They will be kept in the box for several months to come. This useful enterprise deserves success.

FRUIT.—George Reeves has lately brought to Hanford from his orchard near Grangeville some of the largest and best flavored Bartlett pears and apples of the season. The apples are the Ben Davis. Two of them weighed 25 ounces, the larger one weighing 13 ounces and measuring 12½ inches around. Mr. Reeves, who has had a long experience as an orchardist in Napa county, gives it as his opinion, after two years' residence near Grangeville, that no part of California can produce better apples and cherries than the Mussel Slough country.

MUSSEL SLOUGH NOTES.—Farmers are rapidly plowing and seeding in the Mussel Slough district, including the lands along the north shore of Tulare lake. The ground is so wet that it breaks up very moist and mellow. The whole face of the country is already quite green with volunteer grain and weeds, and in some very moist spots the volunteer wheat is heading sufficiently to make good grain hay if wanted for that purpose. So far the weather has been quite mild, the lowest the mercury has been observed on any of the ranches being about 23°. Several white frosts have occurred.

YUBA.

A TURNIP.—*Marysville Appeal*, Nov. 24: Major Tidale has a phenomenal turnip that came from Strawberry valley. It measures nine and one half inches in its greatest diameter, and weighs eight pounds.

A Cheap, Handsome and Useful Present ! !

THE AUTOMATIC FAIRY SEWING MACHINE

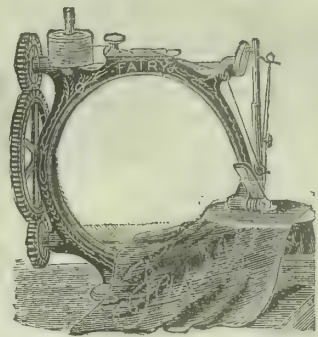
ONLY

\$7.50

—FOR—

THIRTY DAYS.

\$10 After January 1st, '83.



Useful,

STRONG,

Instructive

AND

SAFE.

RECOMMENDED BY PHYSICIANS.

It is a Perfect Boon for Invalid Ladies

Who are physically unable to use a treadle machine. It will do a variety of Family Sewing and is very useful for

EMBROIDERING DESIGNS IN SILK.

It is the Simplest Sewing Machine Ever Made.

NOT THE LEAST APPROACH TO COMPLICATION OF MACHINERY.

Any six-year-old child can comprehend and learn to use it. Every machine is finely ornamented and finished with Berlin Bronze and Nickel Plate. It makes the Celebrated "Elastic Twist" Loop Stitch, said to make the strongest seam. It sews from a single spool—no bobbins to wind. It feeds the work automatically without extra machinery. It runs easily and silently, and is a very fast and sure sewer. It uses Singer Family Needles, which cost the least and can be found the world over. It cannot be turned the wrong way, and is not liable to be put out of order. It is very durable, and, with care, will last for the use of generations.

THE MACHINE FOR THE MILLION!

Nothing like this to take care from the Mother's mind. The machine will clamp on any ordinary table, and is furnished complete with full directions, and put up in a neat, strong box; weight, 1½ lbs. Every machine is fully tested, and is threaded and furnished with a spool of silk, ready for instant use. Fully protected by several Patents. Goes safely by mail, postage 40 cents, which must accompany price. Offered for the holiday season, and for the purpose of introducing, at \$7.50 each, and postage, till January 1, '83. The condensed result of years of study by the best Mechanical minds. The "FAIRY" is a PRACTICAL HAND SEWING MACHINE, and is unequalled for the Instruction of Children. With it they can Make Doll Clothing and learn to do Family Sewing. All orders for

"FAIRY MACHINES"

Must be addressed to

MARK SHELDON,

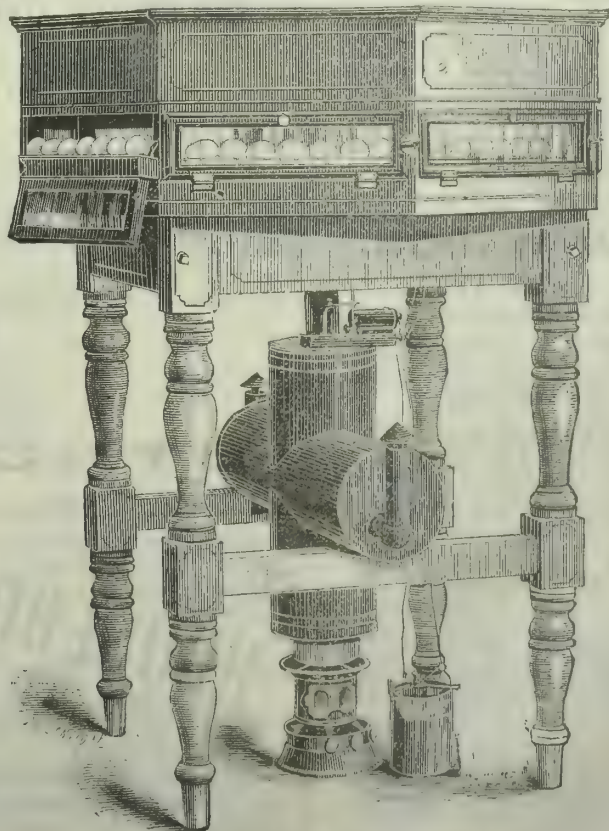
9, 11 & 13 First St., San Francisco, Cal.

GENERAL AGENT FOR THE ENTIRE PACIFIC COAST REGION.

The Petaluma Incubator.

The illustration on this page gives an idea of the appearance of the Petaluma incubator. It is strictly a California invention. We have followed its career with interest. Its successes last season were duly noticed, and the exhibition this year at the Sonoma and Marin district fair

was none the less interesting from the fact that 405 eggs were moved in a machine a distance of 200 miles by water, during the second week of incubation, resulting in a hatch of 370 chicks, an evidence that eggs can be handled during the process of hatching, notwithstanding the old-time notion to the contrary. The incubators were under official supervision during the hatch, and the above result is certified to by them. In competition it was



THE PETALUMA INCUBATOR.

was the largest of the kind ever made on the Pacific coast, consisting of 13 machines, large and small, hatching during the week nearly 2,000 chicks. In addition to the department premium, it was deemed worthy of the only special awarded in the entire fair. At the State fair, Sacramento, it was also the largest ever held there, and

awarded a diploma, silver medal and a special gold medal recommended. They are now used by a number of farmers and poultrymen throughout the State, and many hatches, from time to time, have been notified in our columns. It is worthy of the attention of all those interested in incubation.

Lands for Sale and to Let.

Fruit and Homestead Lands FOR SALE.

Having purchased the tract of land adjoining the town of Vacaville, known as the Mason-Wilson tract, containing 492 acres, and subdivided the same, I am prepared to sell from five acres upwards, as desired.

This land being located in Vaca Valley, known for its early and superior fruits, offers valuable inducements to those desiring to engage in the business, or for pleasant country homes.

For climate, healthfulness and school facilities it is unsurpassed in the State, and easy of access by a branch railroad from Eureka.

I will sell upon favorable terms. For particulars Apply to
W. B. PARKER.
Vacaville, Solano Co., Cal.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The Californian Irrigator," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange & Mart," Santa Cruz, Cal.

BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasture, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

Educational.

STOCKTON BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL. The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address: P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

SACRAMENTO

The Business Training School of the Pacific Coast. Graduates assisted in obtaining employment. Send for the College Journal. Address: E. C. Atkinson, Sacramento, Cal.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

REISTER'S PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,
Chico, Butte County, CALIFORNIA

YOUR NAME

On 50 large size (4x8), Remembrance, Souvenir, and other cards, 10c. 14 pkts. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and lowest prices. 20 fine 4x6 1/2 size cards, turned corners, 10c.

Your Name in the office

Agents make 50 per cent. We offer the largest line of cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

D. C. MOORE, M. D.,

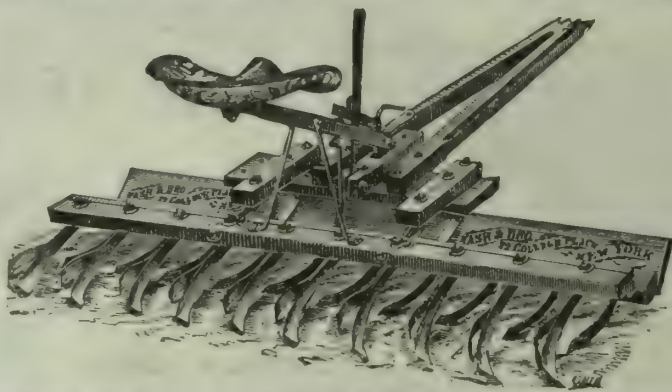
AND

MRS. E. D. MOORE, M. D.,

Trail Hygienic Medical and Surgical Sanitarium Have returned from a tour in the States and resumed Chronic and General family practice, including diseases, at 1021 Market St. 447 Cancer, Consumption, Bright Disease, Liver Complaints, Dyspepsia, Nervous Exhaustion, and all Chronic and desperate cases a specialty.

"ACME" PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.



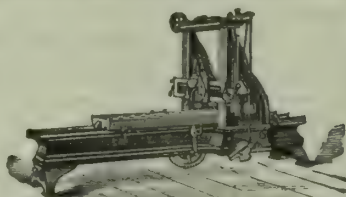
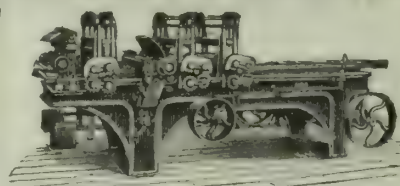
Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,

22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - - San Francisco, Cal
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,

STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

Illustrated Catalogue. Photograph and Lecture, 10c. Automatic Cabinet. Play any Tune.

MAGIC LANTERNS AND VIEWS ORGANS ONLY \$5.

Magic Lanterns and Slides WANTED.

HARBACH ORGANINA CO.,

809 FILBERT STREET,

Musical Wonder Catalogue FREE.

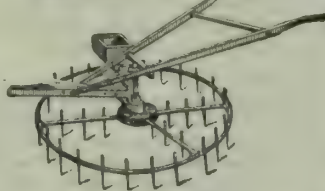
PHILADELPHIA, PA.

BYRON JACKSON,

Manufacturer of

Agricultural Machinery.

Price \$25.



Jackson's Vineyard Harrow.

SENT ON TRIAL.

WOODEN HARROWS,

With Solid Steel V-Shaped Tee h.

IRON HARROWS,

With Solid Steel Teeth.

VINEYARD HARROWS,

Rotating Either Way.

ADDRESS,

BYRON JACKSON,

625 Sixth Street.

SAN FRANCISCO.

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT HOUSEHOLD SEWING MACHINE, GEN'L AGENTS, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors

Office—218 California Street, Room 1.

REMITTANCES to this office should be made by postal order or registered letter, when practicable; cost of postal order, for \$15 or less, 10 cts.; for registered letter, in addition to regular postage (at 8 cts. per half-ounce), 10 cts.



Queen OF THE South FARM MILLS

For Stock Feed or Meal for Family use.

10,000 IN USE.

Write for Pamphlet.

Simpson & Gault Mfg Co.

Successors to STRAUB MILL CO.

CINCINNATI, O.

BOONE & MILLER, Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

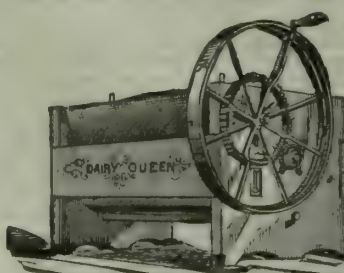
Dewey & Co. { 262 Market Street, } Patent Agents

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.

RECEIVED TWO DIPLOMAS.



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairymaid. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Janesville, Cal.,

Or Jar. L. Haley, Janesville, Lassen Co., Cal.,

Benicia Agricultural Works, Benicia, Cal.



CLUB-FOOT SHOE.

Fig. 2

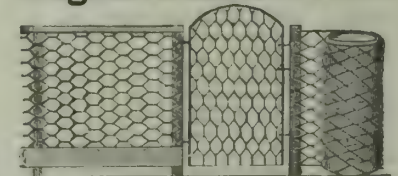
AUTENRIETH'S CELEBRATED

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins, Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will turn dogs, pigs, sheep and poultry, as well as the most vicious stock, with impunity in any weather. It is used for fencing for farms, gardens, stock ranges and railroads, and very neat for fences, parks, school lots and cemeteries. Covered with rust-resisting paint, and guaranteed to last a lifetime. It is Superior to Boards or Barbed Wire in every respect. We ask to try it a few feet, knowing it will wear itself out before the Sedgwick Gates, made of wrought iron pipe and steel wire, defy all competition in neatness, strength and durability. We also make the best and cheapest All Iron Automatic or Self-Opening Gate, also Cheapest and Neatest All Iron Fence. For Prices and Particulars ask Hardware Dealers or address the Manufacturers,

SEDGWICK BROS., Richmond, Ind.

Mention this paper.



Is the Best Pump in the World. Another New Improvement is Lewis Patent Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 32 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorff St., S. F.

P. S. A sample can be seen at this office.

YOUR NAME In Elegant Script Type, on 50 beautiful imported chrome cards, 10c. 14 pkts. \$1. 20 pearl bevel gilt edged cards with lapped corners, 10c. Agents' large album containing all the latest styles of imported bevel edges and satin fringe cards, with illustrated premium list & private terms to agents, 25c. CARD MILLS, Northford, Conn.

JOHN ELLIS,

Landscape Engineer and Garden Architect, Practical Nurseryman and General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

OOTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St. S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Farridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal. Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

TOULOUSE GEESSE at \$15 per pair; \$20 per trio; Eggs, \$8 per dozen. Bronze Turkeys, \$10 per pair; Eggs, \$4 per dozen. Address T. D. Morris, Sonoma, Cal. breeder and importer of all kinds of thoroughbred poultry

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and fowls for sale.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2 50; 25 lbs, \$5 B. F. WELLINGTON, 125 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYOE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.



FOR SALE

20 Houdans, 25 Black Spanish, 20 Langshans, 50 Buff Cochins, 50 Brown Leghorns, 100 Plymouth Rocks, 50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.



Calvert's Carbolic SHEEP WASH. \$2 per Gallon.

After dipping the Sheep, is useful for preserving wet hides, destroying the vine pest, and for wheat dressings and disinfecting purposes, etc. T. W. JACKSON, S. F., Sole Agent for Pacific Coast.

Silos Reservoirs, Head Gates,

ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular

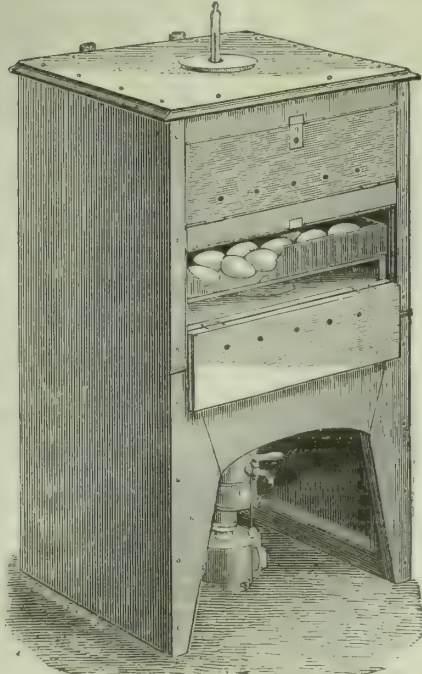
IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881 PETER SAXE & HOMER P. SAXE.

PETER SAXE & SON

GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.



AGENT FOR THE PACIFIC INCUBATOR,

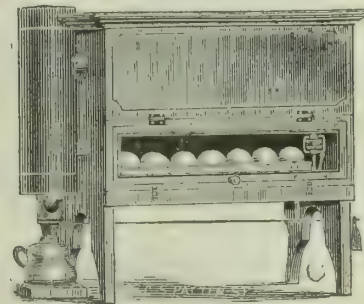
WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to

Box 1771, San Francisco.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity, \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over

PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium Diploma and only Special awarded in the entire Fair, in competition with

NATIONAL (Axfords)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon ovens, hatch entering center; 240 eggs, \$50; 400 eggs, \$75; 630 eggs, \$90; Circular free. Address,

I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

LANGSHANS.



My Langshans are genuine Major A. C. Croas's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR,

1416 Folsom St., S. F.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal. Breeder of pure bred Poland China pigs of the Black Beauty, Black Bess, Bismark, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address J. A. POPPE, Sonoma, Cal.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls, Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25

Sold by the trade generally, or address G. G. WICKSON, 319 Market St., S. F.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco

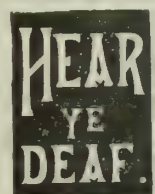
LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco



Garmore's Artificial Ear Drum.

As invented and worn by him perfectly restoring the hearing. Entirely deaf for thirty years, he hears with them even whispers, distinctly. Are not observable, and remain in position without aid. Descriptive Circular Free. CAUTION: Do not be deceived by bogus ear drums. Mine is the only successful artificial Ear Drum manufactured.

JOHN GARMORE,

11th & Race Sts., Cincinnati, O.

AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As Fanciers, Amateurs and others are ready to use a good, reliable, Self-regulating Incubator, that can be produced cheap, we now offer one that holds 150 eggs. The Baby Price \$28. Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast, 630 Howard St., San Francisco.



We have for sale at our farm at Mountain View thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pigs from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, I. J. Truman, S. F.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTEPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER

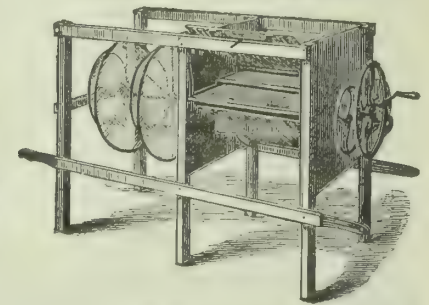
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE BEST. Send for circular and price.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

MECHANICS' FAIR, 1882.

Best Truck.....Silver Medal.

Best Hose Cart.....Silver Medal.

4-Spring Wagon, With Top.....Silver Medal.

Best Milk Wagon.....Silver Medal.

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - SAN FRANCISCO.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Firearms and Sporting Goods, 416 Market Street, San Francisco, Cal.

BENT GRASS FOR SAND DUNES.—The experience of the Commissioners of the Golden Gate park with "bent" grass to fix down shifting sands may be of use to those who have coast ranches. This grass was planted two or three years ago, and it soon appeared that ordinary movement of the sand surface had no effect upon it, while, if such violent displacements took place as were often occasioned by storms, this invincible sand subduer forced its way up through the overlying drift and went on growing as if nothing had happened. This last almost unique vegetative trait was quite opposite to the ready discouragement of the young pines, gums, acacias and other transplanted trees and shrubs. When once covered by the drift their usefulness was at an end.

THE EMPEROR FOR LATE SHIPMENT.—The Los Angeles *Mirror* notices specimens of the Emperor grape brought into town by Mrs. Jeanne C. Carr. In the last days of November the fruit is as solid and firm as though it were August. The specimen looks as though it would ship to New York in prime condition, and it will surely keep until Christmas on the vines. The berry is a dark purple, rather oblong, and large size.

GEORGE & JOHN H. LESLIE, wholesale brokerage and commission merchants of Chicago, have subscribed to the *RURAL PRESS* to secure information concerning the fruit interest of California, especially prune-growing and manufacture. We find that Eastern merchants are continually manifesting more interest in our fruit products, and this, of course, means an extension of the demand for them.

OVER 180,000 Howe Scales Sold.—Hawley Bros.' Hardware Co., General Agents, San Francisco.

A Valuable Paper.

It is a fact that there are but few agricultural papers that are so well adapted to meet the agricultural wants of a State as the *PACIFIC RURAL PRESS*, published in San Francisco. It makes fruit growing a specialty, and devotes, as it should, more than usual attention to the vital subject of entomology. As the suggestions and experience of practical growers of the orange and lemon and other sub-tropical fruits is given, our readers in Florida, and along the gulf, would find them of great advantage. The many warm friends of Prof. Hilgard throughout the South will be pleased to know that he is a regular contributor to the *RURAL PRESS*, and that his scientific researches are proving of great value to the agricultural interests of California. —*Louisville (Ky.) Farm and Fireside.*

How Does Compound Oxygen Cure?

We answer in two important ways: First, by a rapid purification of the blood, in consequence of a larger supply of oxygen to the lungs, and second, by revitalizing all the nerve centers, the Compound inhaled having in its manufacture become magnetized, which gives it the quality known to chemists as "ozone." A new and healthy action is at once set up in the diseased system, and general improvement follows as surely as effect follows cause. If you wish to know all about this new and remarkable remedy, the use of which is rapidly extending to all parts of the country, send to Dr. STARKY & PALIN, Nos. 1109 and 1111 Girard St., Philadelphia, for their Treatise on Compound Oxygen. It will be mailed free.

All orders for the Compound Oxygen Home Treatment directed to H. E. Mathews, 606 Montgomery St., San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

Chicago's Largest Horse Dealer.

James D. Beckett says: "I sell large numbers of one-half and three-fourths blood French, Clydesdale and English horses; principally French horses, because they are sought after more than any of the other breeds, and command higher prices. This is because they last longer on our pavements and give better satisfaction to those who buy them to wear out." —*Chicago Tribune.* These horses are largely bred in the West. M. W. Dunham, Wayne, Ill., having imported and bred nearly 1,000 stallions and mares, and now has some 400 on hand for breeding purposes.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hives syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men:

- G. W. McGraw—Santa Clara county.
- M. P. OWEN—Santa Cruz county.
- J. W. A. WRIGHT—Merced, Tulare and Kern counties.
- JAMES C. HOAG—California.
- L. L. WOODMAN—Nevada State.
- E. W. CROWLEY—Los Angeles county.
- L. WALKER—Butte, Tehama and Shasta counties.
- E. A. WILKINS—San Francisco.
- S. E. BAKER—Eastern States.
- J. WILKES, Amador county.

If you want to become a telegraph operator send 25 cents to C. E. JONES & BRO., Cincinnati, Ohio, for the best illustrated instruction book.

How to Stop This Paper.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Nov. 29, 1882.
The staple cereals, wheat and barley, show a better disposition this week, and values have hardened a little. Advances from abroad and the Eastern markets show a similar tendency, and buyers are gaining more courage. The latest from the English market is as follows:
LIVERPOOL, Nov. 28.—Wheat.—The spot market is firm at 8s and 9s 3d. Cargoes are strong, at 4s for just shipped, nearly due and off coast.

The Foreign Review.

LONDON, Nov. 27.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: Progress with the hopelessly late wheat sowing is very slow under the most favorable circumstances. No improvement in supplies. Dry samples are still scarce. Trade is dull and rates unchanged. Foreign samples continue to disappoint sellers, except New Zealand, which is 6d better. No advance in any other description of foreign breadstuffs, which sell slowly. Cargoes, quiet. Eight arrivals, and sales of No. 1 California advanced 3d. Flour in restricted demand, and sales are more or less labored. Foreign, unimproved; arrivals from America heavy; barley, improved; samples, scarce; values improved at some provincial exchanges. Foreign, quiet. Oats, unchanged; foreign, lower; maize, unimproved.

Eastern Hop Trade.

NEW YORK, Nov. 25.—Hops, easier and unsettled, though it is difficult to buy strictly choice new for less than \$1.10. A good quality of new has sold at \$1.05 to \$1.08 cash to brewers, and in Oneida county the sale of 5,000 bales of medium is reported at 90c. For export here, exporters offer 95c for good hops, without response. All the stock in the London market is reported by cable as having been closed out at £25 to £27 per cwt., with a better feeling at the close.

Eastern Wool Markets.

Boston, Nov. 24.—Wool continues in fair demand, the sales of the week amounting to 2,000,000 pounds and upwards. Prices were a shade easier, but remain without material change. Sales of Ohio were made at 41¢ to 45¢ for XX, and 42¢ to 44¢ for XX and above; Michigan X fleeces at 38¢ to 39¢, in combing and delaine fleeces sales have been made at 43¢ to 44¢ for fine delaine, and 47¢ to 48¢ for fine and No. 1 combing. Unwashed wools have been in fair demand, with steady prices; sales at 17¢ to 23¢ for low and coarse; 24¢ to 32¢ for fine and medium, and choice selections higher. California spring has been selling at 20¢ to 32¢, a round lot of northern (122,000 lbs) selling at 20¢. In foreign wool there have been sales of 12,000 lbs of Australian, 75,000 lbs of Cape, and 97,000 pounds of Mediterranean carpet.
Boston, Nov. 23.—The demand for Wool is steady, but moderate, and in prices there is very little change. California Spring has been sold at 30¢ to 32¢ for choice Northern, and 20¢ to 25¢ for lower grades.

Eastern Grain and Provision Markets.

CHICAGO, Nov. 23.—Wheat, steady; regular, 94¢ for November and the year, 95¢ for January; Winter, 95¢; Spring, 94¢. Corn, steady, active and firmer, at 68¢ cash, 70¢ for November, 69¢ for the year. Pork, firm and higher, at \$16.94 cash, \$16.90 for the year, \$17.02 for January. Lard, strong and higher, at \$11.15 cash, \$11.51 for December, \$11.47 for January.

London Wool Market.

LONDON, Nov. 23.—At the Wool sales to-day, 9,500 bales were disposed of, comprising Sydney, Port Phillip and Cape. The market was fairly animated and prices unchanged.

BAGS.—There is nothing doing in the bag market.

BEANS.—Prices are about the same as last week.

CORN.—White corn sells at 10c per cwt lower than at last report. Yellow sorts are unchanged.

DAIRY PRODUCE.—The growth of fresh feed is increasing the supply of fresh roll, and the price is shaded off from 1 to 2c per pound.

EGGS.—Eggs, too, have cheapened through increased supplies, the decline being 2c per dozen since our last report.

FEED.—Barley and middlings are selling from the wharf at a slight reduction, but millers' rates are unchanged. Hay is the same as last week.

FRESH MEAT.—There has been a drop from last week's advance of about 1c per pound on the various grades of Beef. On the other hand, Mutton and Spring Lamb have gained 1c per pound.

FRUIT.—Grapes are now bringing \$1.00 to \$1.25 per box, and some of very good quality are arriving. Oranges from Mexico are lower. Other Fruits are unchanged.

HOPS.—There has come a block in the local Hop trade, and dealers are talking as low as 90c, but sales are not made, and so the price is merely nominal.

OATS.—Oats are doing fairly, choice Milling lots bringing 92¢ per cwt.

ONIONS.—Onions are unchanged, the same wide range according to quality prevailing.

POTATOES.—Potatoes have fluctuated somewhat, the choicer kinds advancing, but the common river Reds selling lower.

PROVISIONS.—The long period of high prices seems to have been brought to a close by a decline and weakness in the Eastern centers, which reduces values here. Values are, however, still good and trade promising.

POULTRY AND GAME.—Turkeys have been high for a day or two and the Thanksgiving crop promises to yield the growers rather more than usual this year. Fowls are selling well at about the same rates as last week. Quotations may be found in our table.

VEGETABLES.—There is no change of any moment.

WHEAT.—Wheat sells about as quoted last week, but there is more life in the trade, as shippers are buying freely.

WOOL.—There is nothing new. Sales are few and quotations nominal, to a great extent.

Lumber.

WEDNESDAY, M., Nov. 29, 1882.
Redwood.
Shingles, each, — @ 2 50
Posts, each, — 15 @ 17 1/2
Pine.
Rough, — @ 18 00
Surfaced, — 24 @ 30 00
Floor and step, — @ 27 50
Rough, — @ 18 00
Surfaced, — 27 @ 30 00
RETAIL.
Merchantable, — @ 22 50
Surfaced, No. 1, — @ 27 50
Tongue & Groove 30 00 @ 27 50
Pickets, rough, — @ 20 50
do, floor and step, — @ 30 50
do, fancy, — @ 30 00
do, square, — @ 17 50

Domestic Produce.

WHOLESALE.

WEDNESDAY, M., Nov. 29, 1882.

BEANS & PEAS.
Bayo, cwt., — 37 @ 40 00
Butter, — 30 @ 32 25
Castor, — 30 @ 32 25
Peanut, — 30 @ 32 25
Pink, — 30 @ 32 25
Large White, — 25 @ 27 50
Small White, — 30 @ 32 25
Lima, — 37 @ 40 00
Field Peas, 100 lb., — 30 @ 32 25
Broom Corn, — 30 @ 32 25
Southern, — 30 @ 32 25
Northern, — 30 @ 32 25
CHICORY.
California, — 4 @ 4 00
German, — 4 @ 4 00
DAIRY PRODUCE, ETC.
Cal. Fresh Roll, lb., — 30 @ 34
do. Fancy Branda, — 30 @ 36
Pickle Roll, — 25 @ 28
Pekin, new, — 27 @ 28
Eastern, — 20 @ 25
New York, — 20 @ 25
EGGS.
Roll, — 20 @ 25
Pekin, — 20 @ 25
CHEESE.
Cheese, Cal., lb., — 14 @ 15
do. boxed, — 15 @ 16
Cal. Fresh, doz.,
Ducks, — 4 @ 52
Oregon, — 4 @ 52
Pickle, by express, — 37 @ 42
Picked here, — 42 @ 47
Utah, — 42 @ 47
FEED.
Barley, ton, — 17 @ 18 00
Corn Meal, — 13 @ 15 00
Hay, — 10 @ 17 50
Middlings, — 20 @ 22 00
Oil Cake Meal, — 20 @ 22 00
Straw, bale, — 60 @ 75
Extra, City Mills, 25 @ 25 50
do. Country Mills, 47 @ 25 25
do. Oregon, 47 @ 25 12 1/2
do. Walla Walla, 45 @ 25 00
Superfine, 35 @ 24 75
FRESH MEAT.
Beef, 1st quality, lb., — 9 @ 9
Second, — 8 @ 8
Third, — 7 @ 7
Mutton, — 4 @ 5
Spring Lamb, — 7 @ 7 1/2
Pork, unadressed, — 11 @ 11
Dressed, — 10 @ 10 1/2
Veal, — 7 @ 8
Milk Calf, — 9 @ 10
do. choice, — 9 @ 10
GRAIN, ETC.
Barley, feed, cwt., — 14 @ 15
do. Brewing, — 15 @ 15 1/2
Chevalier, — 15 @ 15 1/2
Buckwheat, — 22 @ 23
Corn, White, — 16 @ 16 1/2
Yellow, — 16 @ 16 1/2
Small Round, — 16 @ 16 1/2
Oats, — 17 @ 18
Milling, — 18 @ 18 1/2
Rye, — 17 @ 18 1/2
Wheat, No. 1, — 17 @ 17 1/2
do. No. 2, — 16 @ 16 1/2
do. No. 3, — 15 @ 15 1/2
Choice Milling, — 17 1/2 @ 17 1/2
HIDES.
Hides, dry, — 19 @ 20
Wet salted, — 9 @ 11
HONEY, ETC.
Beeswax, lb., — 12 @ 15
Honey in comb, — 12 @ 15
Extracted, light, — 12 @ 15
do, dark, — 5 @ 9
HOPS.
Oregon, — 15 @ 17 1/2
California, — 15 @ 17 1/2
Wash. Terr., — 15 @ 17 1/2
Old Hop, — 15 @ 17 1/2
NETS.
Walnut, Cal., — 10 @ 12
do. Chile, — 7 @ 8
Almonds, hd sh lb, — 8 @ 10
Soft shell, — 15 @ 17
Brazil, — 10 @ 12
Peanut, — 14 @ 16
Peanut, — 7 @ 8
Filberts, — 14 @ 16
ONIONS.
Red, — 10 @ 12
Silver skin, — 30 @ 35

POTATOES.
New, cwt., — 20 @ 21
Early Rose, — 20 @ 21
Patent, — 20 @ 21
Toma, cwt., — 80 @ 95
Humboldt, — 100 @ 110
" Peachblow, — 100 @ 110
" River, — 100 @ 110
" Cuffey Cove, — 100 @ 110
" River, — 100 @ 110
" Chile, — 100 @ 110
" Oregon, — 100 @ 110
" Salt Lake, — 100 @ 110
Sweet, — 120 @ 125
POULTRY & GAME.
Hens, doz., — 5 50 @ 6 50
Roosters, — 5 50 @ 6 50
Ducks, — 4 00 @ 5 00
Pekin, tame, doz., — 5 00 @ 6 00
do. Mallard, — 2 00 @ 2 50
do. Teal, — 75 @ 100
do. Sprig, — 1 50 @ 1 65
do. Geese, pair, — 1 25 @ 1 50
do. young, — 1 50 @ 2 00
do. Gray, doz, — 50 @ 60
do. White, — 50 @ 60
do. Turkey, — 14 @ 15
do. Dressed, — 15 @ 16
Turkey Feathers, — 10 @ 20
Sable, Eng., — 50 @ 75
Hail, doz., — 12 @ 15
Rabbits, — 15 @ 17
Hare, — 2 00 @ 2 25
Venison, — 3 @ 9
PROVISIONS.
Cal. Bacon, — 15 @ 16
Mutton, lb., — 16 @ 17
Lard, — 16 @ 17
Cal. Smoked Beef, — 14 @ 15
Shoulders, — 14 @ 15
Hams, Cal., — 14 @ 15
do. Eastern, — 14 @ 15
Canary, — 52 @ 55
Clover, Red, — 14 @ 15
White, — 45 @ 50
Cotton, — 20 @ 25
Flaxseed, — 20 @ 25
Hemp, — 4 @ 5
Italian Rye Grass, — 20 @ 25
Perennial, — 25 @ 30
Milk, German, — 10 @ 12
do. Common, — 7 @ 10
Mustard, White, — 12 @ 14
Rasp., — 20 @ 25
Blue Grass, — 20 @ 25
2d quality, — 16 @ 18
Sweet V Grass, — 20 @ 25
Orchard, — 20 @ 25
Red Top, — 8 @ 10
Lawn, — 30 @ 40
Mesquit, — 10 @ 12 1/2
Timothy, — 8 @ 11
TALLOW.
Crude, lb., — 9 @ 9 1/2
Rendered, — 11 @ 12 1/2
WOOL.
SPRING—1882.
Saf. Joaquin, free, — 18 @ 20
do. fair, — 18 @ 19
do. dusty, — 15 @ 17
Southern Coast, — 14 @ 20
Modoc & Siskiyou, — 24 @ 25
Humboldt, — 26 @ 27 1/2
Alvares & Foot, — 22 @ 24
Stanislaus & Tuolumne, — 22 @ 24
Sonoma & Mendocino, — 25 @ 27
For Sacramento, — 20 @ 25
Oregon, eastern, — 20 @ 25
do. Valley, — 23 @ 27
FALL 1882.
San Joaquin and Coast, — 10 @ 12
San Joaquin, good, — 11 @ 13
Northern, free, — 15 @ 17
Northern defective, — 11 @ 14
Northern Lamb, — 15 @ 17
Free Mountain, — 13 @ 16

Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY, M., Nov. 29, 1882.

FRUIT MARKET.
Apples, bx., — 35 @ 1 00
Banana, bunch, — 2 50 @ 3 50
Chestnuts, lb., — 6 @ 7 50
Crabapples, bx., — 10 @ 15
Cranberries, bbl., 15 @ 16 00
Grapes, bx., — 1 00 @ 1 25
Limes, Mex., — 4 00 @ 6 00
do. Cal., box, — 75 @ 3 50
Lemons, Cal., bx, 20 @ 3 00
Sicily box, — 6 10 @ 7 50
Australian, — 6 @ 7 50
Oranges, Cal., bx 25 @ 2 75
do. Tahiti M. 50 @ 3 75
do. Mexican, 17 @ 20 00
do. Loreto, — 6 @ 7
Pears, bek., — 50 @ 1 25
Pineapples, doz, — 6 @ 7 50
Pine, — 40 @ 60
Quinces, bak., — 6 @ 7
do. box, — 75 @ 1 25
Prunes, — 60 @ 75
Strawberry, chest, — 6 @ 7 50
Watermelon, 100, 50 @ 10 00
DRY FRUIT.
Apples, dried, B., 4 @ 6
do, evaporated, — 5 @ 11
do, marinated, — 9 @ 6
Apricots, — 13 @ 14
Blackberries, — 14 @ 16
Citron, — 28 @ 30
Dates, — 9 @ 10
Figs, pressed, — 4 @ 7
do. loose, — 3 @ 4
Nectarines, — 11 @ 12
Oranges, — 13 @ 15
do. navel, — 13 @ 15
Pears, dried, — 7 @ 8
do. whole, — 6 @ 7
Plums, — 5 @ 6
Pitted, — 10 @ 12 1/2
Prunes, — 10 @ 11
Raisins, Cal., bx, 2 @ 2 25
do. Halves, — 2 @ 2 25
do. Quarters, — 2 @ 2 25
Eights, — 2 @ 2 25
Zante Currants, — 2 @ 2 25
VEGETABLES.
Beets, cwt., — 4 @ 1 00
Carrots, 100 lbs, — 87 @ 1 00
" Arrow, sk., — 5 @ 5
" Bullfinch, doz 1 00 @ 1 25
" Garlic, lb., — 1 @ 3
do. poor, — 1 @ 1
Lettuce, doz., — 10 @ 12
Mushrooms, bx., — 75 @ 1 00
New green, bx., — 75 @ 1 00
Parsnips, lb., — 3 @ 3
Peppers, sk., — 75 @ 1 00
do. Chile, — 7 @ 7
Squash, Marrow, — 1 @ 1
" Fat, ton, — 6 00 @ 8 00
Tomatoes, box, — 15 @ 25
Turnips, cal., — 75 @ 1 00

Leather.

[WHOLESALE.]

WEDNESDAY, M., Nov. 29, 1882.

Sole Leather, heavy, lb., — 30 @ 32
Light, — 25 @ 28
Jodot, 3 to 10 Kil., doz., — 36 @ 45 00
11 to 13 Kil., — 50 @ 60 00
14 to 16 Kil., — 60 @ 65 00
Second Choice, 11 to 16 Kil., — 40 @ 65 00
Simou Ulmo, Females, 12 to 13 Kil., — 52 @ 65 00
11 to 15 Kil., — 60 @ 65 00
16 to 17 Kil., — 66 @ 68 00
Simon, 18 Kil., — 60 @ 65 00
20 Kil., — 60 @ 65 00
Kips, French, lb., — 85 @ 1 20
Cal., doz., — 55 @ 60 00
French Sheep, all colors, — 12 @ 15 00
Eastern Calf for Backs, lb., — 1 00 @ 1 25
Sheep Roms for Topping, all colors, doz., — 9 00 @ 10 00
For Hinges, — 8 50 @ 10 00
Cal. Russet Sheep Linings, — 3 00 @ 4 50
Best French Calf, — 4 00 @ 5 00
Good Jodot Calf, — 4 75 @ 5 00
Leather, Harness, lb., — 35 @ 40
Fair Bridle, doz., — 45 @ 60 00
Skiing, lb., — 33 @ 37
Well, doz., — 30 @ 36 00
Buff, ft., — 17 @ 20
Wax Side, — 19 @ 20

General Merchandise.

WHOLESALE.

WEDNESDAY, M., Nov. 29, 1882.

CANDLES.
Crystal Wax, — 16 @ 18
Paraffine, — 20 @ 22
Patent Sperm, — 25 @ 28
CANED GOODS.
Assorted Pie Fruits, — 2 25
Table do., — 3 50 @ 4 00
Jams and Jellies, 3 75 @ 4 00
Pickles, hf gal., — 3 25 @ 4 00
Sardines, hf box, — 1 57 @ 2 00
Hf Box, — 2 50 @ 3 50
Merry Fruit Cakes, — 1 00 @ 1 25
Preserved Beef, — 3 25 @ 4 00
2 lb. doz., — 3 25 @ 4 00
do 4 lb. doz., — 6 50 @ 8 00
Preserved Mutton, — 3 25 @ 4 00
2 lb. doz., — 3 25 @ 4 00
Beef Tongue, — 5 75 @ 6 00
Preserved Ham, — 5 50 @ 6 00
Deviled Ham, 1 lb., — 3 00 @ 3 50
do Ham 1 lb doz 2 50 @ 3 00
Bonedless Figs Feet, — 3 50 @ 3 75
3 lbs., — 2 75 @ 3 00
Speed Fillets 2 lbs 50 @ 6 00
Head Cheese 3 lbs 50 @ 6 00
COAL, Jobbing.
Australian, ton, — 8 50
Coke Bay, — 8 50
Bellingham Bay, — 8 50
Sattle, — 8 50
Cumberland, — 13 00
Mt Diablo, — 13 00
Lehigh, — 13 00
Liverpool, — 13 00
West Hartley, — 9 50
Scotch, — 8 50
Scranton, — 8 50
Vancouver Id., — 8 50
Wellington, — 8 50
Charcoal, sack, — 8 50
Coke, bush, — 8 50
COFFEES.
Sandwich Id lb, — 12 @ 14
Costa Rica, — 12 @ 14
Guatemala, — 12 @ 14
Java, — 18 @ 20
Manilla, — 15 @ 16
Ground, in c., — 22 @ 24
TEA.
Saf. Dry Cod., — 7 @ 7
do in cases, — 7 @ 7
Eastern Cod., — 7 @ 7
Salmon, bbl., 7 00 @ 7 50
Hf bbls, — 3 50 @ 4 00
1 lb can, — 1 12 1/2 @ 1 22 1/2
Pick Cod, bbls, — 7 @ 7
Hf bbls, — 8 50 @ 9 00
In Kits, — 1 65 @ 1 70
Ex Mess, — 3 00 @ 3 25
Pickled Herring, — 3 00 @ 3 50
Boston Smoked, — 65 @ 70
Herring, — 65 @ 70
Plaster, Golden, — 3 00 @ 3 25
Land Plaster, — 10 00 @ 12 50
Lime, Santa Cruz, — 1 25 @ 1 50
bbl., — 1 25 @ 1 50
GLASS, ETC.
Cal. Cube, lb., — 12 @ 12 1/2
Powdered, — 12 @ 12 1/2
Fine Crushed, — 12 @ 12 1/2
In Kits, — 1 65 @ 1 70
Golden C., — 10 @ 10 1/2
Cal Syrup, kg., — 65 @ 65
Hawaiian Molasses, — 25 @ 30
GLASS, ETC.
Cloves, lb., — 37 @ 40
Cassia, — 19 @ 20
Nutmegs, — 85 @ 90
Pepper Grain, — 15 @ 16
Pimento, — 16 @ 17
Mustard, Cal 1 lb, — 21 @ 25
SOAP.
Cal. Cube, lb., — 12 @ 12 1/2
Powdered, — 12 @ 12 1/2
Fine Crushed, — 12 @ 12 1/2
In Kits, — 1 65 @ 1 70
Golden C., — 10 @ 10 1/2
Cal Syrup, kg., — 65 @ 65
Hawaiian Molasses, — 25 @ 30
SOAP, ETC.
Cloves, lb., — 37 @ 40
Cassia, — 19 @ 20
Nutmegs, — 85 @ 90
Pepper Grain, — 15 @ 16
Pimento, — 16 @ 17
Mustard, Cal 1 lb, — 21 @ 25
GLASS, ETC.
Cal. Cube, lb., — 12 @ 12 1/2
Powdered, — 12 @ 12 1/2
Fine Crushed, — 12 @ 12 1/2
In Kits, — 1 65 @ 1 70
Golden C., — 10 @ 10 1/2
Cal Syrup, kg., — 65 @ 65
Hawaiian Molasses, — 25 @ 30
SOAP, ETC.
Cloves, lb., — 37 @ 40
Cassia, — 19 @ 20
Nutmegs, — 85 @ 90
Pepper Grain, — 15 @ 16
Pimento, — 16 @ 17
Mustard, Cal 1 lb, — 21 @ 25
GLASS, ETC.
Cal. Cube, lb., — 12 @ 12 1/2
Powdered, — 12 @ 12 1/2
Fine Crushed, — 12 @ 12 1/2
In Kits, — 1 65 @ 1 70
Golden C., — 10 @ 10 1/2
Cal Syrup, kg., — 65 @ 65
Hawaiian Molasses, — 25 @ 30
SOAP, ETC.
Cloves, lb., — 37 @ 40
Cassia, — 19 @ 20
Nutmegs, — 85 @ 90
Pepper Grain, — 15 @ 16
Pimento, — 16 @ 17
Mustard, Cal 1 lb, — 21 @ 25
GLASS, ETC.
Cal. Cube, lb., — 12 @ 12 1/2
Powdered, — 12 @ 12 1/2
Fine Crushed, — 12 @ 12 1/2
In Kits, — 1 65 @ 1 70
Golden C., — 10 @ 10 1/2
Cal Syrup, kg., — 65 @ 65
Hawaiian Molasses, — 25 @ 30
SOAP, ETC.
Cloves, lb., — 37 @ 40
Cassia, — 19 @ 20
Nutmegs, — 85 @ 90
Pepper Grain, — 15 @ 16
Pimento, —

Introduced into California from Europe in the Spring
of 1871, by Felix Gillet, Nevada City, Cal.

STODDART & CO.,
Washington, D. C.
Box 623

WAKELEE'S

PATENT

AND

Squirrel

Gopher



EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

WAKELEE & CO., Chemists,

Occidental Hotel, S. F.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have
used it
INFALLIBLE SQUIRREL and GOPHER
EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS



H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

PACIFIC COAST LAND BUREAU.

President, Wendell Easton; Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank
Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every
branch of farming can be made prosperous, from stock-raising or dairying down to fruit culture. On the coast of San
Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, un-
surpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of
pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted
to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

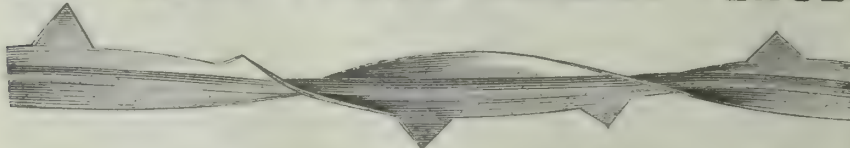
For Sale. The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth
cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands
at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$6.50 an acre; 840 acres fine grazing
land, 7 miles from San Luis Obispo, \$6 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate,
water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

530 California St., SAN FRANCISCO.

This paper is printed with ink furnished by
Chas. Enoch Johnson & Co., 509 South 10th
St., Philadelphia & 59 Gold St., N. Y. Agent
for Pacific Coast—Joseph E. Dorsey, 527
Commercial St., S. F.

J. P. SWEENEY & CO.,
Seedsman,

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn,
Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree
Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.

GARDEN SEEDS.

THOS. MEHERIN,

Importer, Wholesale and Retail Dealer in

SEEDS, TREES AND PLANTS,

Alfalfa, Red and White Clover,

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass,
Red Top, etc.

Also a large and choice collection of FRUIT and ORNAMENTAL TREES.

BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES

Budding and Pruning Knives, Greenhouse Syringes, Hedge and Pole Shears.

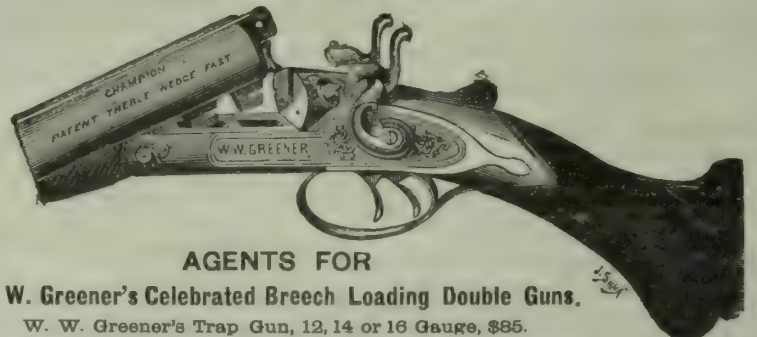
Price List Ready Jan 1st.

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for R. D. Fox's Nursery.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington
Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on
application.

WHAT WILL THE WEATHER BE TO-MORROW

Pool's Signal Service Barometer

OR STORM GLASS AND THERMOMETER COMBINED.

WILL TELL YOU!

It will detect and indicate promptly any change in the weather 12 to 48 hours
in advance. It will tell what kind of storm is approaching, and from what
direction. Invaluable to navigators. Farmers can plan their work
according to its predictions. Saves 50 times its cost in a single season.
Has an accurate barometer attached, which alone is worth the price of the
combination. This great **W. E. POOL'S** **BEST IN THE WORLD!**

The Thermometer and Barometer are put in a nicely finished walnut frame,
with silver plated trimmings, etc., making it a beautiful as well as useful
instrument. We will send you a sample one, *on request*, to your place, in good
order, on receipt of \$1.00, or \$1.50 for \$1.00. Agents are invited from \$1.00 to \$2.00
daily selling them. *Send for your copy.* Order at once. It sells at
SIGHT! Just the thing to sell to farmers, merchants, etc. Invaluable to
everybody. U. S. Postage Stamps taken in good order, but money pre-
ferred. Agents wanted for every where. Send for Circulars and terms.
Address all orders to **OSWEGO THERMOMETER WORKS.**
(Largest establishment of the kind in the world) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second
National Banks, or any business house in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order,
draft on New York or registered letter, at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PRESS SAY ABOUT IT.

The Pool's Barometer works as well as any that has been made. You can rely on it
every time. *Call on J. B. Rogers, Ship & Store, San Francisco.*

Remember, every 120 good order, and you can have the instrument sent post paid
without any extra charge. It is really made and sold cheaply at two dollars.

Geo. B. Parsons, N. Y. R. R. Office, Detroit, Mich.

Pool's Barometer has already saved the lives of many by forecasting the weather.

It is a wonderful discovery and most important. L. J. Beckman, Milwaukee, Wis.

BEWARE OF WORTHLESS IMITATIONS. None genuine
without our Trade Mark, and Signature of J. A. Pool, on back of Instru-
ment, as below:

J. A. Pool TRADE MARK.

Every instrument warranted *Perfect and Reliable*. Size 9 1/2 inches long,
3 1/2 wide. If not satisfied on receiving the instrument, return it at once and
we will refund your money. Please state where you saw our advertisement.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor



TWENTY-FOUR PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, DECEMBER 9, 1882,

Number 24

Sorghum Sugar.

The sorghum sugar industry is still advancing, and may yet bring Gen. Le Duc lasting honor, as the man who first turned upon it the favor of Government investigation and promotion. The work which has been done during the last few years by Dr. Collier and his associates has been passed in review by a syndicate of eminent scientific men, and pronounced trustworthy and of public value. For this reason we choose for our frontispiece this week an engraving of the head of the Early Amber sorghum cane, because this variety, by its early ripening habit, gave the sorghum industry the impetus for its recent advancement.

One of the early acts of the present Commissioner of Agriculture, Dr. Loring, was to request the National Academy of Sciences to review the sorghum sugar work of the Department, and pronounce judgment upon its value. About three weeks ago Dr. Loring received from Prof. O. C. Marsh, President of the National Academy of Sciences, a report from the Academy upon the "scientific and economic relations of the sorghum industry," made in response to a request presented by him on January 30, 1882. The report is very elaborate and will fill 40 closely printed pages of the forthcoming annual report of the Department, which will be laid before Congress early in the next session. It is signed by Profs. Brewer, Johnson and Silliman, of Yale college, Profs. Chandler and Moore, of New York, and Prof. Smith, late of the University of Kentucky. Prof. Goessman, of Amherst, Mass., resigned his place on the committee on September 12, 1882.

The committee find as the result of their investigation that all the analyses made in the Department of Agriculture not only confirm the well-known fact of the presence of sugar in the juices of sorghum and maize in notable quantity, but they also establish the fact that sorghum yields in its juice, when taken at the proper stage of development, about as much cane sugar as the best sugar cane of tropical regions. An examination of the analytical tables submitted to them shows that the juices of sorghum in certain exceptional but not isolated cases were remarkable for the amount of cane sugar they contained. It is ascertained by these analyses that as an average of them all there was obtained 58.57% of the weight of stripped stalks in juice. Of the weight of this juice 16.18% was crystallizable cane sugar, and it was learned that 11.30% of the weight of the juice may be obtained as sugar by the ordinary process of manufacture. It also appears that three varieties of sorghum gave over 13% of sugar, seven varieties 12%, seven 11%, seven 10%, and seven 9% of sugar, and that of the varieties of maize grown in 1880 ten varieties gave over nine per cent cane sugar, ten varieties ten per cent, nine varieties 11%, nine varieties 12%, four varieties 13%, one variety 14% and one 15%. The committee state that in 1880 over 62,000,000 acres of land, or 38% of all the cultivated land in the United States, were in maize. The amount of the sugar thus apparently lost, calculated by the results obtained by the Department of Agriculture in the last three years, is equal to the present product of the entire world.

A remarkable uniformity has been discovered in the several varieties of sorghum as sugar-producing plants when fully developed, but it has also been learned that the different varieties vary widely in the time required for their full development, varying, as has been shown, fully three months between the earlier and later maturing varieties.

"No conclusion," says the report, "established by the work of the Department of Agriculture, practically considered, is of greater importance than the positive ascertainment of that period in the development of the several varieties of sorghum when the juices contain the maximum of cane sugar. On this point there has existed during the past 20 years or more the greatest discrepancy in statement, and

the general opinion prevailing has been very wide of the truth as established by all these experiments."

The investigations of the Department prove to the entire satisfaction of the committee that after the cutting of the cane it "should be immediately worked up" for the production of sugar. The results submitted to the committee

concentration and diminution of the juice, is utterly unfounded and incorrect. It has been shown that when fully matured the sorghum stands even hard frosts without detriment, but if immature the effect is most disastrous.

With regard to the so-called gum, a product of the manufacture, the committee says that in the purging of sorghum and corn-stalk sugar

the juice in the process of syrup production. The committee recommends a still further investigation into the effect of fertilizers upon the growth of the sorghum and maize, variety of soil best adapted to the production of sugar in these plants, the methods of defecation, and the processes of manufacture and use of lime or some other alkaline agent. The committee expresses the opinion that the fruits of the encouraging "policy of the Government toward the sorghum industry are already beginning to show themselves in the decided success which has attended the production of sugar from sorghum on a commercial scale in the few cases in which the rules and good practice evolved, especially by the researches made at the laboratory of the Department of Agriculture, have been intelligently followed. Sufficiently full returns from the crop of 1882 have already come to hand to convince us that the industry will probably be a commercial success." The report concludes with the suggestion that the "sugar-producing industries of the whole country, both that of the tropical cane at the South and the sorghum over a far wider area, will be vastly benefited by further investigations similar to those that have already been submitted to them."

Can it be so Bad as That?

All the fat that is now made an article of commerce was formerly thrown away, so that the manufacturers of oleomargarine make what was valueless valuable.—Extract from interview with Senator Jones, of Nevada, in Chronicle of December 3d.

In the article from which the above is taken, and to which allusion may be found elsewhere in the Press this week, Senator Jones, of Nevada, is placed before the people as approving the manufacture of bogus butter—in fact, as standing sponsor for the abomination in all its methods, materials and purposes. Suppose we accept him, as he seems to be desirous of being taken as the apostle of false butter, and as authorized to speak for the makers thereof, what a damaging admission he makes in the sentence we have quoted above. We have never charged the oleomargarine makers with such a depth of iniquity as Senator Jones acknowledges and even claims as a public service. We have charged them with using soap fat and the like, but none of those commodities could be called "valueless." Certainly the Senator knows too much of commercial affairs to call any grade of tallow "valueless," because he knows that tallow is worth from 8 to 12½ cents per pound. No grade of tallow was ever "thrown away," as the Senator says the oleomargarine material was before they began their work. To tell the truth, we do not know of any fat which was formerly thrown away, except it be dog fat or horse fat. Does the Senator mean to say that these street scrapings are now made valuable by the oleomargarine makers? Surely this business is something much worse than we had dreamed.

A BUSH CLOVER.—Of the Japan clover, to which we have alluded in recent issues, the National Tribune, of Washington, D. C., says: "The so-called Japan clover is a plant belonging to the tribe of bush clovers, and is botanically known as *Lespedeza striata*. It is altogether different in its aspect from the common idea of clovers, but produces fibry, woody stems, similar to those of the cranberry, and of course would be of no value where the succulent clovers (*Trifolium*) can be grown. The Japan clover is said to be an improvement upon sedge grass as food for cattle, and may be valuable in usurping the place of useless weeds, although we do not consider it a plant worthy of cultivation." This is rather a different character than is given this plant by our southern State exchanges, where it is spoken of as making a close sod, etc. The plant is perennial and may be useful to our hill and mountain ranges at all events.



THE EARLY AMBER SORGHUM CANE.

also indicate that the exclusion from the matured cane of all immature cane is of the greatest importance if the manufacture of sugar is contemplated, and show the importance of an even crop with no suckers in its manufacture for sugar. The committee also find that "prompt working of the cane so soon as cut is always safe, and any delay is fraught with unavoidable risk or loss." It is shown, moreover, by the investigation at the Department, that the idea that the effect of rain would be manifest in the diluted juice, and that conversely a prolonged drouth would result in a

it happens very often that this operation is of unusual difficulty, owing to the presence of a certain gummy substance, and this practical difficulty has been by some so magnified that the economical production of sugar from these two plants has been confidently declared impossible. In the experience of those in Washington, as well as of many other observers, this peculiar substance has been found often to be present in quantity so small as to offer little, if any, resistance to complete purging in the ordinary centrifugal. It appears to be formed by the transformation of other constituents of



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Los Angeles County Notes.

General Stoneman at Home.

EDITORS PRESS:—I found Gen. Stoneman seated quietly on his portico, enjoying the early morning air. Fruits and flowers were everywhere around, and a light friendly vine was offering some neat little bunches of full ripened grapes right before him. The linnet were fearlessly helping themselves as if full partners with the Governor in all his fruit interests. I, too, sampled from same and found them excellent. The farm of 500 acres in a body is a beautiful, a valuable homestead. About one-half of it is in vineyard and orchard. Gen. Stoneman sells his grapes and some of his fruit. He has about 1,500 orange trees in full bearing, and has 20 or more varieties of fruit in his orchards. His pomegranate orchard of 3,000 or 4,000 trees is the largest plant I know of. The fruit shipped to San Francisco is generally worth four or five cents per pound. Many care little for the pomegranate, but it is a favorite fruit with the General.

Is the General an aristocrat? one asks. Not that I could discover. He does not assume any importance more than any ordinary farmer should, even if he were a broken down renter that flood, drowth and grasshoppers had visited. His home is the old house as it was years ago when I visited it, and is yet free from all modern fashions, and has never, no never taken to paint, but shows up the rustic brown natural to its many years of exposure to storm and sunshine. Gen. Stoneman has a family of children—a son about out of his teens in a machine shop in San Francisco, learning a hand-soiling trade.

Well, I promised unasked not to turn the new Governor's house inside out, so I will only add that those two or three Spanish-American laborers out there (planting out sods to carpet the pleasure plot, where the children, young and old, recreate at "lawn tennis" or other games), are some living and belonging on the estate. There are some six families residents on the farm, and when needed, are all ready to work for the General, but at other times he may be able to give employment only to one of each family, and thus ensure them always a livelihood. They have always received the same wages—\$1.25 per day, and all are treated as if they each had a real interest in all the labors and results. The General speaks very kindly of his native laborers. I am on the whole inclined to say that the General has not the appearance of that worst man that we sometimes read of during a heated campaign, and I wish he may be as happy in office as at his rustic home.

Florence.

Florence, six miles south of Los Angeles, on the Wilmington R. R., has still her railroad depot, postoffice, and a very feeble edition of a store, a church edifice and an excellent school, kept in a small house. They have long since ceased to care to build up a town there.

The soil is sandy, and some parts have salt-grass, showing signs of alkali, yet most of it yields good crops of barley, corn and wheat. Some few are now sowing the evergreen millet. One party (Dr. Stockton) sowed on the same ground with millet also the usual amount of alfalfa seed, and reasons in this wise: The millet is said to be able to whip out anything else, and the alfalfa has a very strong disposition to do the same thing, and he feels pretty sure of seeing a grand fight, and to get the benefit of the survivor, and can consider it the stronger plant. Mr. Carlton sowed alfalfa in January, 1882. It scarcely showed any signs of life or starting to grow, and the little that did start died out with the drowth. Then he dry-plowed the land twice in the summer, to prepare it for re-seeding this winter. But when about ready to re-sow it, he discovered that the alfalfa seed was all springing up very fully and evenly over the field, and some call it as nice a stand as they ever saw—very full and even over the 12-acre field. He had sowed 25 pounds to the acre, which is double what some farmers would use for a good seeding. The first plowing had buried it deep, and the second had again turned it mostly to the surface.

Those on the artesian belt near Florence and Compton get large crops of this dairy feed. Mr. D. Derrel from 10 acres of alfalfa has baled 70 tons, and has just finished another cutting from same, not yet baled—this yield in less than one year. Mr. Price was mentioned as having a small patch with a heavier yield.

Fruits do well, but are not very extensively cultivated. Apples, plums, prunes, Bartlett pears, berries, currants and grapes do well without irrigation. A. W. Thaxter took from his 30 acres of vines, second year from the cutting, 17½ tons, which is very well for a very dry season and first bearing year. Thomas Brigham got 35 tons from 9 acres of 7-year old vines, but a bad stand and on dry plains. He sold the first quality for \$30 per ton at the cannery, and the rest to a winery at \$18 per ton. Mr. R. Nadeau has 1,700 acres in grapes; his sons have 415 acres in the same.

There is now a strong feeling developing in favor of planting trees for fuel and timber.

Wood is now scarce and costly, a cord of stove-length wood is reckoned 96 cubic feet, or three tiers 4x8. The blue gum or eucalyptus is so far the favorite, as it has produced the largest amount of wood. Mr. Nadeau has some beautiful groves, about 100 acres, not yet seven years old till next March, planted in rows eight feet apart. One year since he chopped considerable wood from it, clearing it all to the stump, and realized over 50 cords to the acre (chopper's authority for this) of excellent stove wood, worth in Los Angeles about \$10 per cord. But that portion chopped has made a marvelously rapid growth, evidently aiming to catch up to the portion not chopped, and in three or four years will yield another large crop—some say more than the first cutting.

These gum forests are already attracting the coyotes, and furnish them homes that promise rare fun for the future nimrods of Florence, who have already found some big families of them. There is likely to be many trees planted this season for fuel only, and they who have cheap waste lands can figure therein a profitable crop. The practical question is, who can recommend the best tree to plant for fuel—the tree that will produce the most wood and is free from pest insects, the tree most desirable? There are many readers of the RURAL that would like to get the experience of others and advice resulting from that knowledge.

Pasadena Horticultural Notes.

I was pleased to find our old friend B. O. Clark, formerly in the Anaheim nursery, now very favorably located in Pasadena, occupying very choice sandy loam, where his trees, without irrigation, are making very satisfactory growth. I doubt if the county affords a spot any more favorable for a pure, clean tree and a perfect rooting. His ample experience in nursery life enables him to set high estimate on his present locality on clean, virgin soil, and no old trees or shrubbery anywhere near him to bring pests to his fruit trees. His stock is a new, fresh plant, suited to the wants of this southern country. I saw seedless Sultanans from cuttings 12 inches planted 10 inches in the ground that had put out several branches to each cutting, and averaging two feet each in length. Apricots from seed last February, once irrigated, made a splendid growth, and are now in dormant bud. Winter Nolis pears cut back to two feet when set out last spring were twice summer-pruned, or cut back, and now over six feet high. Peaches from seed planted last February are now about seven feet high. Peach seed planted deep last March and not watered stand now five and a half feet, and of stout growth.

Mr. Clark has high expectations of the St. Ambrosia peach that he is propagating from Eastern stock. (I think Mr. Rock, of San Jose, had same in bearing this year.) Mr. Clark is experimenting with berries also.

Budding Experience.

I was quite edified in his showing me some of his experimental work that he had done, probably more for the benefit of others than to convince himself of probable results, *e. g.*, his June buds, in seedling apricots, showed less growth than buds that were put in the following August, and remained dormant till spring, and then were forced by the cutting away of the old top. These were on trees of same age from seed. His explanation was clear and very reasonable. The June budding required the amputation of the main stock in the midst of its most vigorous growth, and caused a severe shock to the tree, from which it never fully recovered, and so what seemed to be gaining a year on getting a tree forward, was in reality spoiling the better prospect for a real thriving tree. I cannot, perhaps, make the difference plain in few words, but the trees themselves made the difference very plain to me without words.

Mr. Clark is well versed in his calling, and is trying to fill his nursery with the trees suited to the present wants of all this part of the State, and seems fortunate in having so favorable a location for a perfect success. From present indications of the many new plantings of homes in this vicinity, his intelligent labors will be appreciated, and Pasadena nursery stock in quick demand, for hundreds of acres are being plowed now in this vicinity to plant in trees for fruit or for timber or fuel.

B. W. CROWELL.

Pasadena, 27th Nov., '82.

Impressions of the Horticultural Convention.

EDS. PRESS:—As an attendant at the recent meeting of the horticulturists of this State, at San Jose, I was strongly impressed with the amount of good such an assembling did by the mutual exchange of experience. Information was disseminated of the most valuable character, and which would probably never have been so widely distributed was it not for the meeting of so many individuals representing every section of the State. More should have attended; they would have returned to their homes wiser than they are to-day. Upon their minds there would have dawned some of that higher civilization which so many of our horticulturists need. Some of their conceit they would have surrendered, and admitted that they too had something to learn. There was a great deal of intelligence represented and a large amount of practical experience related, which in time will be productive of much good.

While we will admit that the convention was all that could be desired, yet there was a slight cropping out on the part of some to try to run it too much in their groove. A small mutual admiration clique developed itself. A little of the capturing order was shown. A kind of superior intelligence egotism was exhibited in some quarters. Some of the forty-niners were a little cranky towards the younger generation. There was a disposition upon the part of some of them to impress the convention that they had long ago absorbed everything that could be known about bugs, fruit raising, etc., and that there was no more to be given out.

The next one of these conventions will develop probably less of this disposition, and will be more largely attended. The good imparted will, before another year, make itself felt in every part of the State. No matter how important the business is at home, the fruit growers can better neglect it than to be absent from the annual meeting of the horticulturists. The information gained can never be calculated in dollars and cents.

R. WHEELER.

Stockton, Nov. 21st.

FLORICULTURE.

The Coxcomb and its Culture.

EDITORS PRESS:—The mention in your paper of coxcombs grown in Fresno county brings to our mind recollections of the past. We shall speak a few words in reference to the growth and properties of the plant in a foreign land, and then show how it may be grown here in California without such artificial system. When we speak of the coxcomb abroad we mean especially the set rules of the properties for growth and development of that plant for exhibition in England, according to the standard of English judges, and we must honestly say that we have not seen its superior. These plants, in that country, are grown in pits or frames in bottom heat for that purpose. We have seen as many as 1,000 of these combs together, and the sight was so charming and beautiful that we have thought it was the most lovely sight we ever beheld. When we see a beautiful object in view we often wish that nature had endowed us with the power of language to describe it, but were this the case we find that we should require many other endowments to sustain it, and consequently, perhaps, it is as well as it is. We have seen plants with combs that measured 26 inches from tip to tip, by 20 inches across, or on the cross section, and not over seven inches in height of the stem. Now, many of our readers will think this statement has a good deal of margin to it, but some who see this article will be able to verify it. How this wonderful growth is achieved we propose to show as briefly as possible.

The seeds are sown in shallow pans in hot-beds in February and March in a temperature of 80°. Every grower has his own seeds selected from off the plants he has grown previously, and we would remark here that good varieties produce very little seed. When the seeds are up the young plants are allowed to remain in the pans till the combs are formed, which will be when the plants are about two inches high, when they are potted off into two-inch pots with very rich compost, and then placed back again into the pits or frames, being watered down and placed near to the glass as possible. Watch the plants and examine their roots for repotting. As soon as they require repotting (which may be known by the fresh roots coming out around the sides of the pot), give them a size larger pot. In repotting reduce the ball by shortening it, and this must be done, each time sinking the stem about an inch or so. In the act of handling the soil, bring it up round the stem close and press it lightly, when it will be found that new roots from the stem will be emitted, which causes much in the reduction of stem, and is the means of retaining the foliage on the plant. Do not omit this act of reducing the length of the stem, for on this depends much of the beauty of the plants. Follow this injunction as long as the repotting is continued. A seven or nine inch pot is the largest size used when the combs are full grown. To handle those plants properly requires persons of experience, and to keep the leaves on the stems requires an adept in the profession; but we have known the combs to have grown several inches in size when not a leaf was on the plant.

The properties of a good comb are: Stem dwarf, perfectly round up to the neck of the comb; neck of comb white, without a particle of seed on it; comb solid, not divided or split, but compact; seeds on the base of the neck or top of stem quite round, forming a complete ring not more than one-eighth of an inch in diameter. These are all the seeds that are produced by a plant. Stem seven inches high; leaves perfect, and dark green; color of comb dark red; size of pots, seven to nine inches. All flat-stemmed plants are discarded when the first potting is achieved from the seed pan, for they invariably produce divided or split combs.

Now, as California will grow naturally fine combs without all this artificial work and knowledge, all that is necessary is to understand the necessary points of qualification to grow good ones, for, understanding these

points, every person who grows them will have constantly in mind these good properties which will lead them to form the growth and development of good coxcombs.

Treatment of growth for California: Sow seeds early, say by 1st of March, in pans or shallow boxes, well drained. Place the latter in a green house, if you have it; if not, in a warm room, by the window, in the light. When the plants are up and large enough, take them up carefully and plant them out where they are to remain permanently. Pay attention to all the points as previously directed, and take seed of none but the best. Select the seed from plants having some good points, and after a few years you will have seeds that will come near the given standard of perfection. There are a great many varieties from which to rear, but we like best the color named—dark red.

San Francisco.

JOHN ELLIS.

THE DAIRY.

How Milk is Made.

That the animal organism is capable, under certain conditions, of converting various good elements into milk is one of the most familiar facts of nature. How the milk-producing glands perform their work remains to a great extent a puzzle. The later investigations and theories in this connection are clearly set forth by Dr. G. C. Caldwell in a recent issue of the New York *Weekly Tribune*, in answer to the question, "How is milk made?" He says:

The essential milk-producing part of the udder is made up of a series of ducts or tubes branching out from reservoirs at the heads of the teats, joining one another at little sub-reservoirs, and separating and uniting again, till finally they end within minute organs called vesicles or follicles. Both Dr. Starkevart, of the New York Experiment Station, and Mr. Arnold have traced these ducts to their sources. These follicles are the fountain heads whence the milk is collected by the ducts and carried through one reservoir after another to the teat.

The three essential ingredients of the milk, beside the water, are the fat, in the form of minute globules suspended in the liquid; the casein, partly in solution in the water of the milk, and partly in solid grains suspended in the liquid; and the sugar, only in solution. Nearly all authorities agree that the formation of the milk is attended with a rapid production of new cells, very rich in fat, in the follicles; and the most generally adopted view is that these cells drop off and fall to pieces by what is called fatty degeneration, and that their investing membranes or cell-walls become dissolved, thus, especially, the fat of the milk is produced; and some think that all the constituents of the milk are really nothing but cell ruins, taken up by the water that must come directly from the blood, even if nothing else does, and conveyed away through the ducts and reservoirs to the teats.

But Dr. Starkevart maintains that the fat globules of the milk are really the cells themselves that are so rapidly multiplied in the follicles—that each globule began as a bud on a parent cell in the follicle, grew and then dropped off, and was taken up and washed along by the water containing the casein and the milk sugar in solution, which has been transuded from the tissues. With him Mr. Arnold agrees. This theory requires that each milk globule shall consist of a membranous sac inclosing fat; but the existence of such a membrane or envelope around the fat globule is almost universally disbelieved by microscopists, for nearly all who have given the subject their careful attention failed to find satisfactory evidence thereof. It will be, therefore, a battle of a few against a multitude to establish the fact of such a structure of the milk-fat globule; but in a battle fought with such weapons the victory is not always with the party that is strongest in numbers.

Fleischmann, than whom there is no better authority on matters pertaining to milk, is not entirely satisfied with the theory that the milk is made up of cell ruins alone. He shows that if this were so, in the case of a good milch cow, the dry weight of cell substance broken down every day would be not less than 5.5 lbs., or more than twice the weight of the dry substance of the milk glands of a well-developed udder. While allowing that there is much strength in the position of those who argue for milk production by cell destruction, he claims that there must be some secretion, or straining through, as it were, of a part of the substance of the milk, directly from the blood, which circulates freely and abundantly through the glands.

But even with this partial acceptance of both explanations, we are not yet altogether enlightened as to the manner in which the milk is produced. Unquestionably, however, an important and a peculiar work is done in these glands; there is produced that mixture of the three essential ingredient of food—the albuminoids, the fat and the carbohydrates, which makes milk the type of a perfect food; and there originate those substances peculiar to butter fat, the butyric and its associates, which are not found anywhere else in the animal body. They distinguish this fat in a marked manner from any other fat, whether animal or vegetable, and enable the chemist to tell with unerring directness whether a sample called butter is butter or something else.

HORTICULTURE.

The Fruit Growers' Convention.

Full Reports of Addresses and Discussions.

[By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS. We shall continue the report from week to week, and issue it, when complete, in pamphlet form.—EDS. PRESS.]

[CONTINUED FROM LAST WEEK'S RURAL PRESS.]

Decision on Importing Trees and Plants.

Mr. Haines: The purport of the letter is one which we all agree with, and one which opens up a discussion which indeed is most interesting to this convention. The main purport of the letter is that you should stop the importation of trees for reasons which are good—for reasons which are given. Now, how shall we stop that? There are only two ways. If we stop them by law, as I understand it, they must be in a bad condition; they must be infested with some noxious insect, or something that is dangerous to the people of the State of California, or whoever should receive them. I believe that we have no right to prohibit the importation of an article of commerce from one State to another, unless there is a danger attached thereto; and in order to establish that danger, there must be a detection, we will say, of the insects. That is one view for the house to take of the case. Another is this: That the people of the State of California or of the Pacific slope that are endeavoring to purchase trees, and for the sake of saving a few dollars, or for the purpose of getting a very superior tree, will send to the East to purchase those varieties, to the great danger and detriment of the horticultural interests of this coast. I do not propose to occupy the time with any discussion whatever, but the outline of the discussion upon that letter should be: What right have we to stop them by law? and if we have no right beyond that of the right of quarantine, then we must educate the people of the Pacific slope not to purchase trees in an Eastern market, because there is no advantage in doing so, and perhaps a disadvantage.

Mr. Jessup: It is not the intention to stop the importation of trees by legislation nor by law; it is the refusing of encouragement to those shippers of those varieties by not buying them, and the extra expense of the quarantine that they would be compelled to resort to to make trees clean would of course lessen the profits of the investment. That is the only intention; that if we create a public opinion against the importation of those varieties, as a matter of course it will die out. A man will not ship his trees here if he cannot sell them; and if there is a disinclination to purchase, our whole object is effected.

Mr. Hatch: I conceive that there is only the one way, and that is to form public opinion against these importations, and that is being done to some extent already. A gentleman last year, during a meeting similar to this, at Sacramento, from which this sprung, said to me one day there, "I know where we can go and get some cheap trees." Said I, "I don't want any cheap trees this year; those trees are not necessarily cheap." But he bought some cheap trees, and since then he told me that they were a very expensive lot of trees to him. They were trees that came from the East, and of small and tender growth compared with ours; a great many of them apparently had been frostbitten in transmission to this country and were damaged in that way, and taking them all together he found that he had bought a very dear lot of trees. Such has been the experience of many; some may have had a good experience in that line, but as a general rule experience has not been good in that direction. They are liable to bring pests in, and I think it will be no trouble to form public opinion on such a scale as would keep them out pretty generally.

Mr. Dwinelle: I heartily approve of Mr. Hatch's idea that we must do all we can to create this public opinion, which, after all, must underlie any law which can be enforced. At some places in California they already have a public opinion that is exceedingly strong: take the district of Riverside and its neighborhood; there public opinion is so strong that not only stock which can be shown to be infected, but which is known to come from a suspected district, when they think such stock is coming there, they form a committee of safety to look for it as though there were horse thieves in the neighborhood; something exceedingly dangerous, and they buy up that stock if they can persuade the man to forego the saving in getting it, and they send it out of the country, or they burn it up. And when infected fruit comes into their market and is sold on the streets, the kind of which if thrown away may spread the scale insects among the orchards, they buy it and burn it up, and send word to that district that that kind of fruit is not popular at Riverside. Now, the State Board of Horticultural Commissioners have had this matter before them for consideration. They had the proposition made that the importation of trees should absolutely be forbidden. They were told by legal gentlemen that probably this could not be done, on account of its interfering with the Constitution of the United States, I believe, in regard to regulating inter-State commerce. They

have instructed their executive officers to enforce the strictest quarantine of all trees and other nursery stuff coming into the State, and they are assured by the managers of the railroad lines that they will co-operate with them in every case possible to secure a thorough examination of anything that arrives here. Now, people who have not studied this matter of what could be done by law, or what has been done by law, do not appreciate how tyrannical the laws of the United States are, and how much private rights are interfered with. Most of us know that there is a law in regard to small-pox and yellow fever, but there are a good many that do not know how far sanitary regulations are carried; they do not know that in the more civilized portions of the United States a man cannot allow a contagious disease among his cattle, and that if such a thing is there, it is the duty of the public Board—for instance, in Connecticut, a Board of Agriculture—to examine those cattle, and if they are found to be infected with a contagious disease, to quarantine them in their judgment, and no questions are asked of anybody except themselves—and they are very intelligent gentlemen. If in their judgment it is necessary, they can kill those cattle, absolutely annihilate them as far as possible, burn them or destroy them in any way. Now, that is a horrible invasion of the Constitution of the United States, but they do it; they think the cattle interest of Connecticut is worth something. In Iowa or in Minnesota, I think it is Iowa, they have a law which forbids commerce between counties or between that State and any other State in hop roots, not only which are infested, but which come from a district or State in which diseases or insect pests injurious to hop roots or the hop plants are known to exist. It is absolutely forbidden, and public officers on complaint are required to seize any consignment that comes from such a suspected district and bring it into court before a justice of the peace, if you like, and if condemned these are to be destroyed at the expense of the men in whose possession they are found. Now, we have got precedents, gentlemen, if you only bring it up, but I acknowledge there is not that general sentiment that there ought to be, and that we must make it in the East. I confess that I have stirred up several gentlemen there who are going to bring up this matter before the nurserymen and before public societies there until they decide these matters by the principles of common honesty. Now, I say that if we here in this State get up such a public sentiment as already here exists among ourselves, so that no sensible man in California will buy stock from a local nursery unless it is clean, unless he has evidence of that, then we can force those Eastern people to prove to us that they have taken every precaution before we buy a tree from them or a scion or a bud. Now, gentlemen, if you don't believe it is necessary, go into the other room and see how much misery you can carry into any part of the State upon the point of your knife.

Mr. Johnson: I would say that in California there is a similar law on the statute books of California in regard to diseased horses.

Mr. L. M. Holt, of Riverside: This question we have before us to-day is of greater interest to our section of country than any other question. Our county appears to be one of those almost entirely free from insect pests. I see that Mr. Cook classes us as having the codlin moth there. There are only a few, and it is doing no damage now, although, after talking with people around here, I am inclined to think it may unless we stop it. But the red scale has been the great curse of southern California on citrus trees, and we have got that most effectually quarantined and stopped. Prof. Dwinelle referred to the action of the citizens of Riverside down there, and as there are many reports, and I find a great many of them are incorrect with regard to the action we have taken, I will briefly review it: San Bernardino has not got an orchard to-day that contains the red scale. This insect is to be found in several localities in Los Angeles county. It was imported by Mr. Rose, of San Gabriel, and it is an insect that spreads very slowly, except where you carry it. For instance, from Mr. Rose's orchard, where it has been about eight years, it has only spread about two miles, although you can find where people go to his orchard and pick up oranges and go to Sierra Madre and throw them under the trees, and Sierra Madre has got the red scale; so you can go to Mr. Crank's at Pasadena, and Mr. Crank has got the red scale. Down at the town of Orange two men have reported the red scale, and yet Mr. Hayward, after being at his place for five years, could not find the red scale across the street from him, and it is only last fall, after they had been there five years, that Mr. Clark found the red scale just across the street. It spreads very slowly naturally, but where it gets into a nursery, and you carry the nursery tree, then it spreads very rapidly from place to place. The citizens of Riverside found it was going to be a very essential point for them to stop the spread of this red scale pest, and they resolved to keep it out of there if possible, so they got a pledge signed by nearly every citizen of that valley pledging themselves not to import any trees from an infected district; but in the meantime, before this pledge was circulated, one gentleman imported 500 trees from an infected district; they were examined by our citizens generally, and they were all satisfied that there was not a red scale on them, yet there was danger that if we allowed him to import trees, other people might import trees that had the scale; consequently, we went to this gentleman,

saying "We want to buy these trees," raised a purse of \$375, and bought the trees from him, he standing the expense of bringing them up there, we paying him the first cost of the trees; we sold them to a man who set them out in an isolated valley, and put them in quarantine in a nursery there. Now, if the red scale does not develop on those trees before next spring they would be bought and transplanted, because we will know there is no danger. Another man wouldn't sell his trees, and we compromised that we would let him keep the trees, providing he would let us disinfect them, under the directions of a committee of safety, and he agreed to do that; but for some reason the solution was made so strong with lye that he didn't have any trees left. We got them disinfected, and so we got rid of the red scale in that case. Now, this question has come up here for discussion, and the people are watching it; they want to know what the sense of this meeting is in regard to the importation of trees from a distance, and in regard to bringing these pests; they would like to know what the sense of the meeting is; we have a paper here in opposition to it; it is discussed here on different sides, and if it would not be out of order, I would like to offer a resolution here on this subject, and let it be adopted or rejected by this meeting, so that the people can see how we stand. It is the public sentiment we have got in the southern part of the State that is keeping the matter down, and it is the sentiment we wish to see all over the State; we have come to that in our neighborhood, but the people in Los Angeles county to-day are making arrangements to import trees from Lockport, New York, with a great danger of bringing the curculio. I, for one, would like to see it stopped. I presume there are others here who would like to see it stopped. I haven't got any plum trees, and do not expect to have, but we do not want any curculio in this State if we can help it.

By consent, Mr. Holt offered his resolution, which is as follows:

Resolved, That the importation of nursery stock from the Eastern States or foreign countries is a dangerous practice, and should receive the severe condemnation of the people of this State.

Resolved, That as individuals we will not purchase such trees, and we will use all the influence we possess to discourage the purchase of such trees by others.

Mr. Owen: I was going to relate a little similar experience in this importation of bugs, but before I do so I desire to notice a remark by Professor Dwinelle in regard to these laws being enforced in more civilized States. I think that California is pretty well civilized in that respect now, and I believe about all that is necessary will be to enforce those laws, although I am not certain that there is a law that would fully reach the case that I propose to speak of. This question that I wish to speak of is with regard to a very prominent and popular nurseryman of California, who sells a great many trees. I was at his nursery, looking for nursery stock, and he had just received a large shipment from the East of plum trees. I said to him: "Are you not afraid of importing insects? We are pretty well supplied in California now, and probably you may add to the trouble that we already have." "Oh," said he, "I disinfect all my trees." Well, I went out to where he was disinfecting to watch the process, and after he had gone through the disinfection, having my glass that I always carry with me, I thought I would take a little bug hunt, and I discovered that he had probably only just washed the little fellows and made them more lively than they were before, and the trees were badly infected, and those were offered for sale, and I presume there have been thousands of them sold from that nursery and scattered throughout the State. In this way we will certainly get this dreaded curculio. Now, if we have not a law that will reach such cases, I am in favor of having one, because, unless you have a law that public sentiment will uphold, there are men that will take advantage and sell these infected trees to people that do not know any better, or to those who may be cajoled into doing so.

Mr. Britton: While those resolutions are good, and I agree with them so far as they go, yet they do not touch the real source of the greatest mischief in this State. I am perfectly satisfied that we owe two-thirds of the pests that are destroying our fruit trees at present to the great craze for ornamental and shrubby plants that took possession of the people of the State of California about 10 or 12 years ago. I am perfectly satisfied that those plants have been the breeders of all the greatest misfortunes outside of the codlin moth that the fruit growers of the State of California suffer to-day, and, in fact, the nurseries and all your fancy plantations to-day are completely covered and destroyed with those noxious insects that we have samples of here in the next room. Outside of the codlin moth, those fancy and ornamental shrubby plants have brought all those pests here except what may have been brought on the orange trees and that have been imported from Australia and Mexico and tropical climates. I do not think that most of our scale bugs that prove destructive to us here will exist in a northern climate where the temperature falls below zero. In all reports we have heard of, I cannot find where they have become epidemic where the temperature falls below zero, and for that reason the only enemy we have any great dread of in importing northern stock is the curculio. The codlin moth we have already, and I don't think it was imported in trees. I think it came in fruit that was imported into the State. That is my view of it, and the law to be effective should reach shrubs

and plants of all kinds, or it will be utterly impossible to shut out these pests. Even the curculio can come in strawberry plants, of which there are thousands imported every year. In fact, in our discussion of this question it is a question whether it wouldn't be judicious for our State, or our horticultural societies, or some other body that may be authorized, to offer premiums for the propagation of new varieties, so as to encourage the propagation of them and to discourage the importation of those varieties. Now, it is a noted fact that there has never been a variety of strawberries originated on this coast that has ever amounted to anything, and quite a number of our small fruits are in the same condition. Strawberry-men here in Santa Clara county have been hunting for 10 years for the variety to take the place of the old Longworthy, and it is only by great encouragement that such a variety can be produced. At present there is no encouragement for a man in this State to spend his time, labor and money to produce a new variety, for the reason that in the East there are hundreds engaged in it, and they are producing them there and we are importing them. There has been I have no doubt a hundred thousand dollars spent in importing varieties of strawberries to succeed the old Longworthy, and we have not succeeded yet.

Mr. Stoddard, of Santa Clara: The idea of creating a public sentiment against the importation of fruit trees seems to me to be in very bad taste. I have been in the tree business myself for some time, and I have examined carefully thousands of trees brought to this State, and have as yet failed to find any insect on those trees. It seems to me that if the outside world would create a sentiment, or even pass a law against the importation of trees from California, it would be a good thing, or from Santa Clara county; for I believe there is no place on the globe where there are as many insects as we have. I think there are all of them here except the curculio. I am a little acquainted with that insect. I have lived in the East where it exists in great quantities, and if I understand it, it does not lodge in the tree; the only danger of that being brought here by importation of trees is where there is a great quantity of dirt on the roots; in that case it may be possible, but it is hardly probable. So far as California is concerned, we are dependent upon the Eastern States for fine fruit, and have been all the time. All our fine pears came from New York; if a man in New York has better fruit than I can find in this State, there is no reason why I should not send there and buy his fruit and get it here and plant it. There is no sensible man, it seems to me, can come to any other conclusion. So far as raising trees is concerned, in this State it is a good business; everybody is making money, and I see no reason why we should object to Eastern men bringing their trees in competition with ours. If they can raise better trees, or raise them cheaper than we can, why should we exclude them on that ground? There is no reason for that, my friends. The great objection I find is to irrigating trees. Irrigation has been a curse to this State, and all these insects, I believe, have originated in irrigated districts. If there is any body to deny that, I should like to know from what source it comes. The summer irrigation here and the heat of the sun combined produce insects, although I admit that a great many have been imported here from the islands. At present the only thing that I see to guard against is the curculio.

Mr. A. D. Fryal, of Alameda: In regard to Mr. Jessup's essay that was written in regard to the hybridizing of the apricot, I know something about it, for I have been engaged in the horticultural business for over 30 years. I have now, in all probability, more hybridized trees in my orchard than any other man in the State of California. Neither am I confined to hybridizing the apricot, but I hybridize peaches. I received the first medal in the State of California for hybridized peaches; the hybridized peaches that I raised I sent East. I sent some to the Patent Office, and then after a while the same peach comes back from the East under a new name, and they are selling them, I understand, about a dollar or 50 cents a pound; it is my impression and my candid opinion, that the trees that are raised in California, hybridized trees, will surpass any trees in the world. The apricot, especially, I find I have been very successful with; I have an apricot now that I hybridized some nine or ten years ago that has borne the last two or three years fruit that, in all probability, is unexcelled by any that I know of, and I have got from 10 to 15 varieties of apricots. The apricot that I have reference to is a cross between the Breda and the Royal, and I find that nurserymen that have budded and grafted the apricot on the peach have not been successful; that they get a tree that they are very successful in disposing of and selling them, but they do not last long, and I find, in looking at them at the time the curled leaf is on the peach, that they will most of them have the yellows on the leaf of the apricot. There is no doubt in my mind that there will be a great injury done to the State of California by budding the apricot on the peach. Perhaps I am going against myself as a nurseryman in saying that, from the fact that it is very easy to raise the peach, and to bud on the peach, and it is not very easy to bud on the apricot; that is well known; and I think Mr. Jessup deserves great credit in bringing that before the convention. The gentlemen that deserve great credit are those who will raise new varieties of

(CONTINUED ON PAGE 446).

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reported transactions of subordinate Granges are respectfully solicited for this department.

Meeting of the National Grange.

Sixth Day.

At the morning session the resolution looking to the change in the constitution to allow members of the fourth degree voting privileges in the State Grange was adopted after a long discussion.

The following report occupied most of the day's session:

Report on Agriculture.

Agriculture absorbs the labor of our people to a greater extent than any other industry, the proportion of our population thus engaged being about half, and as the character of their labor does not permit idlers to enter, the proposition that agriculture engages more time, thought and effort than all other industries will be accepted as true. It is also true that all this labor expended in the production of food and raiment has an object beyond mere subsistence of the laborers and others depending on them. That object is the betterment of all persons employed in the field—competence for the faithful, support for the feeble and infirm, education for all to the limit of capacity, especially that practical education which, in its application, augments the benefits flowing from labor. In short, social, intellectual and material advancement, all, in a large degree, depend upon the immediate results of labor. Beyond all this, as the sum of material blessings, the highest good for all people, peace, plenty, thrift, intelligence, morality has intimate relations with prosperous agriculture. All these constitute the grand objects for which we strive. They are the blessings hidden in the soil and the rains and the air, separate as elements, which nothing but toil will combine into the useful products that feed, bless and clothe all people.

It is our province to supply the conditions by labor through which nature transmutes these elements into products that in their uses lift mankind to the highest plane of useful endeavor, if left free from arbitrary check. Such great good made possible through our labor, implies, also, great responsibility, from which there is no escape, except in faithful, intelligent, persistent effort, that ends not with sowing and reaping, but binds us to wise distribution of products, free from all tax beyond the elements of cost, carriage, handling and the fair profit that each branch of labor is entitled to receive.

That they are not free is a fact that excites just alarm, not only in the minds of intelligent farmers, who see present or prospective distress in all artificial burdens placed on their industry, but in the minds of men whose minds are moved by philanthropic considerations. These burdens are seen in arbitrary exactions, imposed by men who establish charges for carrying based on the capacity of soil and producers to yield profit in the service, rather than on the cost of service—a power exercised in defiance of just rights inherent in the persons whose faithful labor is the primary claim to profits; so diverted, a power wholly responsible until there shall be established, by the will of the people, laws defining the general relations between the various branches of industry from the producer to the user. In another way the products of our labor are made subject to hurtful fluctuations in prices, by which our rewards are rendered uncertain, or even wholly lost, so far as profits are concerned. It is in the combinations of men who speculate in prices—men who are able to, and who do, employ vast sums of money to depress prices by fictitious purchases at low rates, thus preventing real transactions at prices based on natural conditions. This is nothing more, nothing less, than gambling, and, as a rule, we are compelled to pay the losses, which constitute our whole show in the transaction.

Until correction of these wrongs is made, and their recurrence prevented, our industry will continue tributary to the good of men and combinations of men who regard justice with contempt, and whose deeds curse the world, whose touch is a blight on our crops, whose hearts are chilled by avarice, whose instincts lean even to the 30 pieces of silver, although they be the price of suffering by those whose toil nature would reward by blessings to mankind.

We ask that gambling in the products of our labor be interdicted by law. It is no answer to say "it cannot be done." Laws may be enacted to forbid the unholy traffic, and penalties for every violation or evasion may be enforced. The will of the people, when exercised, molds their character. Their will may make law even without statute enactment. When we, as farmers, armed with the elective franchise, resolve to correct abuses, and, having resolved, proceed to act, the way will be open, and will have no tortuous direction. We wait for what? Because we doubt the justice of our claims? Are we so abject that we do not recognize bondage as the synonym of degradation? Is it true that we have such pusillanimity of character that we dare not obey the law which makes self-preservation a pressing condition of existence? Answer will some time be made, and if we have wisdom at all comparable with our patience, there will not be long delay.

We have not designed to recount grievances with a purpose of exciting sympathy we do not deserve. For the disability placed on our industry we are chiefly responsible, inasmuch as they can exist only by sufferance. While thought is inert there will be no action to free our toil from the incubus that may neutralize the blessings of a fruitful season, and with this danger always impending our free institutions based on equality of rights and privileges for all citizens are swiftly moving on untoward. When the chief industry of the land is the football of schemers, and burdened with taxes varied in kind and ruinous in extent, it is time to qualify patience by the dignity of action. Agriculture bears all the burdens. It builds levees, opens artificial waterways, builds ships and railways, encourages and supports manufactures; it is the basis of foreign exchange—all this, indirectly, it may be, but none the less really. All this it will continue to do, at least in its just share, but when robbery begins, then let our protest be made in tones that shall reverberate in every capital with such effect that no selfish or political ambition can stand against it.

How shall we, as representatives of an industry thus wronged, an industry that meets with cheerful alacrity every real obligation, organize for its defense? There can be but one way, and that is in wise political action, wholly free from that partisan bias against which the gates of this Order are closed, and the voice of the people recently emphasized protest as the Republic never heard before.

We violate no principle of our Order when we exercise every right inherent in our manhood and citizenship, but it is our right to make government and shape its policy so that it may dispense blessings, not curses.

We ask no special privileges, no concessions; we offer no petitions and make no demands for favors; we want none, but we must have restoration of that equality which is the indulgent principle of the Government founded by our fathers, and this will not come without action on the part of the great body of our people engaged in agricultural pursuits; hence our desire for immediate and effective organization for the specific purposes already defined.

Attainment can only be had through wise legislative action, and that must come directly from our efforts, as it surely will when we exercise the power we possess. Let us hasten to the work, and that the manner of preparation may be freed from all doubt, the following resolutions are submitted:

Resolved, That in the exercise of the elective franchise we shall recognize allegiance to principles as the only safe rule of action.

Resolved, That we repudiate all leadership in politics except that which tends to the advancement of the material interests of all our people through the exercise of the virtues that dignify and ennoble citizenship.

Resolved, That safe protection for our industry against organized extortion implies suitable, and, in some degree, proportionate representation in State and National Legislatures.

Put Darden, Mississippi; C. G. Luce, Michigan; J. M. Blanton, Virginia; L. Rhone, Pennsylvania; J. L. Neal, Kentucky; W. A. Armstrong, New York.

The above report was referred back to the committee after a warm debate. It finally was brought in again, and in effect was adopted as originally presented.

To the Committee on the Good of the Order were added all the lady members, who were instructed to prepare a report for this morning looking to a change in the regalia of the Order. The committee met in the parlors of the Grand Hotel to consider the matter.

Seventh Day.

The National Grange assembled to hear the report of the Committee on Education and the special report of the Committee on the Good of the Order with reference to the matter of regalia. This latter committee made a report favoring a regalia conforming to the present one in use as to shape and color, but otherwise to suit the taste of members. Approved.

The memorial exercises commemorating the life of Mrs. Leuce, wife of the Master of Michigan, were held.

In the afternoon the members of the Grange took a trip around the Belt Road, stopping at the stock yards and other points of interest. An evening session was held with a view to closing up the business of the convention. This, however, was a failure, as too many matters of importance are yet to be attended to. The session lasted until 11 o'clock. The Grange will meet again this morning, and adjourn finally at noon. Among other matters considered last night was a resolution, which was finally adopted, providing for the publication of 6,000 copies of the proceedings of the convention for distribution among the Grangers. Another resolution was introduced to the effect that Grange lecturers explain the question of tariff laws and their workings during the year, in order that the people may understand what it is and the effects of its workings, so that they may be prepared to act intelligently upon it in the future. This resolution called out a debate, which finally resulted in the defeat of the resolution upon the ground that it would introduce a partisan spirit into the Order, which is contrary to the resolution heretofore adopted that the Grange members absolve themselves from all political affiliations which interfere with the harmonious workings of the Order.

Mr. Brigham, of Ohio, was then elected a member of the Executive Committee for the coming year.

Eighth Day.

The last session was held in the morning. Adjournment was had before noon. The Executive Committee was instructed to suggest a better plan for the investment of the National Grange funds at the next convention. Hon. H. A. Devries, of Maryland, and Hon. D. W. Aiken, of South Carolina, were appointed delegates to attend the meeting of the Agriculturalists in Washington, in January. The convention adjourned to meet in Washington the second Wednesday in November, 1883. It is thought that hereafter the National Grange will be held in that city.

Anniversary Celebration by Bennett Valley Grange.

EDITORS PRESS:—Last Monday the Grangers at Bennett Valley and at Santa Rosa met at the latter place to properly celebrate the anniversary of our Order. The day was delightfully pleasant—a regular May day, with not a cloud, nor a speck of mud nor of dust. At an early hour, say 9 o'clock, the happy Patron with his heavy basket and big box began to arrive. The hall of Santa Rosa Grange was at this hour in apple-pie order, a good fire burning and a horny-handed son of toil on duty to receive and welcome the visitors. By 10 the house was full of people, and the dining room adjacent was full of—what? Everything. When the two long tables were fully prepared the eye was not able to see everything; but in the mass of good things might be seen roast pig, turkey, chicken, duck, goose, beef, mutton, veal and baked beans and pork, then pickles and chow-chow of all kinds, with horse radish to suit, and there was slaw, catsup and sauces for every kind of meat. For delicacies there could be found cake, pie of all kinds, custards, floating-island, chocolate cream, coffee, tea, cider, wine and wit. Such a feast would astonish and put to shame the manager of any hotel or restaurant in your city. Upon my word, I never saw a better spread for such an occasion—and the occasion is a grand one—for bear in mind, reader, that the 4th of December is the Patrons' "Independence Day." For 15 long years the Grange has fought the battle of life with good success. But at 11 o'clock

The Meeting

Was called to order by Past Master John Adams, of Santa Rosa Grange, who opened the Grange in the fourth degree. When the proper time came Bro. E. W. Davis delivered a short address of welcome, which was fittingly responded to by Bro. R. A. Temple, W. M. of Bennett Valley Grange. From this time till dinner the Patrons were favored with good music, select reading and short pithy speeches. When all had been intellectually filled, a recess for 90 minutes was declared, that each one might get physically filled; and how full they got is not for me to say.

After recess the hall was cleared of benches and chairs, and with music from the organ and violin (each of which was at the control of a Patron) a right lively dance was in order. When dancing was done, the words of wisdom fell from the mouths of several of the local Grangers, no one being expected to speak more than five minutes. And, Mr. Editor, let me commend this five minutes rule. About 4 P.M. the Grange was closed in due form, when each one went home, glad to have been among such happy, prosperous and intelligent people.

And thus the Grange shall live and grow;
While some are reaping others sow;
And when at last we all shall part,
The Grange will live in some one's heart.

W. S. L.

Santa Rosa, Dec. 5, 1882.

Address of the Worthy Master.

We give further quotations from the address of W. M. J. J. Woodman at the recent session of the National Grange, as follows:

Progressive Work.

As the intelligence, moral standing and enlightenment of a nation, community or organization is indicated by the character of its literature, and the appreciation of and support given to a pure and untrammelled press, so the progress made in the work of our organization may be judged by the increasing number of journals devoted to its interests, and the great prosperity which has attended those heretofore established. In this growing appreciation of Grange and agricultural papers we can see unerring signs of healthy progress and lasting prosperity to our cause.

It has been my observation that, in those States which have an organ published in the interest of the State Grange as the medium of communication between the officers of the State Grange and the subordinate Granges, there a more intimate and fraternal relation exists between these bodies and Patrons generally, and the Order is stronger and more prosperous than in the States which have no such authorized organ. I do not wish to be understood as advocating a separate and distinct organ for each State, or that but one Grange paper be published in the same State. My convictions are, that each State Grange should have an official organ published somewhere, and that the officers and executive committee of that body should keep their departments well filled with such reliable matter and information as the welfare of our cause demands. And, in addition to this, no effort should be wanting to aid and encourage the support and circulation of all good Grange and agricultural papers, for upon a prosperous and faithful press must we look for the strong arm that is to bear our heaviest burdens and help

in every emergency, and for the constant and untiring teacher that instructs, encourages and educates.

Lecture System.

The lecture system has been greatly improved during the past year in some of the States, and, where this has been done, good results have followed. The National Lecture Bureau has also done good service, and furnished to the Order at large some of our ablest lecturers at a trifling expense. And yet there is a great need of earnest, untiring lecturers in many of the States; and the idea seems to prevail that, unless they can be put into the field and all expenses paid by the National or State Granges, the want cannot be supplied. For the National Grange, with an income of only five cents a year from each member, to furnish lecturers for so wide a field at the expense of its treasury, is impossible; and but few State Granges have a revenue sufficient to furnish but a limited supply. Hence the means to compensate lecturers must come mainly from the organization or community employing them and receiving the benefit of their labors.

The truth of the old adage, that "what costs nothing is worth nothing," has been in some degree verified by the experience of those engaged in the various departments of the great lecture system of the world. Free lectures are not as well patronized or as much appreciated as those which cost something to the listeners; and the advanced step which has been taken in perfecting our lecture system, is to provide competent lecturers in different portions of the State with a fixed per diem, which, including traveling expenses, is to be paid by the county or subordinate Grange, or the community employing them. Such lecturers, if able to instruct and interest, will find employment. This system should be extended into every State, and, where the State Grange funds will warrant it, the per diem of lecturers should be paid by the State Grange, and traveling expenses by those employing them. Let this system be perfected, and good lecturers employed within the reach of every subordinate Grange.

Co-operation.

Business co-operation is better understood and more generally practiced by Patrons than heretofore; and, where the business is transacted on true co-operative business principles, either through Grange agents, by individual members or associated capital, our members have been benefited, not only in profits, but in business experience. In the State of Texas alone there are nearly 100 co-operative stores, all in thriving condition, and not a single failure where the business has been conducted on the true co-operative plan. The influence of these stores, located in the country villages of the State, together with that of the Supply House, run by the State Co-operative Association, in Galveston, have done much to advance the interests of our cause in that young but growing State. This principle of our Order, though the least, perhaps, in importance, of any contained in our Declaration of Purposes, is, nevertheless, closely allied to the welfare and prosperity of American agriculture, and should be encouraged and strengthened.

LEMMON HERBARIUM.—We have received a neat circular from our contributor, J. G. Lemmon, of the "Lemmon Herbarium," Oakland, Cal., calling attention to "a large distribution of interesting plants collected during 10 years' extensive exploration of Washington Territory, Oregon, California, Nevada and Arizona. This distribution embraces all the collections of all the orders after Composite, being those which we were unable to select labels for and pack up last winter to which we can now add an immense number of rare and new plants, collected during a six months' arduous and dangerous exploration of the Huachuca range of mountains of Arizona, near the Mexican boundary. This range, like that of the Chiricahua mountains, explored last year, is a lofty, rugged, well-watered and greatly diversified range, that is still infested with savage Apaches, marauding cow-boys and Mexican outlaws. Despite these fearful circumstances, the whole season was spent collecting in the one range of Huachuca, and unusual care was taken to collect the rich flora at various stages of growth, and to make characteristic and ample botanical specimens, as good as the best ever sent from the Pacific coast. The number is so large that the authorities must have several weeks to determine them; meanwhile, they will be distributed under numbers, the names to be supplied to our patrons as soon as reported. There are over 70 species of ferns in the collection, including many rare and new ones." We notice that the prices charged for these specimen plants are reasonable, and they will, no doubt, be quickly taken by amateurs and botanists.

MINSTREL SONGS.—Oliver Ditson & Co., of Boston, the well known publishers of music, have just issued "A Collection of Minstrel and Plantation Songs." These songs, as all know, are wonderful embodiments of humor and pathos, and are clothed with melodies which cannot be forgotten. No music has ever gained so wide popularity, and all can enjoy them. Among the oldest songs are "Susannah," "Cary Me 'Long," "Camptown Races," "Rosa Lee," "Dandy Jim," "Lucy Long," "Settin' on a Rail" and "Jim Crow." The newer nonsense favorites, as "Golden Slippers," "The Bright Light," are here; also the greater part of Foster's melodies, of which Ditson & Co. are the publishers. "Old Folks at Home," and the like, need no introduction. Popular songs that are outside of the "minstrel" line are not forgotten. We find here "Mocking Bird," "Twinkling Stars," "Lillie Dale," "The Old Home," and others. There are about 100 songs, all provided with piano-forte accompaniments. Plenty of choruses are also given.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

AN APRICOT SUIT.—*Reporter*: It will be remembered that a year ago our phenomenal apricot grower, W. C. Blackwood, entered into a heavy contract with the Cutting fruit packing company to furnish an enormous quantity of apricots yearly for five years. On the first year the company went back on its contract—whether justly or unjustly remains for the courts to decide—and as Mr. Blackwood is not made of the stuff that will stand any foolishness in a matter of business, he has brought suit to recover damages for the said breach of contract. Fruit men will watch the result of this case with great interest.

APPLES.—*Oakland Times*: The apples raised about Hayward this fall seem to be smaller than usual. The codlin moth has destroyed a third of the crop, and if not checked will, before long, destroy the entire yield. The Bell-flower and Newton Pippin variety brought good prices, but there are hundreds of tons that can be bought for 40 and 50 cents a box. The large surplus left over is made into cider and vinegar.

WORK.—*Livermore Herald*: Plowing and seeding are now being pushed forward in Livermore valley and vicinity with great rapidity. Farmers on adobe lands are particularly active, and never has there been a better season for the cultivation of this soil than the present. Thousands of acres are already seeded, and hundreds are put in daily. Some fields of early-sown grain are already up and growing rapidly.

BUTTE.

INSECT PESTS.—The Butte County Board of Horticulture, composed of C. L. Durban, Gardner Osgood and W. V. Groves, have presented their report to the Board of Supervisors. After recounting the number of insects found by them in the course of their inspection, and their general prevalence throughout the county, they state that they are fully satisfied, from what they now know of the existence of the insects in the orchards of the county, that, unless a very energetic and united warfare is commenced against them, but a very few years will pass before a large portion of the valuable orchards of this county will be entirely ruined by them. Such has been the case in several of the southern counties of this State that have been as noted for the production of fruit as is this; and we have no hope but that such will be the case in Butte county unless prompt measures are adopted to prevent it.

FEATHERED PESTS.—*Butte Record*: What to do to get rid of the swarms of wild geese and ducks that infest the grain fields is the most perplexing problem that farmers have met with for many years. Notwithstanding vast sums of money are expended every season to keep them driven off the fields, or in employing men to shoot them, the nuisance is in nowise abated. The ducks make their visit at night, and are said to be almost as destructive as the geese. Poisoning is not the proper remedy, as the fowls are largely purchased in the market for food. The *Sacramento Bee* suggests that some of the more wealthy farmers try powerful electric lights with strong reflectors.

LITTLE DRY.—Mr. Papst, of St. John, was in town and reports everything in good condition on the west side of the river, although a portion of the land is becoming a little too dry to plow.

WHEAT WORK.—Everybody is plowing, and teams are scarce and in demand. One man told us that he had six applications for teams last week, and could not supply any. There is considerable summer-fallow in the county, but not nearly as much as usual, in consequence of the unusually large amount of land cultivated last fall and winter. About all the summer-fallowed land is sown, and much of it is up. The acreage of winter-sown wheat promises to exceed that of last winter considerably.

KERN.

ALFALFA SEED.—*Californian*: Alfalfa seed of home production sells at from 12 to 14 cents per pound. The crop has not been as good this year as usual, but a great deal of money has been made out of it nevertheless. It has always been found such a profitable crop that it is surprising more have not tried it, especially when there is seldom enough raised to supply the home demand.

LOS ANGELES.

GRAPES AND BEES.—*Times*: At the Horticultural fair a year ago, experiments were made by the Superintendent, Mr. Geo. Rice, and others, by placing clusters of grapes in the hives of bees on exhibition there, and which were closely confined by wire screens, so that they could not forage outside for food. After a confinement of several days, the grapes, whole and fresh as they came from the vines, were introduced, and though left there for an entire day, the bees climbing over and settling upon them all the time, not a grape was discovered to have been injured. The cluster was then taken out, and down one side a row was punctured with a pin. Those punctured were immediately set upon, and the last vestige of substance absorbed by the bees, no matter how small the puncture had been, while the grapes adjoining were uninjured. Now, however, is testimony of another kind brought to notice. At the office of the *Rural Californian* may be seen a cluster of what was originally the Sultana grape brought from Mrs. Carr's Pasadena place, where, by the

way, she has nearly every variety of grape known to the country, which is only the wreck of its former self, every grape upon the whole cluster having been sucked dry of every atom of saccharine matter, and only the dried skins of the grapes remain. Mrs. Carr states that bees were the authors of the destruction, and that \$200 will not more than cover the loss sustained by her from this source. The Sultana is a very tender, thin-skinned grape, and it may be that on this account the bees attack it, where they would not other varieties. One of the despoiled grapes, the reporter noticed, had become the tomb of a "yellow-jacket." Whether this will afford a clue to the real offenders or not is not known.

RAISIN RECEIPTS.—*Santa Ana Herald*: Halesworth Bros., of Santa Ana, from one vineyard this year made 200 boxes of raisins to the acre. A hundred dollars an acre net is far below the profit of any raisin maker. From four and a half acres of land the above firm sold last season \$1,140 worth of raisins, or \$253 per acre. Mr. Harwood, of Orange, sold his crop, from four acres, for \$712 85. Mr. Windheim, of Orange, netted \$131 per acre for his crop of five acres. These are but a few of the many instances that may be cited going to prove this industry a highly remunerative one. The net profit from a raisin grape vineyard in good bearing order is rarely below \$200 per acre.

NORWALK CHEESE FACTORY.—Mr. T. L. Lombard, of the firm of Johnson & Lombard, cheese manufacturers, Norwalk, was in town recently and favored a *Times* reporter with some interesting particulars regarding the progress made since the factory was started on the 1st of last May. They have manufactured about six tons of cheese per month, and from 2,000 to 4,000 lbs. of milk per day, on an average of 3,000 lbs. They receive milk from a distance of eight miles in every direction, and with the increased facilities which they expect to add shortly, embracing among other things two large vats, in addition to the 620-gallon vat now in use, they will use double their capacity. They will run the factory all the year round. Thirteen and one-half cents per pound is the average price received, and they are well satisfied with the progress made.

MENDOCINO.

HOPS.—*Democrat*: From all parts of the county we learn the gratifying intelligence that preparations are being made for a large increase in the present area devoted to the culture of hops. From J. W. McAbee, of Anderson valley, who was in Ukiah on business last Tuesday, we learned that Messrs. McGough, Withersell, Ball, Stapp and McAbee himself, made arrangements to put about 40 acres in hops, part of the ground being already prepared for the roots. If the present prices should keep up, or the yield should bring even half their present value, the Anderson valley farmers will reap a large additional metallic reward next season. In Potter valley there will also be more attention paid to hop culture in the future, as the increased acreage devoted to that particularly lucrative vine will demonstrate. Last week J. F. Pickle was down this way looking for enough hop roots to put out five acres with, and from him we learned that others would also be numbered among the enterprising citizens of that valley who would soon be doing likewise. In this and Sanel valleys not less than 150 acres will be added to the hop fields; but many sanguine ones believe that 250 will not reach the outside limit. Even the Indians have caught the fever, and they, too, propose to help the boom along. Round valley is determined not to be an exception to the rule, and from there comes the report of an increased acreage, but to what extent we cannot say. From a gentleman just up from Hopland we learn that L. F. Long has contracted to furnish Daniel Flint, of Sacramento valley, with 100,000 roots, and by several of the hop raisers in this vicinity we are assured that every hop root they will be able to spare has been spoken for.

MERCED.

HORSE DISEASE.—*Santa Clara Journal*: A disease has made its appearance among horses in Merced county which baffles the skill of the most experienced horsemen in that locality, and many valuable animals have succumbed to the fatal malady. A gentleman of Santa Clara lost two promising young horses this week from a disease which is new to horsemen here, and he is of the opinion that it is similar to the disease in Merced. The disorder attacks the throat and breast of the animal, and generally proves fatal in from 12 to 18 hours. No specific has been discovered which will arrest the trouble; but bleeding in the neck, if done in time, it is thought, will prove beneficial.

SACRAMENTO.

THE FARMERS.—*Record Union*: The farmers from different parts of the country report that a large acreage of wheat will be sown this year. The late rains that visited this part of the Sacramento valley have put the soil in fine condition for plowing. It is claimed by a number of ranchers who have this season devoted considerable attention to agricultural matters, that the number of acres already in wheat will exceed that of any season for a number of years. The young grass has grown up beautifully, and in some places provides good feed for sheep. The farmers are anxious for a few weeks more of favorable weather, during which time they will have almost completed their seeding for this season.

SAN BERNARDINO.

RIVERSIDE WATER COMPANY.—*Press*, Dec. 2: The citizens' meeting last Saturday was largely

attended, and the question of the new company was discussed at length very thoroughly. The basis of a water company was finally agreed upon, and the following temporary Board of Directors was elected: Dr. K. D. Shugart, Wm. Finch, J. H. Benedict, Dr. J. Jarvis, John G. North, A. Kieth, H. B. Everest, H. B. Haynes, T. H. B. Chamblin, B. F. White and E. Conway. Over 4,000 shares of stock were subscribed at the meeting, representing over 2,000 acres of land—the basis being two shares to the acre. The basis of organization was referred to a committee, consisting of H. B. Everest, E. Conway and T. H. B. Chamblin, to revise the articles of incorporation. This work will be done under the advice of some of the ablest counsel that can be procured in the State. A committee on by-laws was appointed, consisting of B. F. White, T. H. B. Chamblin and E. Conway. As soon as the articles of incorporation are perfected they will be executed and filed, and the meeting of stockholders will be called to adopt by-laws, after which the company will be ready for business.

SONOMA.

PETALUMA POULTRY BUSINESS.—*Courier*, Nov. 29: The weekly shipment from Petaluma of fowls is 60 coops, and of eggs Haynes has shipped daily for the last two weeks about 200 dozen; E. E. Drees averages about 150 dozen daily; Philip Dunn, about 100 dozen; Winans & Goshen, about 100 dozen; Mitchell & Haskins, about 150 doz.; Veale & Roach, about 60 doz.; H. J. Roberts, about 66 dozen; George Schmidt, about 50 dozen. Outside shippers will probably average 10 coops of fowls more a week, and about 50 dozen eggs, making altogether an average shipment of eggs to San Francisco from Petaluma of 870 dozen, and weekly shipments of about 70 coops of fowls. Of course the production of eggs is much less at this season than any other.

POTATOES.—Sam Smith, of San Antonio township, Marin county, brought into town last week a sack of potatoes which we think will beat the State. The largest spud in the sack weighs over four pounds and the smallest one pound and a half. Sam says that out of 800 sacks of good merchantable potatoes raised by him this year, he can pick out 300 sacks as good as the specimen sack referred to. His crop averaged about 110 sacks to the acre. It was new land, and the spuds of the red variety.

POPPE'S CARP PONDS.—*Index*: Mrs. J. A. Poppe's carp ponds are situated six miles south of the town of Sonoma. The ponds are six in number, and are furnished with water from a warm spring that boils from the solid rock. Three of these ponds are literally alive with German carp of all sizes and weights. These carp were imported by Mr. J. A. Poppe, now deceased, direct from Germany, and were the first ever brought to this coast.

SUTTER.

FARM OPERATIONS.—*Yuba City Farmer*: The last rain put the soil in excellent condition for the plow, and as the summer-fallow had already been sown, the farmers were ready to take advantage of the favorable condition. Grain is going into the ground in first class order; the soil harrows down as smooth and even as a garden. Considerable of the earlier sown is coming up, and looked well previous to the recent "cold snap," which has checked vegetation considerably. But as it is yet early, we shall doubtless have more warm and growing weather before the holidays. The crop of 1882 may be said to be all housed, although we believe large quantities of late potatoes remain yet to be gathered. So far as we know the river banks are freed from their burden of wheat. Wheat market seems to be firmer, and barley ditto. Hogs are also firm at 6½ live weight. In fact all kinds of produce is abundant with our farmers, brings good prices, and we are consequently happy.

SEEDING.—*Farmer*, Dec. 1: The weather continues most favorable for farm operations, and our farmers are improving it to the fullest extent. The plows and harrows are going from early morning to dark. Many are already "seeding the end," while all will get through before the holidays if the good weather continues.

TULARE.

BROOM CORN.—*Hanford Journal*: On Wednesday P. C. Phillips shipped from Hanford a carload of broom corn. There were 71 bales, weighing 18 tons. Nearly another carload was at the depot to be shipped, but on examination was found to be too damp and has therefore to be returned to the barn, unbound and allowed time to dry out thoroughly. Mr. Phillips raised 12 or 13 acres of broom corn this year and considers it a good crop. Had it all been well cured, he was in hopes to realize \$100 per ton for it here.

TULARE.

SWEET POTATOES.—*Delta*: H. S. Hand, whose place is between Hanford and Lemoore, has raised this year some very peculiarly formed sweet potatoes. Their shape seems to have been determined chiefly by their location. They were planted on the inneredge of a new levee on Last Chance ditch, and had a very deep soil to burrow in. The roots ran an unusual distance to the water's edge, making a long, slim, yellow potato. Forty or 50 of these were produced that vary in length from 12 to 36 inches, and were not more than two inches through at any point. The longest and most peculiar looking one was from one to two inches in diameter in its largest part, and 33 inches long, while more slender potatoes appended to each end gave this remarkable root a total length of 62 inches be-

fore the slender ends were broken off. Not the least remarkable fact is that from other slips from the same seed, planted in the usual way, some distance from the levee, the potatoes produced were of the usual form and size. This is clear proof that the place where the long potatoes grew and that part of the plant's nature which makes its roots seek water caused their uncommon length.

VENTURA.

DRIED APRICOTS.—*Free Press*, Dec. 2: Just after all our fruit growers had disposed of their stock of dried apricots this fall orders were received from Chicago and Philadelphia for 10 tons at 28 cents cash here. This shows the superiority of Ventura fruit and mode of handling, as apricots raised and dried in the upper part of the State only command 16 cents, the producer paying freight, drayage, commission, etc., out of that. The only lot of Ventura dried apricots we know of in the county is now being retailed in 10-lb packages at 35 cents per pound. Speaking to an orchardist the other day, we expressed the opinion that an apricot orchard would shortly be worth \$250 an acre. "Two hundred an acre!" said he, "why mine pays interest on a valuation of \$1,000 per acre, and no man could buy it for that." It may also be added that Ventura dried apples, pears, peaches, prunes and nectarines also command prices a good way above San Francisco quotations. Our fruit raisers have adopted the wise rule of shipping nothing to San Francisco to be sold on commission. Any one wanting their products must order them direct.

YUBA.

BEEF CATTLE.—*Marysville Appeal*: Beef cattle are scarce and high in price. Good beefs are bringing about seven and a half cents a pound. It is thought that the price will go to nine cents next spring.

THE CODLIN MOTH.—Mr. Eastman, an orchardist of Camptville, says the codlin moth has appeared in his neighborhood, but not in sufficient numbers to do much damage. At San Juan and other places in the mountains he says the insect has become troublesome. He believes that the moths will do great injury to all the mountain orchards unless measures are speedily taken to arrest their multiplication. It is his intention to give his trees a good "drenching" this winter.

AGRICULTURAL.—The farmers are busy this month. The summer-fallowed land has been pretty much all sown, and plowing has been going forward actively since the late rain. The summer-fallowed soil has "worked" admirably, and many of the sown fields look as smooth as a floor. The green shoot; from much of the early sown grain are above ground, and were growing rapidly when checked by the late heavy frosts.

IDAHO.

SHEEP.—The Idaho *Avalanche*: Howell & Sibley, who recently purchased the Westgate ranch, on Cow creek, intend to winter 5,000 head of sheep on the ranch, and will increase the number to 20,000 next spring. The *Avalanche* has heard it stated by some that sheep destroy the range for cattle—in fact, kill the bunch grass entirely where they graze—while those engaged in the sheep business deny the truth of the statement, and assert that there is sufficient room for both, allowing that they do destroy the range for other stock.

News in Brief.

THE Czar of Russia has assumed the title of Lord of Turkestan.

REAR ADMIRAL WYMAN, U. S. N., has been stricken with paralysis.

THE reduction of the public debt for November was \$5,534,142.

AN asbestos factory and other buildings were destroyed by fire Thursday at Quebec.

THE South Yuba canal company is building a ditch 12 miles long, to cost \$20,000.

THE Albany iron works, employing several thousand men, have reduced wages from 10% to 25%.

THE Sultan of Turkey is in great terror of assassination, and hardly dares show himself outside his harem.

A REPORT is current that Potter has sold all his holdings in Omaha, and that Vanderbilt has bought them.

THE year's embezzlements and robberies in Russia, private and official, will amount to 26,000,000 roubles.

THE North Side Rolling Mills at Chicago have shut down, throwing 1,800 to 2,000 men out of employment.

THE corn crop of the United States is estimated this year at 1,680,000,000 bushels, and the wheat crop 500,000,000.

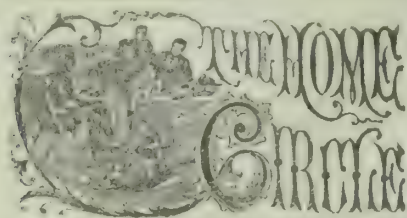
AN actress was killed on the stage at Cincinnati Thursday by Frank Frayne, who endeavored to shoot an apple off her head.

THE Napa water company, digging wells in the foothills of Napa, have found one stream that yields 12,000 gallons per hour.

THE issue of standard silver dollars from the Mint for the week ending Dec. 2d was 802,000, against 536,500 for the corresponding period last year.

TO THE reckless custom of climbing on and off cars while in motion, so common in Chicago, is due most of the accidents which have occurred on the cable roads.

THE internal revenue collections in California district during the fiscal year ending June 30, 1882, were: First district, Chancellor Hartson, collector, \$3,814,692; second district, Amos L. Frost, collector, \$3,122,840.



Making Apple-Butter.

Oh the glorious days of autumn,
Second of blood of the year;
Nature's darlings in full blossom
Of their gold and scarlet gear.

In the orchard luscious clover
Spreads a carpet thick and green;
Over all the misty sunlight
Like a veil of silvery sheen.

These thoughts and feelings only,
Without words the maiden hath,
As she stirs the apple-butter
In the orchard's sunny path.

Still the apple tree so sturdy
Doth the frost king's power defy,
On his crown, so hale and hearty,
Wealth of fruitage bearing high.

Princely pippin, russet golden,
Melting greenings, saps of wine,
Snowy fameuse, seek-no-further,
And the "maiden's blush" divine.

All the perfume of the spring-time,
All the passion of July,
All the sweetness of September,
And October's richest dye;

All their spirits' rarest treasures
In the liquid amber gleam,
As she stirs the apple-butter,
Maiden in her early dream.

In the hazy, blissful stillness
Dreams she of the winter near,
Of its feasts and merry-makings,
Of its freese games and cheer.

And 'mong all the youths and maidens,
One alone ne'er growth dim,
While she stirs the apple-butter,
Thoughts of love she stirreth in.

—Inter-Ocean.

To Vote, or Not to Vote?

(Written for the Press by Mrs. Rancher.)

Some time ago, in a communication from your esteemed correspondent, Mrs. Nichols, she gave as a reason for long absence from the "Home Circle" that she had been suffering from a severe spell of illness, in recovering from which her three score years and ten were against her.

And after reading her last article to the Press, in which she replies with such sweet patience to an attack that was surely a little harsh, I am loath to be found differing from her; am unwillingly on the opposite side. I am sure Mrs. Nichols would neither ask nor accept consideration because of her sex; but many years, and the wide experience that comes from a long and useful life, should entitle the possessor to all courtesy. And when we of middle age look down from our high and note with what changed eyes we now look on life, may we not with reason expect other changes as we climb the hill day by day and little by little add to our experience? But looking at the subject from where I now stand (and by no means denying that laws oppressive to women do exist), the ballot seems a poor remedy. First, from its unfitness to the duties that fall naturally to our lot.

I think it was J. G. Holland who once aptly referred to this matter as "the right of women to sing bass." And would not the one be as unnatural and awkward for us as the other? It seems much like the cry of the discontented pendulum, "Oh, if I were but the hands!"

Years ago there were watchmakers in the Swiss villages whose trade it was to make, at their homes, watches entire from beginning to end, and the result of this slow, laborious process was that watches were owned only by the favored few.

Now each part of a watch is made by a separate workman, who, from long training, and perhaps from natural adaptiveness, has attained great proficiency in his part. I once knew a boy who attempted to learn the trade of repairing watches, but his work in most respects was a failure. Only in one department—in turning at the lathe—he showed decided talent. Having a kind master, he was allowed to perfect himself in this branch. He afterward went to Waltham, and there found just the place to which he was adapted—that of turning the finest pivot in the finest watches. We can all see the result of this method in the durable, reliable, well-finished timepieces of our day, that are yet so cheap as to be within the reach of all.

So may it not be that the women who must always be the mothers, sisters and wives, fall naturally to the duties connected with the house, while the fathers, brothers and husbands are quite as naturally fitted for the outside work, and in that work include the matters directly pertaining to the Government?

But inasmuch as the sisters, no less than the brothers, are amenable to the laws, this might be thought to be a hardship, were it not for my second reason that it is unnecessary.

Have you never noticed during the campaign before some hotly contested election, that there

were certain men whose favor the candidates for office held in great esteem? Not because these men have personally more votes than other men, but because they would influence a large class of voters. Their vote counted but one; their influence might count 10, 20, 50, 100, even more. Now women have all that privilege, and even now, as poorly informed as most women are in regard to the matters of the Government, it is useless to say that they are naught in politics. Let a woman but take an interest in these things; let her inform herself as to the merits and demerits of those who are up for office; then if she be a wise woman, not given to party wrangling, but in just terms explain her convictions to the husband, or father, or brother, I opine that she will have as much of a voice in that election as if she went to the polls. I have in my mind now the case of a young lady, amiable, domestic, making a happy home for an aged father, pretty, given somewhat to fashionable attire; a casual acquaintance would scarcely have selected her for a power behind the throne.

Yet so it was; and it was a study of itself to note how well she understood the character of each friend and acquaintance, so that this point was brought to bear on one, and something else to arrest the attention of another, and all in such a pretty, womanly way I am sure the word strong-minded (at least in the obnoxious sense it is now used) was never so much as thought of in connection with her.

I have heard that one of the most disheartening things in connection with the anti-slavery movement was the apathy of some of the negroes, who, with good homes and kind masters, desired no freedom. And this line of argument has been applied to women who oppose what is popularly known as "woman's rights" by those in favor of them. But have we not our freedom? Could we accomplish any more by exercising the right of franchise?

Doubtless if none but wise and honest legislators were chosen the laws would soon become more just and equitable. And this brings me to my last reason, because it is inadequate.

When we see how unlawful and wicked means are constantly brought to bear to influence voters; how men in high standing are open to bribery and deaf to the cry of the oppressed; how monopolies flourish, and juries are bought, and wickedness carries itself with a high hand—do we not see that the root of the matter lies deeper than we have yet dug?

And when we remember that women as well as men love the uppermost seats in the synagogue and a grand place in society, and the favor of the powerful ones, can we expect our wrongs righted but by that moral force that alone can make the crooked path straight?

Let us never forget that politics as they now stand are a filthy pool; and since we are neither saltpeter nor chloride of lime, let us never drag our skirts in their slime, nor descend into this pool till we have carried away the slum of selling a vote for a drink of whisky and of devouring greed for office, and have filled in their place the sweet waters of true temperance on a solid basis of honesty and justice.

Stanislaus Co., Cal.

The Housewife's Pin-Money.

EDITORS PRESS:—We are glad that there has been a dairymen's convention called for the purpose of discussing the manufacture of oleomargarine, a subject which touches nearly every farmer who has a pound of butter to sell and every citizen who is a consumer. If the chemical ingredients are the same, or so nearly so that the difference is not easily detected, who among us wants to eat all kinds of fat for butter? If they would always make it of pure beef tallow it might be more tolerable.

If oleomargarine is to take the place of butter, the scanty supply of pocket money of many a farmer's wife will become scantier still, and dairymen will have to sell their fine stock to the manufacturers and find a new employment.

It is to be hoped the convention will take some decisive steps in the right direction, and that they will be upheld by both producers and consumers. Butter requires too much hard labor in its production to be sold for a song, as will be the case if oleomargarine is forced upon the market to any great extent. And no matter to what state of perfection it may be brought, it seems as though it would be impossible to give to oleomargarine the delicate flavor of good grass butter.

Vallejo, Cal.

CLARA DEMING.

Chaff.

"WHERE'S the molasses, Billy," said a woman sharply to her son, who had returned with an empty jug. "None in the city, mother. Every grocer has a big black board outside, with the letters chalked on it, 'N. O. molasses.'"

A COWARDLY fellow having kicked a newsboy for pestering him to buy an evening paper, the lad waited until another boy accosted the "gentleman," and then shouted in the hearing of all bystanders: "It's no use to try him, Jim, he can't read."

STUGGINS says that at his boarding-house in the country—a real, old-fashioned farm-house, by the way—they have all the seasonable vegetables fresh from the can.

"ONE country, one starry banner and one wife" is the platform of an editor whose field adjoins Mormonism.

Full of Grit.

"The stage has gone, sir, but there's a widder lives here—and she's got a boy, and he'll drive you over. He's a nice little fellow, and Deacon Ball lets him have his team for a trifle, and we like to get him a job whenever we can."

It was a hot day in July. Away up among the hills that make the lower slopes of the Monadnock mountains, a friend lay very ill. In order to reach his temporary home one must take an early train for the nearest station, and trust to the lumbering old dusty coach that made a daily trip to K—n. The train was late, the stage, after waiting a while, was gone. The landlord of the little white hotel appeared in his shirt sleeves, and, leaning his elbow on the balcony rail, dropped down on the hot and thirity traveler what comfort could be extracted from the opening sentence of my sketch.

"Would he not come in and take some dinner?" "Yes." "Would he send round for the deacon's team?" "Yes." "And the boy?" "Yes."

And the dinner was eaten, and the "team" came round—an open buggy and an old white horse—and just as we were seated the door of the little house over the way opened, and out rushed the "widder's boy."

In his mouth was the last morsel of his dinner; he had evidently learned how to "eat and run." His feet were clad in last winter's much-worn boots, whose wrinkled yellow leathers refused to stay modestly within the limits of his narrow faded trousers. As his legs flew forward his arms flew backward in an ineffectual struggle to get himself inside of a jacket much too short in the sleeves.

"There he is," said the hostler; "that's Widder Beebe's boy. I told him I'd hold the deacon's horse while he went home to get a bite."

The horse did not look as if he needed to be held, but the hostler got his dinner and the boy approached in time to relieve my mind as to whether he would conquer him and turn him wrong side out.

He was sun-browned and freckled, large-mouthed and red-haired, a homely, plain, patched little Yankee boy; and as we rode along through the deep summer bloom and fragrance of the shaded road winding up the long hills in the glow of the afternoon sun, I learned such a lesson from that little fellow at my side as I shall not soon forget. He did not look much like a preacher, as he sat stooping forward a little, whisking the flies from the deacon's horse, but his sermon was one which I wish might have been heard by all the boys in the land. He did not know he was preaching, or he would have stopped, I think. As it was, I had to spur him on now and then by questions, to get him to tell me all about himself.

"My father died, you see, and left mother the little brown house opposite the tavern. You saw it, didn't you, sir?—the one with lila bushes under the window? Father was sick a long time, and when he could not work he had to raise money on the house. Deacon Ball let him have it, a little at a time, and when father was gone, mother found the money owed was nearly \$300. At first she thought she would have to give up the house, but the deacon said: 'Let it wait awhile,' and he turned to me, and patted me on the head and said: 'When Johnny gets big enough to earn something, I shall expect him to pay it.' I was only nine years old then, but now I am 13; I remember it, and I remember how mother cried, and said: 'Yes, Deacon, Johnny's my only hope now,' and I wondered what I could do. I really felt as if I ought to begin at once, and yet I could not think of anything I could do."

"Well, what did you do?" I asked quickly, for I was afraid he would stop, and I wanted to hear the rest.

"Well, at first I did very funny things for a boy. Mother used to knit socks to sell, and she sewed the rags to make rag carpets, and—I helped."

"How? What could you do?"

"Well, the people who would like a carpet could not always get time to make it. So I went from house to house among the farmers, and took home their rags, old coats, and everything they had, and out in the wood shed I ripped and cut them up. Then mother sewed them, and sometimes I sewed some, too, and then I rolled them into balls and took them back to the owners, all ready to be woven into carpets."

"But did that pay you for your work?"

"Oh, yes; we got so much a pound, and I used to feel quite like a merchant when I weighed them out myself with one of our steel-yards. But that was only one way. We have two or three old apple trees out in the backyard by the wall, and we dried the apples and sold them. Then some of the farmers who had a good many apples began to send them to us to dry, and we paid them so many pounds all dried, and then had the rest to sell."

"But you surely could not do much in ways like this?"

"No, not much, but something; and then we had the knitting."

"Did you knit?"

"Not at first, but after a while mother began to have rheumatism in her hands, and the joints became swollen and the fingers twisted, and it hurt her to move them. Then I learned to knit. Before that I always wound the yarn for her. I had to learn to sew a little, too, for mother did not like to see holes without patches."

And he looked half smiling at the specimens on his own knees.

"You did not mend those?" I asked.

"Yes, sir, but I was in a hurry, and mother said it was not done as it ought to be. They had been washed, and I could not wait for them to dry."

"Who washed them?"

"I did, and ironed them, too. I can wash and iron almost as well as mother could."

"But she does not let you do it?"

"She don't mean to have me, but how can she help it? She can hardly use her hands at all, and some days her feet are so bad she cannot leave her chair. So I have had to learn to make the beds and scrub the floor, and wash the dishes, and I can cook almost as well as a girl."

"Is it possible? I shall have to take supper with you on my way back to the city, and test your skill."

Johnny blushed, and I added:

"But how do you learn your lessons? Every boy should learn something from books."

"I know just where the boys in my class are studying, and I get the lessons at home. Mother reads them to me out of the book while I am washing the dishes or doing her work, and when we come to anything we can't make out I take it over to the teacher in the evening, and she is very kind—she tells me."

Very kind! Who would not be kind to such a boy? I felt the tears coming to my eyes at such a sudden vision of a son doing a girl's work, while his poor mother held the book in her twisted hands and tried to help him to learn.

"But all this does not earn money, Johnny. How can you hope to save if you give your time indoors?"

"Oh, I don't do girls' work all day; no indeed. I have worked out all our taxes on the road. It wasn't much, but I helped the men build a stone wall down by the river, and Deacon Ball lets me do a great many days' work for him; and when I get a chance to take any one from the hotel to ride, he lets me have his team for almost nothing, and I pay to him whatever I make. And I work on the farm with the men in summer, and I have a cow of my own, and I sell milk at the tavern; and we have some hens, too, and we sell the eggs. And in the fall I cut and pile the wood in the sheds for people who haven't any boys—and there's a good many people about here who haven't any boys," he added thoughtfully, brushing a fly from the old white horse with the tip of his whip.

After this we fell into silence, and rode on through the sweet New England roads, with the Monadnock rising before us ever nearer and more majestic. It impressed me with a sense of its rugged strength—one of the hills rock-ribbed and ancient as the sun; but I glanced from the mountain to the little red-headed morsel of humanity at my side with a sort of recognition of their kinship. Somehow they seemed to belong together, I felt as if the same sturdy stuff was in them both. It was only a fancy, but it was confirmed the next day, for when I came back to town, after seeing my invalid friend, I went to call on Deacon Ball. I found the deacon white-haired and kindly-faced. He kept the village store and owned a pretty house, and was very "well-to-do." Naturally we talked of Johnny, and the deacon said to me, with tears in his watery blue eyes:

"Why, bless you heart, sir, you don't think I'm going to take his money, do you? The only son of his mother, and she's a widder, and all tied up into a double bow knot, with the rheumatics besides! True enough, I let the father have the money, and my wife she says, says she to me, 'Well, deacon, my dear, we've neither chick nor child, and we shall be just as well off a hundred years hence if the widder never pays a cent; but 'ording to my calculation, it's better to let the boy think he's paying.' Says she to me, 'Deacon, you might as well try to keep a barrel of vinegar from workin' as to keep that boy. It's the mother in him, and it's got to work.' We think a good deal of the widder, Mandy and me. I did, before I ever saw Mandy; but for all that, we hold the mortgage, and Johnny wants to work it out. Mandy and me, we are again to let him work."

I turned away, for I was to sup at Johnny's house; but before I went I asked him how much Johnny had paid.

"Well, I don't know; Mandy knows. I pass it to her, and she keeps the book. Drop in before you go to the train and I'll show it to you."

I dropped in, and the deacon showed me the account. It was the book of a savings bank of a neighboring town, and on its pages were credits of all the little sums the boy had earned or paid; and I saw they were standing to Widow Beebe's name. I grasped the deacon's hand. He was looking away over the housetops to where Monadnock was smiling under the good-night kisses of the sun.

"Good-bye, sir, good-bye!" he said, returning my squeeze with interest. "Much obliged, I'm sure, Mandy and me, too; but don't you be worried about Johnny! When we see it we know the real stuff it takes to make a man, and Johnny has got it; Johnny's like that mountain over there—chuck full of grit and lots of backbone."

BURNING GAS WITHOUT FLAME.—At a late soiree of the Secretary of Chemical Industry, held at Owen's College, Mr. Fletcher, of Warrington, England, demonstrated the possibility of the combustion of gas without visible flame, the heat obtained from a quarter-inch gas pipe being sufficient to fuse iron into drops.

We Do Fade as a Leaf.

[Written for the RURAL PRESS by JEANNE C. CARR.]

A bit of the Canadian woods seems to have been dropped upon our Pasadena hills. The Norfolk Island pine, a tropic stranger, is all illuminated by the royal blazing of a pair of native trees which all through the summer hours have stood unnoticed in its shadow. One is a scarlet oak and the other the Eastern dogwood (*Cornus Florida*).

The sunlight streaming through the dogwood gives it the same purity and intensity of color that we see in the ruby—every leaf of the same depth and richness of tone. Not so the scarlet oak, in which a hundred tints of olive, purple, russet browns and old gold greens strive not to be overcome by that pure scarlet which is the type of long suffering love. Hold a leaf in your hand, and note the bronzing of the underside upon the scarlet midrib, and veins stand out in bold relief.

Here are red maple leaves and bright toned sassafras and glowing amelanchier, each borrowing something of the scarlet oak glory in the afterglow of the season. I fondly lay among them silver poplar leaves, tawny gold without, well varnished and leathery to the touch, but downy white beneath, ready to show this silver lining at the lightest touch of the wind.

I planted this poplar for a memory, and to-day it repeats for me a sweet story of old, of places where my child-feet wandered in search of these autumn jewels.

Red maple leaves and the liquid amber seem to ask for frost to perfect their ripening; not so the chestnut, where every blade is pointed well, the ribs in bright green, upon an old-gold surface, and the boldly serrated edges shaded to a deep brown, I lay the chestnut leaves upon my forehead, and in psychometric vision see a troop of boys and girls, baskets in hand, filling a New England woodland with songs and laughter. I see cheeks brightened with chestnut burs, and in mirthful sport many a tangle of ringlets and curls. Later, too, the gathered store plays its part in the hospitalities of those long winter evenings.

The wild persimmon of the Southern States has a beautiful leaf in autumn, but is excelled by the common thorn tree, in color and in texture also. The thorn leaf is one of the most exquisitely sculptured.

All day the cut leaved birch has been dropping her pretty buff feathers into the grass—of this tree one may say it is lovely at all seasons, like Aphrodite, whether clothed or not it is the type of grace. Even in winter its drooping sprays suggest what summer confirms, the most delicate of haunts for the winged spirits of the air.

Strong and stiff is my mahonia bush; but how fit for all the finer purposes of art is this rigid, polished, crimson blotched leaf. No two leaves of this leaf are alike in their ripening.

The purple fringe tree is well named, the delicate hues of the blossom reappearing now in rich purples a pure mulberry color, while the persistent mist-like fringe gives it a touch of spirituality.

Our spicas are very gay now, and much more effective as ornamental shrubs than they were in springtime. The Missouri currant is tipped with scarlet, and flames out of a clump of California cherries as if to shame their glossy trimness.

All this charms me; and the half is not told. But I speak never a word when I look up into the curtains of Virginia creeper which is striving to cover the poverty and nakedness of our dwelling with its ineffable grace. Its delicate fingers are weaving upon these rough boards a pattern worthy to adorn the home of many mansions. Next to the mosses, which "take up their watch by the headstone," I love best the plants which creep around porch and window as if they were Nature's messengers of good will. Climbing always, clinging always; veiling the tired eyes through summer's heat, this glorious creeper is transfigured at last into beauty like that of the sunset clouds.

Pasadena, Nov. 14, 1882.

ENCOURAGEMENT.—How often a few words of encouragement given, when both body and spirit are weary with daily toil, falls like rain upon the thirsty earth. If we could only know their worth and seek for opportunities to give them! I knew a boy of 10 years who was counted a dunce in his books who preferred the foot of his class to any other place. He had then, as he expressed it, "nothing on his mind," and to whom study was a nuisance. At the close of a term he received a prize from his teacher for perfect attendance. The prize had not been offered at all, but was simply given as a reward for the rarest of qualities, punctuality, although he had been dull, and the sprightly ones who had stayed from school every now and then had passed him in their studies, yet he had been orderly and regular, and the teacher with rare discernment had singled out his best point, and thinking to bestow a little encouragement had rewarded him for his own sake, and for an example to the others. The wisdom of the proceeding was shown when the boy, as he ran home, exclaimed: "O, mother, there is something to me after all!" and succeeding terms of school showed that the right stimulus had been applied, the dull boy brightening and becoming studious and persevering, and developing an unlooked-for originality, and always remembering with pleasure his first unexpected prize.—*Rural New Yorker*.



THE KING OF BEASTS.

Young Folks' Column.

Our Puzzle Box.

Cross-Word Enigma.

My first is in rear, but not in van;
My second is in boy, but not in man;
My third is in coach, also in hack;
My fourth is not in nail, but in tack;
My fifth is in young, but not in old;
My sixth is in warm, but not in cold;
My seventh is in morn, but not in eve;
My eighth is in mourn, but not in grieve;
My ninth is in near, but not in far;
My tenth is in pitch, also in tar;
My eleventh is in all, likewise in part;
My twelfth is in science, but not in art;
My thirteenth is in north, but not in south;
My fourteenth is in nose, but not in mouth;
In my whole a feature of the West is found,
Although in other countries they abound.

A. B. C.

Transpositions.

1. Transpose proportion and form to rend.
2. Transpose a pitchy substance and form an animal.
3. Transpose to injure and form a limb of the human body.
4. Transpose to brave and form to peruse.
5. Transpose suitable and form to be prolific.
6. Transpose an animal and form a vegetable.

JERRY.

Hidden Implements.

1. Lord Ragney is absent.
2. Mandrake is sweet, is it not?
3. The shoes are completely worn out.
4. Have you been to the islands of Orkney?
5. Dump low the cart, John.

NETTIE.

Charade.

My first is a certain part of speech;
An article is my second;
An Irish nickname is my third;
"Word for word" my whole is reckored.

Blanks.

- [Fill the blanks with words pronounced alike, but different in spelling and meaning.]
1. The ——— has retired to the country for a little fresh ———, they say, ——— he goes to Europe.
 2. I gave the ——— a ——— and a knife to ——— it with.
 3. Has it ——— put into the ———.

W. H.

Answers to Last Puzzles.

- NUMERICAL ENIGMA.**—Moosetocmaguntic.
AMPUTATIONS.—1. Blood, loo. 2. Spark, par. 3. Speak, pea. 4. White, hit. 5. Stand, tan. 6. Sane, an.
DIAMOND PUZZLE.—
S I R
S Y R I A
F I R E F L Y
R I F L E
A L E
Y
BLANKS.—1. Main, Maine. 2. Maid, Made.
GEOGRAPHICAL ANAGRAMS.—1. Winnipiscogee. 2. Dneiper. 3. America. 4. Everest.

Bess at Church.

Bess was going to church. She had been once before with mamma. She was going now with brother Dolph.

It was winter. She wore her white fur cape and blue velvet bonnet. Her dress was blue.

Dolph carried a singing book.

Bess wanted a book too.

There was but one singing book, so Dolph gave Bess a picture book.

When the choir sung, Dolph opened his book. Then Bess opened her picture book.

She saw a picture of a little girl and her lamb. Bess knew all about that picture.

"Did Mary's lamb go to church?" she whispered to Dolph.

"Guess not," said Dolph.

"Did Mary sing?" she whispered once more.

"No," said Dolph.

Bess wanted to sing. Pretty soon Dolph heard her singing in a low tone:

"Mary had a little lamb,
Its fleece was white as snow."

"Hush!" said Dolph. "Little girls don't sing in church."

Bess was quiet for a few moments and then Dolph heard her whisper:

"It followed her to church one day."

"It did go to church," aloud.

"Bess Laurence!" said Dolph, "if you don't keep still you will have to go right home."

He tried to take the book away from her, but she would not let him have it. She shut up the book, and looked at the minister.

She did not sing any more.

The next time Bess went to church she did not carry a picture book.—*L. M. P., in Little Folk's Reader.*

THE LION.—We Give our little folks a grand portrait of the king of beasts, engraved from Rosa Bonheur's celebrated painting. This especial lion has ceased to alarm the jungle, and is doing the roaring for the Lion Insurance Company, which has been named after him.

GOOD HEALTH.

LIABILITIES FOR INJURY TO PATIENTS DURING OPERATION.—The decision of Judge McAdam, in a recent suit before the Marine Court of New York, brought by Thomas J. Kelly against the dentist Colton, to recover for injuries caused by allowing a piece of tooth, which was being extracted, to drop down the plaintiff's throat while he was under the influence of laughing-gas, is one full of importance, not only to dentists, but to general surgeons as well. It is alleged that the piece of tooth slipped from the forceps, and for four weeks thereafter the plaintiff was troubled with a cough until he finally expectorated the piece. The court held that while a patient was under the influence of an anesthetic which deprived him of the use of his faculties the operator was bound to exercise the highest professional skill and diligence to avoid every possible danger, and in this case it was the opinion of the court that the circumstances shown were sufficient to carry the case to the jury on the question of negligence. The judgment appealed from was in favor of the plaintiff for \$500 damages, and this judgment was affirmed by the present decision.

THE ETHER SPRAY AN IMMEDIATE CURE FOR NEURALGIA.—Dr. McColligan extols the value of the ether orrhigolene spray for the instantaneous relief principally of facial neuralgia. He first had occasion to observe its good effects upon his own person, he having suffered greatly from facial neuralgia. Since curing himself he has had occasion to test its efficacy in about 20 cases. The result was invariably a most gratifying success. In many instances a permanent cure was established. He attempts to explain its action by supposing a complete change to take place in the nutrition of the affected nerve in consequence of the intense cold acting as a revulsive.—*Southern Practitioner.*

SUBSTITUTE FOR COD LIVER OIL.—Among the numerous substitutes for cod-liver oil which have from time to time been brought before the notice of the profession, dugong oil, which is an extract obtained from the dugong, an herbivorous cetacean inhabiting the warm seas of the coasts of Australia and the Eastern Archipelago, has met with a most favorable reception. Dugong oil is free from the unpleasant odor and taste which characterize cod-liver oil, and is much less liable to change in keeping. At ordinary temperatures it is opaque from the separation of its more crystalline constituents, but becomes clear and almost colorless when slightly warmed. The dose is the same as cod-liver oil.

DOMESTIC ECONOMY

MINCE PIES.—Take the best part of a neat's tongue parboiled, peel it, cut in slices and set it to cool. To a pound of tongue, beef or veal, put two pounds of beef-suet, then chop them all together on a block very fine; to each pound of meat put a pound of currants and a pound of stoned raisins, chopped or cut small; then pound your spice, which must be cloves, mace and nutmeg; season as you like with sugar, candied orange, lemon and citron peel shred, with two or three peppers; squeeze in the juice of one lemon, a large glass of sack, with some dates stoned and shred small; all these being mixed together very well, make your pies and bake them, but not too much.

SLICED APPLE PIE.—Line pie-pan or plate with crust, sprinkle with sugar, fill with tart apples sliced very thin, sprinkle sugar and a very little cinnamon over them, and add a few small bits of butter and a tablespoonful of water, or not, as you please—it depends upon the juiciness of the apple—dredge in flour, cover with the top crust, and bake about three-quarters of an hour; allow four or five tablespoons of sugar to one pie. Or, line pans with crust, fill with sliced apples, put on top crust, and bake; take off top crust, put in sugar, bits of butter and seasoning, replace crust and serve warm. It is delicious with sweetened cream. Crab-apple pie if made of the "Transcendents," will fully equal those made of larger.

RED AND WHITE CAKE.—One cup of butter, one cup of sweet milk, two cups of sugar, whites of five eggs, two teaspoonfuls of the Horsford baking powder, sifted into three cups of flour. Flavor to suit with lemon or vanilla. Take out one cupful of the cake batter, and stir into it about 15 drops of prepared cochineal. Then when you put the batter into the cake you can add the red part here and there, spreading some of it so that streaks will appear when it is cut in slices. It is very nice indeed. Let the frosting be pure white. Baked in layers as a white cake, you can make of this excellent coconut, chocolate, custard, lemon, cream, or any kind you please. It is the filling that makes a different sort, the body of the cake is the same.

STUFFED TOMATOES.—Choose half a dozen tomatoes of as nearly the same size as possible; cut off the top, and take out carefully with a silver spoon the insides; rub the pulp through a sieve; then add to it, stirring vigorously, two large spoonfuls of bread crumbs, a little melted butter, and pepper and salt to suit your taste; fill the tomatoes with this, put on the covers, and bake them in a moderate oven. Bake on an earthen pie plate or pudding dish.

WILD DUCK.—If fishy and the flavor is disliked, these should be scalded for a few minutes in salt and water before roasting. If the flavor is very strong, the duck may be skinned, as the oil in the skin is the objectional part. After skinning, spread with butter and thickly dredge with flour before putting in a very quick oven. Young ducks feel tender under the wings, and the web of the foot is transparent; those with thick, hard breasts are best. Be particular in selecting wild ducks.

WHITE SOUP.—Take a large knuckle of veal, one pound of ham and a fowl if required; a few peppercorns, a head of celery finely shredded, and two or three onions; add six quarts of water and let it stew for several hours; strain in the soup, and when cold, having taken off the fat, add to the liquor, on the day it is required, quarter of a pound almonds blanched and pounded; boil it very gently, then pass the soup through a sieve, and thicken with half a pint of cream and two eggs.

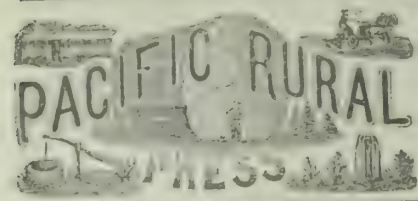
CRANBERRY SAUCE.—Pick over and wash the cranberries and put in the preserving kettle with half a pint of water to one quart of berries; now put the sugar—granulated sugar is the best—on top of the berries. Set on the fire and stir about half an hour. Stir often to prevent burning. They will not need straining, and will preserve their rich color cooked in this way. Never cook cranberries before putting in the sugar. Less sugar may be used if you do not wish them very rich.

APPLE SAUCE.—Pare, halve and quarter a sufficient quantity of nice stewing apples; put them into a baking dish, and cover thickly with sugar—bits of lemon peel may be added if liked. Put a plate over the dish and set it into a pan having a little hot water in the bottom, and place in a hot oven. Bake until the pieces are clear and tender.

COOKIES.—Two cups sugar, one cup butter, one teaspoonful soda, four eggs, and flour. Mix them not very stiff; roll out and bake quickly. These will keep a long time, and grow soft in a few days.

FRIED PARSNIPS.—Scrape, cut into strips, and boil until tender in salted water; drain and dip into batter, made with one egg beaten light, one-half cup milk, and flour enough to make a batter, and fry in hot butter or lard.

APPLE SNOW.—Mash the pulp of three baked apples with silver spoon; add one cup sugar and the beaten white of an egg; flavor and beat one-half hour. Serve with soft custard or alone.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individual addresses are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. *Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may be required in the payment of any quarterly subscription in this paper.* No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES 1 week. 1 month. 3 mos. 12 mos.
Per line (10 lines).....25.....80.....22.20.....\$6.00
Half line (5 lines).....\$1.50.....\$3.00.....10.00.....24.00
One inch.....2.00.....5.00.....14.00.....40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

S. H. STROMG

SAN FRANCISCO:

Saturday, December 9, 1882

TABLE OF CONTENTS.

EDITORIALS.—Sorghum Sugar; Can it be so Bad as Time? 437. The Week; A Senatorial Endorsement of Bogus Butter; The Dairyman's Meeting, 441. A Law to Protect Genuine Butter; Two Promising Peas; Resignation of Matthew Cooke; Opportunities, 445. Patents and Inventions; Notices of Recent Patents, 450. A Useful Household Device; Blake's Paper File, 452.

ILLUSTRATIONS.—The Early Amber Sorghum Cane, 437. Andre Des orates and Anne Agaveau Peas, 445. A Useful Household Device; Blake's Bill Post, 452.

QUESTIONS AND REPLIES.—Peas for Pigs; Starting Nursery Trees; Apricot Market; Gum Trees for Fuel; Pheasants, 444.

CORRESPONDENCE.—Los Angeles County Notes; Impressions of the Horticultural Convention, 438. FLORICULTURE.—The Coccinella and Its Culture, 438.

THE DAIRY.—How Milk is Made, 438. HORTICULTURE.—The Fruit Growers' Convention, 439. 440, 441, 442.

PATENTS OR A USBANDRY.—Meeting of the National Grange; Address of the Worthy Master; Anniversary Celebration by Bennett Valley Grange, 440. AGRICULTURAL NOTES.—From the various counties of California and Idaho, 441.

NEWS IN BRIEF.—On page 441 and other pages. HOME CIRCLE.—Making Apple-Butter (Poetry); To Vote, or Not to Vote; The Housewife's Pin-Money; Chaff; Pull of Grit, 442. We do Fade as a Leaf; Encouragement, 443.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Bess at Church; The Lion, 443.

GOOD HEALTH.—Liabilities for Injury to Patients During Operation; The Ether Spray an Immediate Cure for Neuritis; Substitute for Cod-Liver Oil, 443.

DOMESTIC ECONOMY.—Mince Pies; Shred Apple Pie; Red and White Cake; Stuffed Tomatoes; Wild Duck; White Soup; Cranberry Sauce; Apple Sauce; Cook's; Fried Parsnips; Apple Snow, 443.

POULTRY YARD.—Success with Chickens; Poultry for Australia, 450.

FORESTRY.—Forest Trees of California—No. 19, 450.

Business Announcements.

Sewing Machines—Mark Sheldon, San Francisco. Incubators—J. M. Hallett, Oakland, Cal. Poultry—A. H. Smith, Brooklyn, Alameda Co., Cal. Grapevines—F. A. Buck, Oakville, Napa Co., Cal. Books—G. & C. Merriam & Co., Springfield, Mass. Nurseries—W. M. Williams, Fresno City, Cal.

The Week.

Field work has been driven with resistless energy during the last few weeks of peerless weather, and now some report that the year's winter seeding in their districts will be nearly or quite done by Christmas time. This is uncommonly early, and will give the grain the chance to enjoy all the rain there is to come, and will fill all with a disposition to enjoy the holiday season to the utmost. Now it is becoming rather dry in some parts, and a touch of rain would freshen things and give the feed new vigor. But there is time enough for the clouds to gather.

The transit of Venus has been the sensation of the day. The sun has been clear from first to last contact, and thousands have looked longingly at the round spot crossing the glowing disc, with especial interest because the planet will not cross again for more than 120 years.

We have a good deal more oil this week, but there seems no escaping the issue which is being made except by meeting it squarely, as we are endeavoring to do.

Oxalic acid is found in the common sorrel and rhubarb plants.

A Senatorial Endorsement of Bogus Butter.

Formerly my ideas on butter making were of the vague and general character that most people entertain. I thought that butter came from cream, that cream came from milk, and that milk came from the cow, and there was no reason why I should push my investigation further. When oleomargarine first began to attract attention, however, I came to the conclusion that the mystery of butter making was then for the first time being unraveled, and that the claim of the manufacturers that beef fat could be converted into butter fat was well grounded. I do not know that I stored my mind with every philosophical detail, but I have no doubt that I can make my new lesson clear to you. Beef fat, as I understand it, is made up of oleine, margarine, or what are called the butyric compounds. The secretion of oleomargarine is performed by the milk glands, and its conversion into butyric, or butyric margarine, is performed in the alembic of the udder under the influence of mammary pepsin. In the churn the butter fat that has been held in solution in the milk is united in masses and known as butter. Now all the manufacturers of oleomargarine do is to shorten the processes of natural butter making.

To the assertions that it was a vile, impure compound, the manufacturers have replied by publishing the reports of various distinguished chemists who had personally examined the process of manufacture, and who unanimously declared that oleomargarine is composed of exactly the same constituents as dairy butter.

All the fat that is now made an article of commerce was formerly thrown away, so that the manufacture of oleomargarine makes what was valueless valuable. The industry, I should imagine, cannot but be of benefit to the State. From an interview with Hon. J. P. Jones, of Nevada, in the San Francisco Chronicle of Dec. 3d.

Thus the Hon. John P. Jones, U. S. Senator from Nevada, lends his name and influence to the effort which a few greedy men are now making to endanger the prosperity of a leading industry of the Pacific coast, that their own purses may be filled. Probably not less than \$10,000,000, now invested in legitimate dairying on this coast, is imperiled for the aggrandizement of a dozen men; and the livelihood of 10,000 men is threatened that less than a score may become fat upon the profits of counterfeiting. Here is a cluster of growing commonwealths whose citizens cry out against the imposition of false food, and whose confidence in one of the leading articles of their diet is being ruthlessly shaken. On the one hand, a multitude of producers and our whole population of consumers; on the other hand, a little group of men greedy for wealth who, though they themselves call their product by its true name, are ministering to the avarice of a cohort of deceivers who come between them and the consumers. And now in this issue there comes a man occupying the position of a popular representative, who deliberately takes his place on the side of those who are doing their best to endanger a legitimate and a wide-reaching industry. It is a spectacle which can hardly be patiently contemplated.

The Hon. John P. Jones, of Nevada, is a man skilled in finance and a leader in public affairs to whom we would accord full credit for the prominence he has attained. Before he became a statesman he was versed in mines; and as mines often rest upon assays, we will cheerfully accord him full familiarity with the mysteries of inorganic chemistry. But when he steps upon the field of organic chemistry and physiology he betrays an ignorance which an under-graduate should be ashamed of. We do not believe so much unscientific nonsense was ever crowded into a single paragraph as he puts into his explanation of the secretion of fat in the animal economy. It is lamentable that a man of his position should proclaim such ignorance. Men whose minds are engrossed with other affairs are not expected to understand the mysteries of the laboratory, and they generally refrain from attempts at elucidating them. But when the attempt is made, it must be met, that the people may not be imposed upon through their confidence in a great name.

According to his statement, which we print above, Senator Jones started out with a correct idea of the origin of butter. Butter does come from cream, cream from milk, and milk from the cow, and if Senator Jones had rested his "investigation" there he would have possessed all the wisdom there is on the subject in the world; for butter comes from no other source than the milk-yielding animal, and in no other way than from the milk.

Sensor Jones then began to "investigate," and found "that the claim of the manufacturers that beef fat could be converted into butter fat was well grounded." It is quite plain where Senator Jones conducted his "investigation" to reach this astounding conclusion. He found it laid down in the specifications of the Mege patent, and that to him was proof complete, and he now puts this special plea of the patent forward as a scientific exposition of the subject. The fact of the matter is that "beef fat," by which we understand fat from other parts of the body, is not butter fat, and is not made into butter fat. There are in the butter fat oils which cannot be found elsewhere in the animal, and it is upon the presence of these oils that butter depends for its distinctive characteristics and qualities. These oils constitute about eight per cent. of the composition of butter fat, and they furnish the flavor and aroma which gives butter its delicate and delicious distinguishing qualities. The oleomargarine makers attempt to gather these oils by churning their tasteless grease with genuine milk, but they never succeed, for they themselves confess that they cannot compete with the best butter; that is, butter which is properly made and shows its true quality. Why, Senator Jones, in his generous-hearted endorsement of this false butter, grants more even than the inventor claims, for the specifications read: "I have discovered a substance substantially

identical with true butter," etc. Senator Jones says "identical," without a qualifying phrase—in fact, he converts one into the other. Verily, Senator Jones has an improvement upon the Mege process.

The Senator continues his exposition in these words: "Beef fat, as I understand it, is made of oleine (sic) margarine, or what are termed the butyric compounds." This is rather rich as a Senatorial understanding of fat. In the first place, there is no such thing as "margarine." Here is where reliance on the Mege specifications, as an authority on animal chemistry, brings the Senator into trouble again. If he had "investigated" in better authorities he would have found that no such thing as margarine exists, and that the name "oleomargarine" does not describe anything known to science, but is merely the trade name for bogus butter. The Senator then couples his oily myths with this phrase: "Or what are termed the butyric compounds," thus making them synonymous, with something which does not exist in "beef fat" at all, but in butter fat alone. The Senator's lucid explanation of the composition of beef fat, then, amounts to saying "beef fat is composed of what does not exist at all, or what does not exist in beef fat," which does not give him very high rank as an expert on grease.

But this is hardly the worst in this unfortunate declaration of Senatorial ignorance. He plunges deep into the mire of false physiology: "The secretion of oleomargarine is performed by the milk glands, and its conversion into butyric or butyric oleomargarine is performed in the alembic of the udder under the influence of mammary pepsin." This is nonsense, pure and simple, and plenty of it. It is another draft upon the Mege patent with original variations. You can no more get oleomargarine from the milk glands than you can scrape it off the horns. The milk glands secrete their own characteristic fat. They draw their supplies of raw material from the blood, and they make their own use of it. Other parts of the body do the same, and there is no connection between the parts, or exchange of commodities, except as each takes blood from the arteries or gives it to the veins which lead from the heart throughout the structure and back again. The term the Senator uses, "butyric oleomargarine," has no more significance than if he had said "buttery axle-grease," which would perhaps be the better phrase if he referred to the results of the Mege process. "Mammary pepsin" is a phrase for which the Senator is not to blame; he or his interviewer stole it whole from the Mege patent specifications. It means about as much as "mammary stomachache" would in the same connection. In order that our readers may possess a review of what is really known of the operation of the udder, we give on page 438 an article which cites the acknowledged authorities.

The Senator concludes his treatise on the transmigration of grease with the reflection that "all the manufacturers of oleomargarine do is to shorten the process of natural butter making." Yes, that is what they are trying to do, we acknowledge, and if they are not checked in some way they will shorten it so much by the introduction of their drippings that the industry will not hold together.

Sensor Jones says that distinguished chemists declare that "oleomargarine is composed of exactly the same constituents as dairy butter." The Senator again discounts the inventor. No chemist ever made such assertion. The makers do not claim that it is. The fact of the matter is, it isn't. There are those volatile flavoring and aromatic oils in the genuine which are not in the oleomargarine. They are the saving clause. THE COW STILL HOLDS THE TRADE MARK!

The Dairyman's Meeting.

As we had seen no announcement of a place of meeting for the dairymen next Tuesday, Dec. 12th, we telegraphed to F. W. Moore, of Santa Cruz, as he was Secretary of the meeting which issued the call. Mr. Moore replied that the meeting would be at the Russ house, on Montgomery street, but no hour of meeting was named. We presume that 10 A. M. will be about the time for assembling.

The meetings in the several counties have proceeded, but we have not received full information of the transactions. At Gilroy a meeting was held, and D. M. Pyle and E. A. Davison were appointed delegates. Delegations are expected from Humboldt and Del Norte and San Mateo, besides those named in the last two issues of the RURAL. The disposition to organize in the dairy counties has not, however, been as active as the occasion demands, and individuals in counties where meetings have not been held should take it upon themselves to attend and apply for admission to the convention. No doubt anyone who has a direct interest in the production of the legitimate article will be cheerfully admitted.

We trust the attendance will be so large that no hotel rooms will accommodate the convention. There ought to be a rousing meeting, including representatives from all affected localities, and a vigorous tone pervading all its proceedings. If the meeting is small or weak the oleomargarine men will proceed boldly, trusting to profit by the apathy of the dairymen. Each one interested in this important question should assume part of the responsibility of making the convention a notable success.

QUERIES AND REPLIES.

Peas for Pigs.

EDITORS PRESS:—I do not remember of seeing any article in your paper advocating the raising of peas to fatten hogs on. In portions of this State where the nights are too cool to grow corn peas do well. I have no doubt but there are plenty of farmers who have experience in this direction. Pork is a good price, and if the hogs can harvest the peas and grow fat, saving the cost of harvesting, threshing, etc., why is it not practical? Peas grow well in this country, and should any of your many readers have experience in this line I should, for one, be glad to learn something of their management.—J. T. HOTT, San Mateo, Cal.

The idea is a good one and worthy of discussion. We should like to hear what our readers have done with peas and pigs, and how they have done it. No doubt some of our Humboldt county readers are especially well informed on this subject. We may remark that it is perfectly feasible to provide for the dry months of summer with a good feed of succulent peas, and for swine in warm weather, says Coburn, in his treatise on swine husbandry, there are few kinds of food equal to peas. Two bushels, sown broadcast on an acre of properly prepared land, should produce about 30 bushels of stelled peas, which the hogs will harvest, and, if not too ripe, peas, pods, vines and all will be eaten.

The value of the field pea is not known or appreciated as it should be, and as it is likely to be in the near future. They produce more flesh in proportion to fat than corn, and are fit to use at a season when especially needed. In England, where it is impossible to raise corn, farmers rely largely on peas to fatten their pork, while in Canada, where very fair corn is raised, they claim that more hog feed can be provided from an acre of peas than from an acre of corn. Peas are splendid forage for fowls also.

Peas do not succeed everywhere in California. They do best in the cool northern coast districts, where the heat is hardly sufficient to mature corn. Let us hear more about pigs and peas.

Starting Nursery Trees.

EDITORS PRESS:—Please inform a reader of your valuable paper, through the Press, of the best method of propagating and growing peaches, plums, apricots and cherries from the pits, also apple seed, in this climate. We always thought in the Middle States that they had to be frozen to make them sprout.—W. B. PHILLIPS, Wilmington, Los Angeles Co.

We had quite full letters on this subject in the RURAL during September, to which the reader is referred. We may say farther that the frost agency is not required. The main thing to do is to prevent the pits from drying out. This is done in several ways, as the letters to which we refer show. A writer for the Santa Cruz Sentinel says his method is as follows: Every year I treat peach pits in this way—smooth off the ground, spread the pits upon it and cover with sacks; over the sacks lay straw four or five inches thick. When the pits sprout plant in the nursery. Apple and pear seed I plant in boxes, and when they are grown about three inches high they are also set in the nursery about a foot apart. In three or four months they are large enough to bud.

Apricot Market.

EDITORS PRESS:—In support of my position on the apricot question, I refer you to Mr. Barbour's statement, at the Fruit Growers' Convention, that "London is glutted with California apricots." I think Mr. B. is better qualified to establish his statement than Mr. Coates to refute it. Mrs. Coates kindly sent me a sample of the "sugarless jam." It has a pronounced prune flavor, as distinguished from the tartness of plum jam. It was quite as sweet as desirable. Reminded me of what we used to call "German jam," but was not so tart, or so thoroughly cooked. Our children thought it splendid.—EDWARD BERWICK, Carmel.

Gum Trees for Fuel.

EDITORS PRESS:—If any of your readers think of planting gum trees for future fuel they probably never saw gum wood burn. As I write I am sitting in front of a fire of blue gum wood, burning on a hearth. There's a perpetual detonation and sizzling going on, as though there were a display of fireworks imminent. Missile coals, red hot, are bombarding our wire guard, occasionally making a bright trajectory and falling on the hearth rug, to the discomposure of feelings and olfactory nerves. Otherwise it burns like willow, and leaves a very white ash.—EDWARD BERWICK, Carmel, Nov. 24, 1882.

Pheasants.

EDITORS PRESS:—Some days since we saw in San Jose, at a poultry dealer's, some chickens that were said to be Golden Pheasants; others, that were called Poland Pheasants. We have examined all the poultry lists obtainable (they were not extensive), but can find no mention of these fowls. Will some one, through the Press, please tell us something about them?—E. L. HOPKINS, Saratoga, Cal.

Who will answer?

NEW PAPER IN LOS ANGELES COUNTY.—Edward A. Weed, formerly publisher and editor of the Lassen Advocate, and at the present time Secretary of the Pacific Coast Press Association, is about to begin the publication of the Ontario Fruit Grower, a weekly paper to be published at the new town of Ontario, on the Southern Pacific Railroad, between Cucamonga and Pomona. For the present the paper will be issued from the office of the Press and Horticulturalist at Riverside, but as soon as a building can be erected and material obtained an office will be established at Ontario.

A Law to Protect Genuine Butter.

We showed last week that the existing law against false butter is inadequate, and will be found inoperative, because there is no inducement to detectives to follow the adulterators in their devious paths. It has other faults. We give below a draft of a proposed law drawn by Hon. Judge J. A. Stanley, who is one of our leading lawyers, and a dairyman as well, and who thoroughly believes the genuine product can be protected by law. Let the provisions in the following law be carefully studied by all who have legal acumen, and let us know if there are any particulars in which it may be improved:

Proposed Law Against False Butter.

A Bill to be entitled "An Act for the protection of the dairy industries of this State, and the consumers of dairy productions."

The people of the State of California, represented in Senate and Assembly, do enact as follows:

SECTION 1. Every person who shall manufacture for sale, or who shall offer or expose for sale, any article or substance in semblance of butter, not the legitimate product of the dairy, and not made exclusively of milk or cream, but into which the oil or fat of animals not produced from milk enters as a component part, or into which melted butter, or any oil thereof, has been introduced to take the place of cream, shall distinctly stamp, brand or mark upon every tub, firkin, box or other package of such article or substance, the words "Oleo-Margarin—Imitation Butter," in plain letters, not less than one-fourth of one inch square each; and in case of retail sale of such article or substance in parcels, for otherwise, the seller shall, in all cases, deliver therewith to the purchaser a printed label bearing the plainly printed words, "Oleo-Margarin—Imitation Butter," the said words to be printed with type, each letter of which shall not be less than one-fourth of one inch square. And every sale of such article or substance not so stamped, branded, marked or labeled, is declared to be unlawful and a misdemeanor, and no action shall be maintained in any of the Courts of this State to recover upon any contract for the sale of any such article or substance not so stamped, branded, marked or labeled.

SEC. 2. Every person dealing, whether by wholesale or retail, in the article or substance, the sale of which is declared unlawful by Sec. 1, unless stamped, branded, marked or labeled as therein required; and every hotel or restaurant-keeper in whose hotel or restaurant such article or substance is used, shall continuously keep conspicuously posted up, in not less than three exposed positions in and about their respective places of business, a printed notice in the following words, viz: "Oleomargarine, or imitation butter, sold here," the said notice to be plainly printed, with letters not less than one-half of one inch square each.

SEC. 3. Every person who shall knowingly sell, or offer to sell, or have in his or her possession, with intent to sell, or for use in a hotel or restaurant kept by him or her, contrary to the provisions of this Act, any of the said article or substance required by the first section of this Act to be stamped, branded, marked or labeled as therein stated, not so stamped, branded, marked or labeled, or in case of the retail sale thereof, without delivery of the label required by Sec. 1 of this Act, or who shall fail to keep continuously and conspicuously posted in and about their respective places of business the printed notices required by Sec. 2 of this Act, shall, for each and every offense, forfeit to any person who will or may sue therefor, the sum of \$500 gold coin, to be recovered with costs, including a fee of \$100 for the attorney of the plaintiff in any Superior Court of this State.

SEC. 4. Every person who shall fail to keep posted in and about his or her respective places of business the notices required by Sec. 2 of this Act, shall be guilty of a misdemeanor.

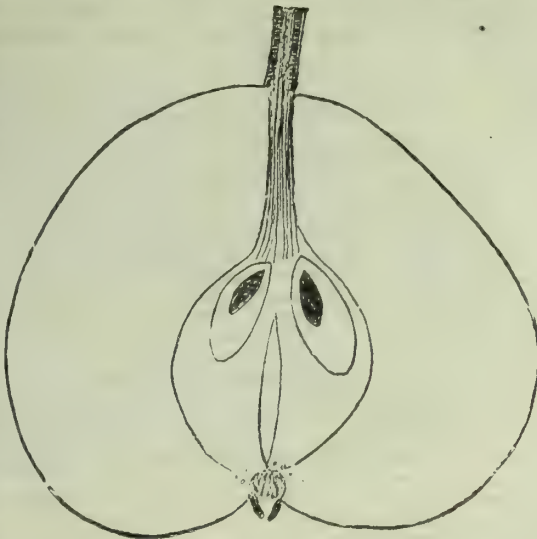
SEC. 5. Upon the trial of any indictment or information for any misdemeanor, under the provisions of this Act, or of any action brought to recover the forfeiture provided for by Sec. 3 of this Act, the sale, or offer, or exposure for sale, or for use in any hotel or restaurant of any article or substance required by Sec. 1 to be stamped, marked, stamped or labeled, not so marked, stamped, branded or labeled, shall be presumptive evidence of the knowledge of such persons of the character of such article or substance.

SEC. 6. Every person convicted of any misdemeanor under this Act shall be punished by a fine of not less than \$500 nor more than \$1,000, or by imprisonment in the county jail, not less than one month nor more than six months, or by both such fine and imprisonment.

MILLOMAISE.—We notice that our country exchanges are busily engaged in reproducing, from some Eastern authority, an article describing "millomaise" as something very new and desirable. Unless we are very much mistaken, the grain "millomaise" is nothing more nor less than what is extensively grown in this State and called white Egyptian corn or white dhoura corn. Our rural contemporaries often get quite excited over "new things," because of high sounding names, when in fact the new things are quite old and may be often growing within sight of their sanctum windows.

Two Promising Pears.

Many of our readers doubtless know that there is on the experimental grounds of the State University at Berkeley an orchard of selected fruits, a few trees of each kind, planted with a view to having standard varieties, true to name, for comparative test and for the identification of these varieties, if presented to the public under other names. Some of the trees are now coming into full bearing and Mr. W. G. Klee, the gardener in charge, is making sectional drawings with notes of characteristics, keeping the whole in a book, which will be valuable for reference. We propose to reproduce for our readers the drawings and descriptions of some of the most promising of these fruits, as they are no doubt quite new to the majority of growers. This week we have two pears, the Anne Agereau and the Andre Des-



THE PEAR, ANDRE DESPORTES.

portes, a French couple, if one judges by the names.

Of Anne Agereau Mr. Klee writes: Tree of very moderate growth, but of good habit. Specimen of fruit shown is average size and form, which is broadly oval. Skin thin, ground color yellow, dotted with smaller and larger specks of russet; sunny side with a bright red cheek. Stem rather thin at about one-fifth of the length of the fruit, inserted in an extremely shallow cavity. Calyx open, sepals distinct, basin shallow. Core large, seeds well developed, flesh firm, white fine-grained, somewhat gritty around the core; juicy, with pleasant sub-acid flavor. Ripens

ing's Fruit Trees of North America does not quite correspond with the specimens grown here.

We shall show more of these University fruits hereafter.

Resignation of Matthew Cooke.

Matthew Cooke, of Sacramento, who has been the head and shoulders of the anti-insect war in this State, has resigned the office of Chief Executive Horticultural Officer, which he has filled for the last 21 months, and to the duties of which he has applied himself with such zeal, devotion and success. We expected that Mr. Cooke was going to stay in the fight until the last codlin moth surrendered, and until the horde of invading pests was effectually checked



THE PEAR, ANNE AGEREAU.

in Berkeley about two weeks previous to the Bartlett. Being early and a fine looking fruit, of good flavor, it seems worth recommending for more extensive trial.

Of the pear Andre Desportes, Mr. Klee writes: Tree of fair growth, but of rather irregular, somewhat drooping habit. Specimen of fruit of average size and form, which is obcordate. Skin thick and rough; ground color a yellowish green, covered with russet and dark green and black dots. Stem very short, thick and fleshy, with hardly any cavity at its base. Calyx open, the lobes erect; basin large and regular, with the strong ridges of the side terminating around it. Core large; seeds perfect. Flesh white, exceedingly fine-grained, melting, juicy, with the peculiar flavor of the Bartlett (but finer, compared with the B. produced in the same orchard). A good bearer and a remarkably good keeper, having kept sometimes for more than a month in ripe condition. Picked the 31st of August, 1881, it was ripe the 22d of September. Picked in the middle of September, 1882, it ripened in the course of three weeks, some specimens keeping as late as the 30th of November. Owing to its remarkably fine keeping qualities for an early fall pear, it recommends itself for shipping. According to Downing, this pear originated with Andre Leray, in 1854. The description found in Down-

ing's Fruit Trees of North America does not quite correspond with the specimens grown here.

We shall show more of these University fruits hereafter.

Some little idea of the work which Mr. Cooke has done may be gained from the following extract from the *Record-Union*:

The correspondence of the office has reached such enormous proportions as to nearly occupy one man's time, that for the first 19 months of service the postage alone amounted to \$234; that his traveling expenses for the first year were \$1,336; that he had been obliged to furnish an office, to purchase books, to purchase instruments for making experiments—in short, that all the expenses of the office devolved on him with no resource but the salary and \$300 traveling expenses which are allowed by the State. He further says that the expenses have reached an average of \$2,400 per year. The salary of the office is \$150 per month.

We have remarked that Mr. Cooke does not stop his work and his interest in economic entomology because of his resignation. He has new in preparation an elementary book on entomology, which we trust will be introduced in the schools all over the State, and thus train up an army of observers which will be of inestimable value to the State.

Opportunities.

How few there are that make the best of their opportunities. It is a daily occurrence to hear the regretful musings of those about us that golden opportunities have escaped them. This age is prolific in opportunities. All about us we see the practical and experimental. Science, art and education have enlarged our possibilities, have opened new avenues of labor, thought and research to us, until now the most diversified talents can find a field in which specialties may be wrought out.

But the fact is patent to all that, as a people, we are not improving our surroundings and enlarging our field of labor and usefulness proportionately with the advance of the age in other directions. While thought has never been so rapid and suggestive, yet the average man considers far too little what certain lines of action will result in. There is too much of a tendency among those of this age to let well enough alone, and permit to-morrow to work out its own destiny. The consequence is that often opportunities are lost, and we are insensible to our loss until the future reveals to us what was within our reach. As a race we need to think more and not allow others to think for us.

Among the ancient customs, in the schools of which the old philosophers were the instructors, there was this one: Each evening before allowing sleep to bring on its unconsciousness and close for ever the departing day, each scholar was taught to think over the deeds done during the day. He was instructed to consider each deed in relation to all the others which he was instrumental in doing. It was a part of the instruction to contemplate how certain actions, had they been different, would have influenced the character and bettered the surroundings of the individual. It was, in fact, a system of thought and personal examination instilled into the minds of the young, as to how they might best improve their surroundings, and use, to the best advantage, their opportunities.

There are some people who never seem to advance. From a mercenary point of view, they may be money-making, but are not wealthy. In other words, they may possess great talents and latent force, but never know how to use it to the best advantage. The same amount of powder used to fire off a cannon, when closely confined in the bore, and accomplish the bombardment of a fort, or destruction of many men, if ignited while in a loose heap, unconfined and wanting direction, little destruction, if any, will result.

The things used in warfare need the intelligent direction of man to make them effective. So, too, our opportunities. If not improved, or misdirected action results, nothing will be accomplished. It is only when opportunities present themselves, and we thoughtfully use them by directing our efforts so that the powder, figuratively speaking, will send the ball home, and win for us success, that we can begin to see of what advantage it is to wisely improve our opportunities.

There are some men who never make a move but that they win. There is no chance about it. Life is much like a game of chess. Understanding how to move the figures or pieces the game can be won; but that player who does not understand the value of each move, who does not comprehend how important it is to consider the position of his antagonist, and know full well the advantage certain positions will give him, can never win. But it is not so with the man who does not consider the movements he makes in life, and know, when opportunities present themselves, how to improve them. The man who, after making a move in chess sees how he might have moved to a better advantage never makes a Paul Murphey in chess—such a man never made an excellent player. Just so in life, we must consider well our surroundings, try to improve them, make a move only when we know it to be the best, and we will succeed.

Some will doubtless say that it is impossible to consider life and living in this way. Circumstances may present themselves after a decision has than made that had we known would have changed our whole course. This we admit, but it still makes our argument the stronger in favor of considering honestly our opportunities before hand, in the best light and knowledge possible to attain. Much will be gained even if we do sometimes find, that if we had taken some other course, we might have been better off, by earnestly doing the best we can in present positions—always striving to rise above circumstances, and advance to the rank and calling that talents and native ability merit. These lessons are particularly applicable to the young. It would be well were the children of this age instructed to think for themselves, much as the scholastics of ancient times were. At all events young men and young women could often better their condition by a little more thought and a wise consideration of their opportunities.

A TOOTHED RAILWAY, after the method adopted for the ascent of Mount Washington, in New Hampshire, is to be constructed over the Brunig Pass, in Switzerland. The cost will be about one and a half million dollars.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 439.)

fruit. By so doing they will confer great benefit on the State of California, as it is said he that raises two blades of grass where only one grew is thereby a benefit to mankind. I am working for mankind, and I hope I will live a few more years, for I think I have very probably rendered some little service, for I see it is going to be the great fruit of California, and I advise gentlemen here not to purchase the apricot on the peach. A gentleman alongside of me some 26 years ago planted out a small apricot orchard, some on the apricot, most of them on the peach. Those that were budded on the peach are all dead. The apricot is living, and will for a hundred years. They grow immense. They are perfect tigers in size. They are almost as bad as the blue gums when they get to be about 25 or 30 years old. I do not say as to taking up the moisture, but they are great growers, and I think Mr. Jessup has done a great deal of good in bringing up that question.

Dr. Chapin: With regard to the last remarks of the gentleman, I think he omitted a most important matter—that of stating the character of the soil on which the stock on which the apricot was planted. We can say here in Santa Clara county that we can see peach stock upon which the apricot has been growing for a great many years, probably as long as the gentleman has been in the nursery business, and in the most thrifty, healthy and finest possible bearing condition, to-day yielding 800 lbs. of apricots to the tree. In another place, where the soil is of an entirely different character, the apricot can only be grown upon its own root, or upon plum stock, of which the myrobalan is the best, where the peach tree itself will not do well. It is, without any question, a certain matter that the best bearing trees we have here of the apricot are upon peach stock, and the bulk of the trees that are being planted out by orchardists in the Santa Clara valley, excepting the lower and wetter portions of it, are upon peach stock, and they do much better than apricot stock. With regard to the question of ornamental trees and shrubs, I would support most heartily the remarks made by my friend from Santa Clara county, Mr. Britton; he has stated a most important fact with relation to the bringing of these scale pests, and if the gentleman who has lately come here from the East to this country, and who condemns the resolutions here offered against the importation of Eastern fruit trees, will but stay here a few years and find out what we in Santa Clara county know, he will change his opinion materially and will heartily support those resolutions.

If you will allow me, I will read you a list of 20 different varieties of ornamental shrubs and trees, or flowers, that I got from Oak Hill cemetery two or three days since and brought into the exhibition hall for the inspection of the members of this convention. It will give you a faint idea of the list of ornamental trees, as well as deciduous and useful trees in our orchards and our gardens, which may be infested by the Scerpa Purchasi or cottony cushion scale. I have a pear tree, an apple tree, bridal wreath, a rose, dwarf-box, verberna, veronica, different acaciae, including the acacia mollissima, the acacia latifolia, the acacia fibrifunda and acacia linnaeae, all the varieties of acacia, the pittisporum tobria, the strawberry, the black locust, California laurel, cork elm, the English ivy, the magnolia grandiflora; of forest trees, the white oak, *Quercus Albae*, the dwarf flowering almond, the wild greasewood; among all the roses that are infested, the Banksia rose is alone free from the effects of this pest; the climbing vine, the clematis, the variegated sage, the English laurel; and in that cemetery the ground is literally covered with them in places as large as a person's hand, and you can take them up a shovelful at a time, and so you can't see the ground at all. They are on the ground, on the fences, around the lots in the cemetery, as Professor Dwinelle suggests, eating off the paint (laughter); but, at any rate, they are so thick on those fence posts that you cannot see the color of the wood, and it looks precisely as though a pot of red paint had been tipped over on to it. All of these can be seen in the exhibition hall. Now, with such a list as that, it does seem to me that if it is possible to secure legal enactments that are constitutional, we cannot do too much toward enforcing strictly the quarantine laws, which will prevent our getting any more pests than we have already here. Santa Clara is already supplied, and we do not want the curculio added to the already too long list.

Mr. Stoddard: I want to correct a mistake of the gentleman. I am not from the East. I have been in the State 14 years, and I have been interested in fruit raising ever since I have been here. I have owned a nursery five years, and am selling trees now, though I have never sold an irrigated tree.

Dr. Chapin: I now recognize the gentleman, who lives out in the western part of the valley. It is true he does own a nursery himself and a very large orchard.

Mr. Pitkin, of Santa Clara: I will occupy but a very little time of this convention, because what I have to say very probably will not be well received; but I do believe it is foolish for us to be wasting our time in speaking about legislation in regard to the importation of anything from the Eastern States, or from any other quarter. I do not believe we can make a constitutional law that will cover the point,

and I do not believe we will stop anyone from importing trees or anything of that kind from the East. I think the time of the convention could be more profitably spent in showing us how to get rid of what we have got. I would like to hear, too, about the kind of trees to plant and how to plant them out, and how we can get rid of the insects we have got instead of wasting the time, as I believe it will be found to be, in trying to advocate or effect any legislation that is to be taken.

Mr. Haines: I differ with the gentleman very materially. If a great number of years ago, when the scale was first found in San Jose we had proceeded to get rid of what we then had, and had put our foot down and said, "We will have no more here," you can see the material benefit it would have been to the people of this State, and probably to the gentleman himself. If such had been the fact, every cent of the money which the horticulturists of this State have spent in this direction would have been saved to them. While I do not intend to reply to the gentleman at any length, we are getting off of the real subject under discussion. The question before us, I believe, is the resolution which the gentleman from Marin has introduced, and the argument should necessarily be to the point upon that resolution; and after that resolution is disposed of, then we can discuss apricots upon peach stocks or upon peach stock—that comes within the province of the paper read by Mr. Jessup. But if you will pardon me one moment and allow me the same liberty which several other gentlemen have exercised, of not speaking directly to the point, I will state this, that while, as the gentleman said, it is a difficult thing to prevent the curculio coming from the East in those packages, there is one way that we can stop it and only one way—to educate public opinion. Now here I meet a dealer; I want some trees. Where am I going to get them? Shall I send to San Jose? No; they have got lots of scale there. Where will I go? Will I go somewhere else? Oh, no! they have got the San Jose scale up there in a small quantity, and I would not advise you to go there. What kind of trees do you want to plant? I want to plant peach trees, and pear trees and a variety which the curculio does not interfere with. Well, an Eastern dealer comes here and says: I will sell you those trees very cheap indeed. They are not acclimated, perhaps, but then, my friend, you may rest assured there is none of the scale bugs in them—none of the San Jose scale. Perhaps I say there is a curculio. But the curculio don't attack these varieties that you want to plant. How are you going to convince that individual he should plant the trees grown in California? In only one way have we started to convince him—by framing an Act and passing it through the Legislature in three or four days. So far as that matter is concerned, we are here for the purpose of revising that Act to eradicate these insects, so that we may save our orchards. We must so act that we can publicly say to those who desire to plant trees in California that our trees are free from insects, and it is of every advantage to you to purchase of us and reject the Eastern importation. That is the only way we can educate public opinion; we must first clean our orchards from every insect we can which devastates or preys upon them; and then, sir, the object is accomplished; that, sir, is the primal object of this convention, and I believe that this convention should have no uncertain sound upon the question of legislation for the protection of horticulture. I believe, sir, that it should have no uncertain sound in the passage of this resolution, by which we of this convention will pledge ourselves not to purchase in the Eastern market. Why, sir, if I could make \$100 or \$500 by purchasing a lot of trees in that market, I should consider that I was a very bad citizen indeed if I were to take advantage of that little pecuniary gain, and myself running the risk of thousands and perhaps millions in the way distant future which it would cost the people of this State if the curculio happened to be imported thereby. Now, while I have nothing more to say upon this subject, while I believe that is the only way by which we can educate public opinion, I believe that the demands for legislation, for the purpose of eradicating the pests that we have now, should speak plainly, and that they should not be overborne by other gentlemen who may perhaps have a greater ability to discuss the question. I hope that the members will show that they are in favor of such legislation for the purpose of getting rid of the ills which are bearing upon them.

Mr. Hatch: In relation to the words of the gentleman from Santa Clara, I would like to say, that while it is without doubt very beneficial to us to discuss the better methods of raising trees, yet it would be useless to do so if we cannot rid ourselves of those insects we have and protect ourselves from others which we may have.

J. M. Asher, of San Diego: I only wish to say a few words in regard to my experience in getting trees from the East. Some three years ago the Horticultural Department at Washington favored me with a few hundred coffee plants, and some other plants. On receiving them I examined them, and found three different kinds of scale insects. Now, who is to educate our people there at Washington? We supposed that they were put there to educate us. I only make this statement to show what we have got to contend with.

J. H. Wheeler, of San Francisco: If I may be excused for saying a few words, I think as Mr. Haines does. I think that he has struck the point exactly. I think the convention is

drifting a little from the subject; the question resolves itself as to whether we shall import trees or not, and, although speaking on the resolution that has been offered, it seems to me that the resolution will not affect all that the convention desires to; for I think we are unanimous in sentiment against the injuring of our fruit interest, and are all in favor of sanitary measures just as far as they concern our own interests. Our fruit growers have got their trees, or can get them, from our local nurseries. I think they are protected in those measures, therefore we do not want any importation of trees. Now, all the resolutions you may get up and all the resolutions that have been formulated and passed by conventions heretofore have not affected what we want, and it seems we must go to the law. We must then get a law which may be passed that will prohibit the importation of trees, or else will permit the importation after proper sanitary measures have been taken to remove the scale. There are those among us who believe we have got all the insects and injurious diseases here among our trees that can be imported, and there are some that say that we have got them all now. I don't believe so myself, for I see that there were 25,000 species of fungi in Missouri, and I don't think we have got them all here, although we may have a good many; but if other States have them in the same proportion, I think we have a good deal to expect. Now the law is the one thing that can be enacted here, and it seems to me that the point at issue is whether we can disinfect our trees that come from the East or whether we can absolutely prohibit their importation. We have the best authority among us that trees can be disinfected, if done properly. Then, to protect the interests of those who are importing trees, we might pass a law which would require all trees to be disinfected at certain points by the proper authority. This must be rigidly enforced; it must be a crime to trespass on that law. We may have points at which carloads of trees are disinfected, but there are others that come by mail and by express, and unless the difficulty in removing the pests is overcome in an easy manner we will not be able to enforce the law.

Therefore I think, to come down to the point, what we want to talk about is whether we want to absolutely prohibit the importation, or whether we shall be able to disinfect.

Mr. Pitkin: I came from the East, and I only have been here five years, but I believe thoroughly that it is practically an impossibility to import the curculio on trees from the East—that is to say, unless they are imported at a time when there is none imported, in the summer. You cannot get the curculio here passing through where the thermometer is 40 degrees below zero. If this curculio is fetched from the East, it will not be brought on trees—it will be brought in flower pots, or on plants of a small variety, which come through the root, but it can't go through an atmosphere where it is 40 degrees below zero, and that is the reason why it is kept in the East.

Prof. Dwinelle: This convention is not the Supreme Court of the United States, nor of the State of California, nor even the Superior Court, nor the Justice's Court, but it is a court whose opinion is worth something—it is the opinion of the fruit growers of California; and whatever we wish to have done as to legal enactments, we have got to have it framed by our representatives. We want to tell our representatives what to make out, and we have got to fight it in court, and when we come to the lawyers' fees we have got to put our hands into our pockets and pay them, as we have been doing this summer, having our trouble for our pains, and by and by we may get some good out of all this. Now there have been propositions made here which, I will not characterize as they strike me, because the gentleman would think I was insulting his intelligence, and so forth; but when the gentleman says that the curculio cannot be imported on trees to this State I do not think that he has read much on the subject, or has not had as much experience with the insect as he might have had. We have a southern route now where the mercury is not 40° below zero, and besides that the trees are not always detained at the coldest point. The curculio lives in the winter as a very tough little beetle, which many would not know from a little bit of fine adobe. If we have imported the curculio during the last 30 years he has found an uncongenial climate, and I hope that that is the case. I noticed a statement in an Ohio report that the curculio, the grub, when it leaves the fruit and goes into the ground, must have a certain amount of moisture there or it can't complete its transformation; and it has been observed in Ohio that after a very dry year that there are very few curculio. Now, I hope that our very dry year, which comes every year, according to Eastern ideas, has kept the curculio away, but, gentlemen, I do not know it, and we want to be certain about these things as far as may be. Now, as to the inspection of the tree, and the statement that it has no insects on it, I wouldn't give a snap of my finger for any man's opinion who was not a good entomologist and had not a good glass. I do not know the wording of the resolution now before us, but I am afraid it is not broad enough. Now, our worst pests to-day, part of them come from the East, and part I don't know where they come from. John Weil, of Napa, says he had perfectly healthy peach trees until he bought peach trees in the town in which I was born, Rochester, and afterwards he had

plenty of the woolly aphid, and we know the red scale came from Australia, and the cottony scale also from Australia. California, and San Jose particularly, has been credited with the scale called the San Jose scale. I have heard something since I came to San Jose which might be said in vindication perhaps of San Jose, from which we may suspect that if we follow that right back, we will find it is Australian too. I am not sure about that; it is merely a scent I am going to follow up. I don't want San Jose to have the credit of this glorious institution. (Laughter.) I am afraid Oregon will feel slighted if I don't say a word for Oregon. They have been getting up a terrible hubbub with regard to insects, and a-going to do as we are here in California, making a fuss. They say, "Why, these things come from California; we have been buying California fruit." Let me tell you, gentlemen that are buying stock from Oregon, because a person traveling through Oregon and Washington Territory yesterday told me that the orchards there looked as though they had been burnt, and what was it? It was the aphid of the apple tree, and we have got enough of them without sending to Oregon; and I do not know but what we got them from Oregon, and I know that they are willing to let us have them very cheap. Now, the gentleman states a case where a party buys apples and pears which are not subject to the curculio—curculio, it is a very loose name; it is technically among most people applied to the plum weevil. Now, let me tell you that there is a curculio for the apple; there is a curculio for this and that and the other. There are thousands of species. Which do you want? I suppose you want the one that will go for the particular kind of fruit you are raising. I do not. As I said yesterday, it is impossible to fight the San Jose scale alone.

Mr. Hasman, of Napa: Mr. President, I am but a short time in this State, but I come with the intention of making it my home, and to remain here, and of course I want to see it kept as clean of insects as it can possibly be. I have listened very patiently to the discussion here, and a few points in it have struck me as impolitic. While I believe in protection from these insects, I cannot believe in total prohibition, for we can't have any law to forbid the importation of fruit trees or shrubs to plant; besides, I do not want to have this beautiful golden State encircled by a Chinese wall of prejudice, so that I can't get a good thing if I see it elsewhere; but understand me that I believe in thorough disinfection; and I believe, if we enforce strict laws with regard to disinfection, we can accomplish all we propose to do. We can get no law to prohibit the shipment of foreign trees here nor the shipment from other sections into this State. I don't think we can do it, and I have spent a few days of my life studying the question of possibilities and impossibilities, and when I see that a thing is impossible I give up and don't attempt it, and I think prohibition is impossible. Now, there has been something said about the curculio. I come from a section where the curculio is abundant everywhere. We get no clean apples nor plums, nor almost any other kind of fruit without a sting from that pernicious little insect, the curculio, and God knows I don't want it here. I have seen enough of it. But, gentlemen, if you take into account the simple fact that you have imported trees and plants now for the last 30 years, and haven't got the curculio yet, it seems to me that either it can't be shipped here because it lives in the ground, or that it can't exist here, and I think you need have no great uneasiness about the curculio. If you have not got it in all these shipments, I do not think you will ever get it.

Mr. Britton: I rise to offer an amendment to the resolution. I move that the resolution be amended so as to include the importation of foreign plants and shrubs, because I think that the discussion has perfectly shown that those enemies do not come alone on the fruit trees, which the resolution covers.

Mr. Holt accepted the amendment to the original resolution, and as so amended it is here adopted.

The President: The next order is the paper of Dr. S. F. Chapin on the codlin moth.

The Codlin Moth and its Suppression.

The actual work of the orchard chiefly determines the question of profit or loss to the horticulturist. Finding my orchard infested with the codlin moth, I determined to make such efforts for its suppression as seemed to me possible to carry forward. With the purpose of presenting the facts obtained from those investigations and the work done, and not intending to give any history or description of this pest, which has been so ably done already by Matthew Cooke and others, I trust I may, with your approbation, detail my season's experience. At the end of the last season I found in my orchard about 30 apples infested with codlin moth larvae. Of these I succeeded in finding and killing about one-half. The others had already escaped from the fruit.

As I never allowed any return boxes to come into my orchard, I knew that these larvae could not have been produced by moths introduced in that manner.

Some orchards near me have been for more than one season infested, and I have naturally expected that sooner or later some few moths would gain entrance, and I have this serious fight to encounter. The nearest infested orchard is about 200 yards distant from my own, and another about one-half mile away.

(CONTINUED ON PAGE 448.)

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

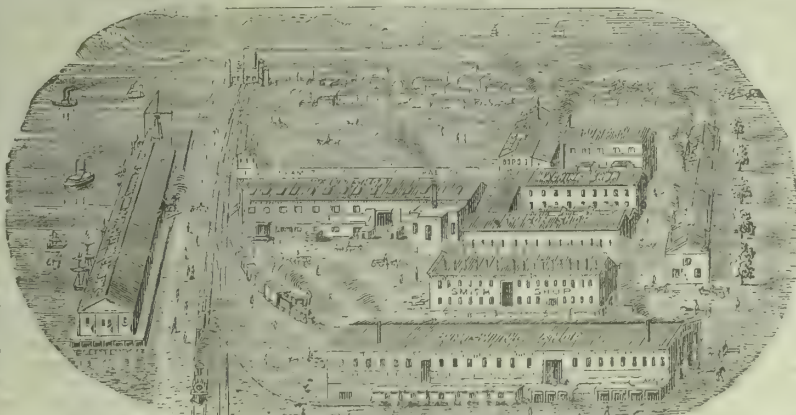
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Fresno Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

Agricultural works on the Coast.



The Largest and Most Complete

THE BUILDINGS are over 1,600 ft. in length, and have a floor surface of 10,000 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 10,000 sq. ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and cost. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium.

WE MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Hill's Improved Horse Powers. Hill's Improved Granger Gang. Hill's Side Hill Gang. Hill's Improved Horse Powers. Hill's Improved Single Sod and Tule Plow. Hill's Double Deep Tiller. Hill's Improved Headers. Hill's Improved Grading Plow. Fresno Ditching and Grading Plow. Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento

J. A. BILZ'S CARRIAGE MANUFACTORY,

Machine and Blacksmith Shop,

PLEASANTON, - - - California.



I present above an exact representation of my new Excelsior two-wheeled Phaeton, which is the result of long experiment, and with which I am willing to challenge competition by any other two-wheeled vehicle made. I guarantee that the chucking motion is entirely removed, and that for ease of riding, my Phaeton is equal to any Buggy. The shafts are hung loosely in a rubber box, by which means the jar is completely removed from the axle and the horse's back. The body is also hung loosely on a round axle, and is balanced in front by two coil springs with eccentricity, which prevents the "jogging motion" that would otherwise be imparted by the horse. It is, therefore, as easy for the horse as for the rider.

The Excelsior Phaeton

Is made in four different styles, ranging in price from \$90 to \$160. I also keep a large stock of Family Carriages, Open and Top Buggies, Spring Wagons and all kinds of Farming Implements, all of my own manufacture. I also manufacture my well-known VINEYARD and ORCHARD PLOW, which can be run close to trees without danger by the whiffletree. I am prepared to do all kinds of machine work.

N. B.—Parties from abroad who want to get the best article made, at reasonable prices, should address me for further information and reference.

Patent Right for Sale in Counties and States Abroad.

J. A. BILZ.

HARNESS, SADDLES,

LEATHER & SADDLERY

Goods,

WHOLESALE AND RETAIL.

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$60 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc. W. DAVIS, 410 Market Street.

WAKELEE'S

PATENT

AND

Squirrel



Gopher

EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

WAKELEE & CO., Chemists,

Occidental Hotel, S. F.

WHAT WILL THE WEATHER BE TO-MORROW

Pool's Signal Service Barometer

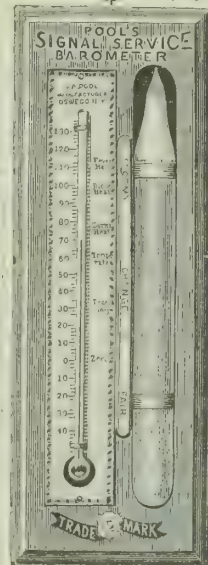
OR STORM GLASS AND THERMOMETER COMBINED,

WILL TELL YOU!

It will detect and indicate correctly any change in the weather 12 to 48 hours in advance. It will tell what kind of storm is approaching, and from what direction—invaluable to navigators. Farmers can plan their work according to its predictions. Saves 50 times its cost in a single season. Has an accurate thermometer attached. When alone is worth the price of the combination. This great WEATHER INDICATOR is endorsed by the most eminent Physicians, Professors and Scientific men of the day to be the BEST IN THE WORLD! The Thermometer and Barometer are put in a nicely finished walnut frame, with silver plated trimmings, etc., making it a beautiful as well as useful ornament. We will send you a sample one, delivered free, to your place, in good order, on receipt of \$1, or six for \$1. Agents are making from \$5 to \$20 daily selling them. A treat will come to you. Order at once. It sells at sight! Just the thing to sell to farmers, merchants, etc. Invaluable to everybody. U. S. Postage stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and terms. Address all orders to OSWEGO THERMOMETER WORKS, (Largest establishment of the kind in the world) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business house in Oswego, N. Y. Write your Post Office, County and State plainly, and remit by money-order, draft on New York, or registered letter, at our risk.

This will make a Beautiful and Very Useful Present. READ WHAT THE PUBLIC SAY ABOUT IT. I find Pool's Barometer works as well as one that cost fifty dollars. You can rely on it every time. Geo. B. Parsons, M. C. R. O. Office, Detroit, Mich. Barometer received in good order, and must say that the instrument gives perfect satisfaction in every respect. It is neatly made and wonderfully cheap at two dollars. Geo. B. Parsons, M. C. R. O. Office, Detroit, Mich. Pool's Barometer has already saved me many times its cost, in forecasting the weather. It is a wonderful curiosity and works to perfection. F. J. Robertson, Milwaukee, Wis. BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:



J. A. Pool TRADE MARK. Every instrument warranted Perfect and Reliable. Size 9 1/4 inches long, 3 1/4 wide. If not satisfied on receiving the instrument, return it at once and we will refund your money. Please state where you saw our advertisement.

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50% to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Crabbe, C. Grozinger, T. L. Grigsby, D. Emerson, M. M. Estee, Prof. Husman, Berringer Bros., and others, Napa county. L. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dresel, James Shaw and others, Sonoma county. R. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wykoff, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

P. K. STOCKTON,

St. Helena, Napa County,

CALIFORNIA.

Grangers' Union of San Joaquin Valley,

Importers and Dealers in

AGRICULTURAL IMPLEMENTS.



GANG PLOWS, SULKY PLOWS, SINGLE OR WALKING PLOWS. THE BEST CHILLED PLOW IN USE.

Hollow Toothed Harrows, Cultivators, Barbed Wire, Bailing Wire.

Wagons! Wagons! Wagons! Buggies! Buggies!

Coal, Iron and Steel. Builders' Hardware.

Write or Call and see us before Purchasing. Address all Communications,

GRANGERS' UNION,

280 and 282 Main Street,

STOCKTON.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 446.)

The prevailing winds in the moth season would bring the moths in my direction, although the air in the nights is generally still.

This year apples did not show the effects of the presence of the larvæ until very late, and from the press of work, they were not as closely looked for as should have been done, therefore it was the 1st of July before we became aware of damage done.

I then commenced on the 10th of July a systematic examination of all fruit upon the apple and pear trees by means of a ladder, so that every specimen of infested fruit could be discovered and picked from the tree. This was done at intervals through the season, as shown in the annexed table.

Also bands were carefully placed upon 800 trees. These were removed and examined closely every week, when all larvæ found were counted and killed. Furthermore the fruit which had fallen upon the ground was at intervals gathered up for examination and destruction.

These three methods were pursued with the closest possible care, and all infested fruit I have personally cut open and examined for the presence of the larvæ. I have done this to the end of the season, and counted the larvæ, so that I am able to give you the number of all larvæ that could be discovered in the orchard for the entire year.

So closely was this inspection made that at the time of gathering the fruit the men were unable to find many apples that were infested; and indeed, as near as could be ascertained from them by inquiry, I could only gather that about 200 were affected. As, however, I could not examine myself the fruit picked by them, it may be supposed that more than that number were gathered and not accounted for. Also among some of the windfalls that were gathered up and carried away for use, and which I could not inspect, some infested fruit was overlooked. These two references will explain an apparent discrepancy when it is seen from the table that about 600 more larvæ were found and counted than infested apples were discovered.

The different dates are here given in full, and the number of larvæ upon each examination, as well as the infested fruit picked and the cost of doing this work. The table is placed before you in this manner, as some interesting facts may be noted which could not well be seen in any other way.

Apples and pears are here considered together.

DATE.	Infested fruit picked from trees.	Infested fruit on ground.	Infested fruit at gathering.	Larvæ found in fruit on ground.	Larvæ found in fruit at gathering.	Larvæ found in fruit on trees.	Larvæ found in fruit at gathering.	Cost of picking infested fruit from trees.	Cost of picking infested fruit from ground.	Cost of picking infested fruit at gathering.	Cost of picking infested fruit from trees.	Cost of picking infested fruit from ground.	Cost of picking infested fruit at gathering.
July 19th, 12 h.	210	60	145	145	145	145	145	\$1.50					
July 18th.	70	48	118	118	118	118	118	3.00					
July 20th, 21st.	70	48	118	118	118	118	118	.60					
July 24th.	40	35	75	75	75	75	75	.60					
Aug. 7th, 9th.	119	35	154	154	154	154	154	3.50					
Aug. 12th.	100	63	163	163	163	163	163	2.60					
Aug. 16th, 21st.	180	130	310	310	310	310	310	4.50					
Aug. 28th, 30th.	481	308	789	789	789	789	789	5.30					
Sept. 6 h, 9h.	379	164	543	543	543	543	543	3.80					
Sept. 15th, 16th.	240	31	271	271	271	271	271	3.00					
Sept. 24th.	280	31	311	311	311	311	311	3.00					
Sep. 26 h, 27th.	280	31	311	311	311	311	311	.60					
Sept. 30th.	280	31	311	311	311	311	311	.60					
Oct. 14th.	280	31	311	311	311	311	311	.60					
Oct. 21st.	280	31	311	311	311	311	311	.60					
Oct. 28 h.	280	31	311	311	311	311	311	1.00					
Sept. 4th.	208	88	296	296	296	296	296	.50					
Sept. 9th.	88	4	92	92	92	92	92	.50					
Sept. 15th.	60	4	64	64	64	64	64	.50					
Sept. 19th.	126	34	160	160	160	160	160	1.00					
Sept. 26th, 27th.	36	4	40	40	40	40	40	.50					
Oct. 10 h.	262	3	265	265	265	265	265	.75					
Oct. 21st.	255	3	258	258	258	258	258	.75					
Sept. 13th.	44	26	70	70	70	70	70	.25					
Oct. 10 h.	150	28	178	178	178	178	178	.25					
	1829	1030	2859	2859	2859	2859	2859	\$36.00					

Total infested fruit discovered, 3,659; Total larvæ found, 3,659; Total cost, \$36.00.

Knowing that in such a presentation of a subject exact statements and figures are necessary, I give you the production of the trees, and estimate as closely as possible the proportion of infested fruit; also in boxes, so as to arrive at the percentage of loss. The trees being mostly Newtown pippin apples, and six years old, of course could not furnish a very large amount of fruit.

Including with the choice picked fruit early and late pears and apples, all windfalls and infested fruit, there was a yield of 825 boxes. The 3,660 larvæ should represent, as nearly as can be estimated, 24½ boxes. The percentage of infested fruit is therefore found to be .0297. Some notes in connection with this investigation may be of value.

So carefully were the bands attended to that during the entire season but one larvæ was found above the bands. In that case the band was accidentally left very low, so that the fingers could be placed between it and the tree, thus offering no resistance to the upward progress of the worm; also, but two empty pupa cases were found during examination of bands, one being found in the crotch of a tree and the other on a trunk below the band. In all the apples examined, and in which were found larvæ, but 24 produced two larvæ. In one only were three larvæ. These were found August 21st. In all of the cases, except one in which two larvæ were found, the time was from

August 19th to the 30th. In but two apples were two larvæ found in the same cavity.

At every examination the larvæ found were at all stages of growth—some ready to leave the fruit, some partly grown, and some just hatched and commencing their work, being hardly perceptible, though from Sept. 15th to Oct. 10th the larvæ found were, most of them, well grown. Here a very important fact was noted: On Oct. 10th from the fruit examined 28 larvæ were taken. Of these 28 but 6 approached maturity. There were four that were less than one-eighth of an inch long and six between one-eighth and one-fourth of an inch in length. This shows that the moth will fly and deposit her eggs up to the very last moment of the season, it being right in the midst of gathering the fruit. The largest number of larvæ obtained at one time from any band was 24. A careful comparison of dates and numbers found, as set forth in the table, will show increase and diminution at certain periods, and will also suggest more than one thought in connection with this most interesting subject. It was noted that after the fruit was partly grown, about one-half of the larvæ entered the fruit from the side. In many cases the larvæ escaped from the fruit by the passage it made in entering, as only one opening was found, that going to the core. A question is asked by the *San Francisco Bulletin* of Oct. 18, 1882, whether one codlin moth larvæ destroys more than one apple? This entire season I have watched that point carefully, and can answer it: I think positively, as does Mr. W. H. Jessup, of Haywards, in reply on Oct. 19th. In fact, I have met this question in the statements made concerning the larvæ found in infested apples. One egg is deposited on an individual apple or pear, that egg hatching into a worm, which is intended to feed upon the single apple or pear, as the case may be, to which it is attached. It proceeds to mature in that single specimen, and if undisturbed does not leave the fruit until the time arrives to go into cocoon. Sometimes the larvæ is destroyed before reaching the seed capsules, as I have found in occasional apples holes made by the worm not extending to the center of the fruit. In the extremely few instances where two larvæ were found in one apple, it was evident that the explanation rested in the fact that two eggs were deposited in the space between two apples where touching while hanging upon the tree and by accident the two larvæ entering the same apple. Another fact in proof of this is that in these investigations the number of larvæ found fully equaled the number of apples that were discovered affected. Had it been the habit of the larvæ to migrate from apple to apple, the fruit affected would have many times exceeded the number of larvæ.

Climatic influences I think control to a great degree the rapidity with which the codlin moth goes through its various changes. In the warm climate of the Sacramento valley Mr. Matthew Cooke found that the moth would emerge in eight days from the larvæ going into the cocoon. Mr. A. T. Hatch, in Suisun valley, informed me that in one case where the bands had been overlooked, and an interval had elapsed of 14 days between examinations, he had found an empty pupa case. Mr. Felix Gillet, of Nevada county, in his report to the Board of State Horticultural Commissioners, stated that 15 days was the time required for the mature larvæ to transform into the moth. In this cooler summer climate of Santa Clara county I have found a longer time than any of the above needed for this change from larvæ to moth. July 10th I placed a full-grown larvæ, which had just left the apple, one-half inch in length and three-thirty-seconds inch diameter, in a glass jar. It climbed to the top, remained quiet one day, commenced spinning its cocoon, in which it remained and in the pupa case, until the 29th, when, as my little girl was looking at it at 6 P. M., the moth burst forth. This will be seen to require 19 days. Also on August 15th a codlin moth larvæ, found in an early Crawford peach by one of my children, was placed in the jar with the peach. On the 17th it left the peach, commenced its cocoon and the moth emerged Sept 5th, requiring again 19 days. Owing to our rainless summers, we are debarred from the use of Parisgreen and other poisons applied in solution by spraying upon the trees and fruits as practiced in the Eastern States.

I have here two codlin moths that have emerged from the larval condition, as stated; one is from the apple and the other is from the peach. It is the true codlin moth, if any of you wish to see the moth itself. I will state here that it is almost an impossibility for the orchardist to find the codlin moth in the orchard; this moth does not come into houses, it does not come to lights and fires to be destroyed. As I have heard many orchardists say, we see them in clouds flying about, and we destroy millions of them. I will say that you cannot see the codlin moth, as its habits are so peculiar that it will not be attracted by lights and fires when intent upon depositing its eggs. Therefore, it seems that at present our efforts must chiefly be directed towards suppression of the larvæ. The method of using the bands is of considerable importance. The plan adopted, and which I think is best, is to cut old grain sacks up into strips about six or eight inches wide. These apply to the trunk of the tree where it is smoothest and most even, by folding with the under edge of the band a little higher than the outer; put it around the tree but once, with the folded side uppermost, allowing it to lap two or three inches, and securing it in place by putting in a tack on the upper edge, which has been

drawn tight to the tree, but leaving the lower portion loose and open. The best tack to use may seem an unimportant matter here, yet I have found it a great convenience to have just the right one, which is the 12 ounce, large head, oval tinned carpet tack. These are easily used, removed and replaced, and the same tacks have been in constant use through the season, and are now saved to be again used next year. You will here see, by way of illustration, the band applied. I have been thus minute in explanation, as, upon the proper application of the band I think depends much of the success obtained in trapping the larvæ. With this simple measure attended to, I know of no better trap, and do not desire a more successful means of capturing the escaped larvæ.

There is no patent upon this and the cost is trivial. I have also noticed that these bands I have with me caught an immense number of eggs of the red spider, thus helping very materially to lessen that pest. The infested fruit I have been careful to pick in iron or tin pails, so as not to afford a hiding place for escaped larvæ, which will surely find plenty of opportunities in boxes or baskets. You can here see by the specimens shown with what wonderful instinct the propagation of the species is provided for. Having sold my apples this season upon the trees, I made it a condition that only new and unused boxes should be brought on the premises, and also that I should myself attend to the codlin moth as I thought best, picking off infested fruit and otherwise. These conditions I regard as absolutely essential to success in suppressing the moth. Every orchardist should, in all contracts to sell his fruit as it hangs in the orchard, impose these three conditions, viz: that only new and unused boxes should be brought on the premises; that the orchardist himself should pick all infested fruit from the trees, and that he should have all windfalls to gather up and destroy at regular intervals. If these stipulations are universally adopted, and then the necessary work done in fighting the codlin larvæ, a long step toward ridding ourselves of the pest will be taken. Wherever any old boxes are used, and also new ones coming from any places where codlin larvæ have an opportunity to ensconce themselves, these must be disinfected so as to destroy the worm. We cannot employ too many methods of extermination. Boxes and packages should be disinfected in the large distributing centers, arranged for by legal enactment, and also by the orchardist himself immediately upon being brought to his premises.

Every means in our power must be brought into use to exterminate this pest. The infested fruit picked from the trees and that gathered from the ground should be boiled at once, and fed to hogs or other stock. All this work of inspecting and picking fruit, gathering from the ground and examination of bands should be done once every week, from the very beginning of the season until one week after all apples and pears are taken from the trees.

The necessity for this will, I think, be seen from the examination of the table presented Oct. 28th, where the finding of one larvæ was the result of the last examination. Since writing the early part of this paper, I have, on Nov. 8th and 9th made a careful examination of all apple and pear trees in bearing in my orchard, to discover, if possible, all hidden larvæ in crevices and crotches, and under loose bark. The result has been the discovery of 24 larvæ. Ten of these were in crotches of trees, eight were on the trunk about where the bands were placed, and six were on the trunk below where the bands had been. All 24 these were hidden under bark. None were in the pupa case, but all in a cocoon, darker in color and very much tougher than the previous cocoons have been. These were evidently prepared for winter.

At this time were also found four empty pupa cases in crotches of trees.

It is here the importance of thoroughly cleansing the tree is shown. This can only be done by removing loose and partly detached bark, and washing with some compound obnoxious to the moth and larvæ.

For this purpose the best applications are the concentrated lye in winter, or the whale oil soap and sulphur mixture at any time of the year. It is well to call the attention of orchardists to the practice of piling up apples around the trees, the trunk being the center of the cone. No method could be devised that would more surely stock the orchard with codlin larvæ. I will not speak of the losses from the codlin moth to the disparagement of any who have made efforts to suppress it, but there are too many who have let the moth have full sway.

It may be well to consider the enormous losses in that way sustained. Where it has prevailed the loss has been usually as great as 75%. Many have told me their loss has been as high as that, and about as many have said their loss was 90%. The best reports have been 50%, where a close inspection of bands has not been made. In one orchard it required 13 men to pick in one day 23 boxes of sound apples from among the mass of infested ones. That indicated a loss of more than 90%. In one place that I know of a band was taken that was put on to stay, being nailed down firmly. In that band on a space of six inches square were counted 500 larvæ, all there at that time; and the party told me that there were then on that band more than 1000 worms. This will explain the rapid increase of the moth, and the consequent excessive loss from its ravages. The proximity of orchards decidedly effects the percentage of loss; in other words, where two in-

festated orchards are close together, the owner of one trying to suppress the moth, the owner of the other doing nothing, or next to that, the isolated orchard has a far greater chance to escape, or if infested is far more amenable to treatment. This shows, in a most unmistakable manner, the necessity for some means of general control of orchards, so that those who through ignorance or wilful neglect do nothing to help themselves, and more than that, actually do all they can to ruin their neighbors, shall be compelled to make intelligent warfare against this terrible enemy. The remark has been made to me more than once that it is impossible to do this work in an old orchard where large trees are to be treated; that it is admitted it may be done in young orchards, but not in old. Will not many who say this admit that they have not really tried to do this work? If apples can be picked at harvest, can they not be picked at any previous time? If the work can be done by a few, can it not be done by the many? Let us not allow our trees to get beyond our reach. Until within the past two weeks, and since all my season's work on this matter was finished, I had not known of any effort on the part of others to try this combination of means for the suppression of the moth's ravages. I am glad to be able to present some corroborative testimony. On the 30th of October I visited an acquaintance who is a large grower of fruit, and who told me he had great success in suppressing the codlin moth. I asked him what particular course he pursued, and found that he had picked the infested fruit from the trees five times over a part of his orchard and three times over the remainder. To this, with the close attention he had given the bands and the gathering of the fruit from the ground, he attributed his small loss of three per cent at gathering, and not more than 10% for all the infested fruit. This was the result in an orchard yielding this season 12,000 boxes of clean marketable apples and pears, and where the trees are 16 years old. The codlin moth had been in his orchard for three years. The inspecting and picking of fruit was done at intervals from the first part of July. The trees had been well cleaned and also washed at different times in the winter season. One method of taking the infested fruit from the trees is by a hook-shaped knife with double edge, and another a blunt hook. Specimens of these are shown in the exhibition room. However, while this may save the trouble of carrying about a ladder, yet I think better and surer work can be done by going to the top of a ladder, where close inspection can be made, and the fruit picked by hand. One other orchardist I have since seen, Nov. 1st, who has 600 apple trees 20 and 22 years old. His crop this season is 5,000 boxes of sound apples and 500 boxes of infested fruit gathered at harvest. He had picked from the trees infested fruit twice in the season previous to the final gathering. Once, the first week in July, and again in August. He then gathered 75 boxes which, if grown, would make 300 boxes. Therefore, his loss was about 16 per cent. He examined his bands twice a week, as a rule. The question "Will it pay to do this work?" I unhesitatingly answer in the affirmative.

Discussion.

Mr. Cooke: I suppose that it is well known that it has taken the Doctor a great deal of time to make up that report, and it certainly is invaluable to the fruit growers of California. Just one matter in reference to the codlin moth: There is a small place in Marin of 250 acres, whence there are 31,000 trees subject to the codlin moth—the Novato ranch. In June, 1881, I visited the ranch, and, greatly to the dismay of Mr. De Long, I found the pupa of the codlin moth. When I told him he said, "No, sir, we have none here." I replied, "Mr. De Long, there it is on this tree." Now, I would like to call for his experience since June, 1881.

Mr. DeLong: All I can say is that I did not know we had one in the year 1879; we had none in the year 1880; we had none in the year 1881 (ill he discovered, as he says, one in the chrysalis form. That year we gathered our fruit and carried it into the apple house, and I saw very little of it on the fruit. The apples did not seem to be much affected, but the suggestion was made to me by Mr. Cooke that I had better sold the boxes. I asked him whether they had gotten out of these boxes into the cracks of the floor into the building, and how it would do if I should close this building up, by putting mosquito netting over the windows, so that there would be no possible chance for the moths to get out. He agreed with me that that would be a good idea, and I did so; having one that I thought I would like to know the result of it. I nailed all the doors up so that it would be perfectly impossible for anything to get in and out without my knowing it, and I locked the door, and took one of my men and put him in possession of the key. He commenced about the middle of April, finding some of the moths and to kill them, and up to the 27th of May kept just running account; after that he kept a daily account, and he actually killed 15,627 moths up to about the 27th of October. As the account is called for I will read it; it will give an idea. As the days grew longer and warmer they increased; as they grew colder they diminished. This is the account; these are the moths themselves, not the pupæ.

(TO BE CONTINUED.)

THE New York Board of Aldermen ask the Legislature to repeal the Sunday law.

MYER'S IMPROVED GANG PLOW.

The only Plow that ever Received the \$100 PREMIUM at the State Fair.

Simplest and Most Effective Plow in the World!

The Lifting Gear and Land Gauge need only be seen to be appreciated.

The Adjustable Spindles and Boxes are a new feature, and when worn can be replaced without purchasing new wheels or arms.

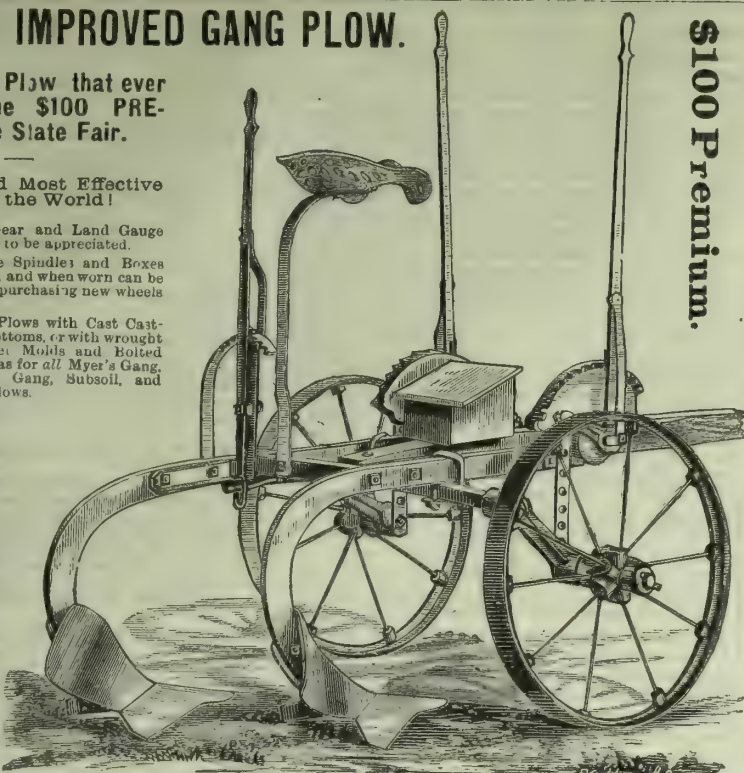
We have these Plows with Cast Cast-Steel Share Bottoms, or with wrought extra heavy steel Molds and Bolted Shares; also Extras for all Myer's Gang, Single, Sidehill, Gang, Subsoil, and Vineyard Gang Plows.

We will have, in time for summer fallowing, Myer's Gangs with the celebrated Collins Cast Cast-Steel and Bolted Shares, with extra high Mouldboard for Deep Plowing.

In ordering Extras be sure to give number of Plow.

AGENTS SOLICITED AND LIBERAL TERMS GIVEN.

Fifth Street Cars pass the Works every five minutes.



\$100 Premium.

RICE'S ENGINE, BOILER AND FLOW WORKS,
Manufacturer and Sole Agent, Nos. 52, 54, 56, 58 & 60 Bluxome St., Bet. Fifth & Sixth, near U. P. R. Depot.

S. P. BAILEY.

O. E. BADGLEY.

JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - - - Stockton, Cal.

IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,

Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Belle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.

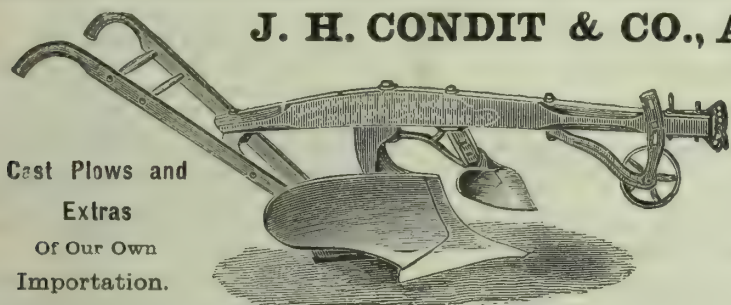
We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow.

In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.

J. H. CONDIT & CO., Agents

-FOR-



OLIVER CHILLED PLOWS.

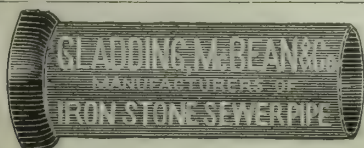
Cast Plows and Extras Of Our Own Importation.

Steel Plows, Reversible Molds, Eureka Gangs, Seed Sowers, Harrows,

Fence Wire, Wheelbarrows, Hardware and Ship Chandlery.

Rubber and Leather Belting. Rubber and Hemp Packing. Tents, Hose and Twine. Garden, Flower and Field Seeds—Alfalfa

J. H. CONDIT & CO, Hunter St., near Main, Stockton



For the Drainage or Irrigation of Lands.

TERRA COTTA

CHIMNEY PIPE & TOPS

Vases, Flower Pots, Fire Bricks, &c.

MANUFACTORY AT LINCOLN, CAL.

SEND FOR ILLUSTRATED CATALOGUE

1310 Market Street, SAN FRANCISCO

CORRESPONDENCE is cordially solicited from reliable sources upon all topics of interest and value to our readers.

BUY LAND

Where you can get a crop every year; where you will make something every season; where you are sure of having a crop when prices are high; where you have a healthy place to live; where you can raise semi-tropical as well as other fruits; where you can raise a diversity of grain and vegetables and get a good price for them. Go and see the old Reading Grant (in the upper Sacramento Valley), and you will find such land for sale in sub-divisions to suit purchasers—at very low rates and on easy terms. There are 12,000 acres at from \$3 to \$30 per acre, including pasture, vine, fruit land and grain land. Will sell the whole tract at a great bargain. Send stamp for map and circular to EDWARD FRISBIE, proprietor, (on the Grant), Anderson, Shasta Co., Cal.

E. MAIN, 315 Folsom Street,

Makes to order Gents' Fine French Calf Boots from \$5 to \$10; Gaiters from \$3 to \$6; Alexis from \$3.50 to \$5; Mens Heavy Kip Boots, \$6; Oxford Ties, French Calf, \$4; California Leather, \$3.50; Men's Working Shoes from \$2.50 to \$3; Children's Shoes made to order. Persons in the country ordering to the amount of \$12, I pay the express charges. I sell nothing but my own manufacture.

SPERRY & CO.,

MILLERS,

Stockton,

Manufacturers of

New Process

Roller Flour.



San Francisco

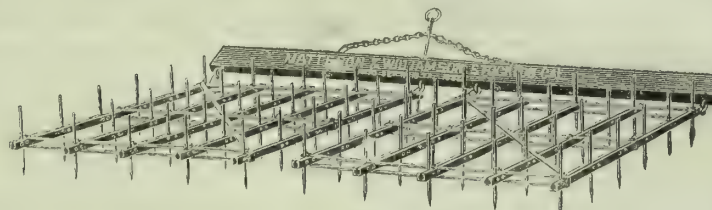
Office,

22 California St.

CAPACITY 1000 BARRELS DAILY

STOCKTON CITY FLOURING MILLS

Patent Channel Harrow.



THIS NEW INVENTION IS SUPERIOR TO ANY HARROW.

Each Section is Independent of the other. Any Sized Tooth Can be Used. The Frame will Last a Lifetime.

ALSO THE REVERSIBLE MOLD-BOARD STOCKTON GANG PLOW.

Cultivators. Weed Exterminators.

Agricultural Implements.

Manufactured and Sold Only at Our Works,

MAIN STREET, STOCKTON, CAL.

Matteson & Williamson.

PRICES REDUCED!

JOHN CAINE,

Sole Proprietor of the

Globe Iron Foundry and Machine Shop.

STOCKTON IMPROVED GANG PLOWS.

With Extra Reversible Molds, Standards, Wheels, and Landsides.

Eastern and Home Made

Sulky &

Gang Plows.

The Russell Manufacturing Co.'s Solid Woven COTTON BELTING, Black Coated.

BEST BRANDS BARBED WIRE.



Agent for STUDEBAKER Farm, Freight and Spring Wagons. Made to my Order.

GEM and CAHOON SEED SOWERS.

Salesroom and Warehouse, northeast corner of Market and El Dorado Streets, Stockton, Cal. Address, JOHN CAINE, Globe Iron Works, P. O. Box, No. 95, Stockton.

The best of



Through Dewey & Co.'s Scientific Press Patent Agency.

No. 252 Market Street. Elevator, 12 Front St., S. F. Telephone No 658.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER. GEO. H. STRONG

POULTRY YARD.

Success With Chickens.

EDITORS PRESS:—When you find a man quietly going ahead and succeeding year after year in any pursuit, he is the man to learn from, rather than the man who is dreaming over fine theories yet to be established. A. J. Lineback, of Calistoga, is one of these quiet, practical men, who has, for some years now, been engaged, in a small way, in the chicken business. A year or two ago I interviewed him as to his experience with chickens and his views upon the subject, and sent the results to the RURAL PRESS. From the beginning he had a very strong faith that there was money in chickens if the business was judiciously conducted. A neighbor of his believed that there was money in it without the judicious clause being considered. So, without experience, he started in strongly by purchasing a large flock of fine blooded fowls at a high price. How to feed, how to control lice, how to set a hen—all these were things that must be learned by experience after his capital had been invested. Four or five months were sufficient to prove to this novice that there was no money in chickens, and so he quit it in disgust, a poorer, if not a wiser man.

Mr. Lineback has about 250 hens, which are now mostly three years old. He thinks that two laying seasons are as long as hens in this county are profitable, and will now dispose of all his old hens, except a few for breeding purposes. He has about 300 young chickens coming on, one half of which are roosters. He thinks roosters do not pay, except as early spring broilers.

His chickens are mixed blood, but after a long and close study of the subject, he is convinced that pure blood pays better than mixed, and that the White Leghorn is the most profitable bird for him. He shut up 15 pure White Leghorns in a yard 50x75 ft., containing nothing but shade trees and gravel. He fed them on corn at night for one week, then on wheat at night the next week. He thinks this method better than feeding corn and wheat mixed every day, since it gives more of a change of feed. In the morning he feeds one-third shorts and two-thirds bran, mixed in sour milk or water. He regards bran as a profitable feed, especially in hot weather, because less heating than solid grain. Cooked wheat is very fine and pays well. For green feed he gave young corn fodder, beets and cabbage. He kept a supply of shells in the yard; also pure water. He puts a little copperas in the water during the moulting season, and thinks a little coal-oil in the water occasionally a fine thing to prevent disease. He has not been troubled with swell-head, nor any other disease, since he began to use coal-oil in their drink. This swell-head disease is a growing evil, and is causing great trouble and loss in many flocks of chickens.

Robert Barkway, of Rio Vista, a man well posted in the chicken business, says that every chicken attacked with it must be removed permanently from the flock, or it will spread greatly the next season; and this accords wholly with my experience. It may be cured in some cases, but it will not pay. It must be prevented.

From the 15 pure Leghorns which Mr. Lineback shut up he got the following weekly returns of eggs: 65, 67, 70, 69, 78, 69, 66, 64, etc. From another band of 14 mixed chickens (white and brown Leghorns and Plymouth Rocks), treated the same as the others, he gathered 55, 73, 53, 53, 67, 60, 57, 62, etc., per week.

He shipped eggs to San Francisco as follows:

March.....	225 doz
April.....	210 "
May.....	252 "
June.....	94 "
July.....	144 "
August.....	141 "

Total six months.....1,032 doz
Estimated profit per year from each hen.....\$150

His hatching was mostly done in May and June—probably too late by one month, at least. His roosting-houses are made four by six feet in size and five feet high. They contain five perches, and will hold from two to three dozen hens. They have shake roofs, and sides and ends made of red-wood pickets, split out one-half inch thick. They are cheap, clean, light and airy, easily carried by two men. I like them, also his coops for setting hens, made of lath 15 inches high, 24 wide and 4½ ft. long, which serves as a dining-room for two hens, with an opening at each end for the hens to pass through into their nests. The nest is made on the ground and covered with a roof made of two boards 22 inches high and 14 inches wide, with shake back. This gives room for feeding and exercise, and the two hens thus placed together seldom disturb each other. W. C. DAMON.
Napa, Dec. 1, 1882.

POULTRY FOR AUSTRALIA.—We are pleased to note that a promising trade in thoroughbred poultry from this State to Australia is opening up. Mr. J. W. Cuming, of North Temescal, Alameda county, received by the last mail orders from three wealthy parties in Australia for Languans, Plymouth Rocks, and Leghorns (white and brown). Mr. Cuming took the first prize for White-faced Black Spanish at the late Golden Gate fair.

FORESTRY.

Forest Trees of California—No. 19.*

Heavy Yellow Pine.
(Pinus ponderosa.)

"There is a quiet poetic spirit here, amid
The silent majesty of these deep woods—
Its presence shall uplift thy thoughts from earth,
As to the sunshine and the pure bright air,
Their tops—the green trees lift."—Longfellow.

The yellow ponderous pine of California and Oregon covers vast areas of several thousands of miles in extent, from beyond the Columbia river to Mexico, and from Coast range to Sierra mountains, with the most magnificent forests, not only mixed with other pines, firs, spruces and varied aborea, but still maintaining its prevailing character; it also often becomes the only species the traveler may meet for days together, especially in the arid and burning interior valleys and basins, and even here it is often a large tree, i. e., over 100 ft. high, suffering somewhat in the character of the lumber, which then becomes softer, lighter, and is greatly given to an ungainly warping propensity that seems simply ridiculous, when posing to such extremes. Like most other trees, the quality of the timber is exceedingly variable, according to soils and surroundings. To illustrate and confirm this remark, we will state that a dwarf variety, or rather subvariety of *Jeffreyi*, in Owen's valley, at "Casa Diablo," bearing cones barely one-half the usual size, within reach from the ground—the full grown trees but little higher than one's head—with glaucous sour foliage of the taste of common rhubarb or sorrel. At first view, we took this remarkable example to be a new species of pine, but upon more close and careful examination, although growing upon exactly the same level and within a few stone-throw of typical trees over a hundred feet high, yet this dwarfed character seemed evidently due to the soil in which this particular group grew, being a saline deposit from a hot spring, forming a little knoll whence the mineral waters had receded in course of formation.

The ever-increasing import of all our varied Pacific observations tends to impress upon us the vast significance of foundation soil—as to accelerate or depressive, qualitative or quantitative, and other influences upon arboration, or the lesser and more general vegetation—many fingered facts point continually to the ultimate mineral and moraine as their great guiding genius; so the lesser mineral flows to the last and least, aereal and ethereal; a thousand witnesses rapidly multiplying, crowd to the front and clamor for recognition and application to human use, or to use and to humanity. The artificial dwarfing of trees by the Japanese—a former mystery, now generally known—practiced by myself when a boy, viz: By the layering principle, modifiedly applied, from upon trees already very old, by partially and successively continuing to belt or girdle a twig while the limb is wound round by turf or moss with a suspended water drip until it strikes radicles, and then cut off and potted or planted. This pine, from 100 to 300 ft. high, and from three to eight feet in diameter, is, for nobility of port and lofty beauty, in the eye of the cultivated stranger, possessed of unusual interest; the finest forests are but little removed from the great sequoias themselves; this comparative contrast is most vividly brought home to one's consciousness by their often skirting, and as it were, guarding the regions round about them; nor is it always their grandeur alone that so impresses, for to be duly appreciated we must enter into the spirit of the tree itself in various ways, must catch the silvery thrill that so nervously and finely thrills over the long radiating turfs of steely needles, that tip and aspergill the older beady-scarred boughs; and then there are those large, long plumes of younger spire-topped trees, which are altogether alive to one who

"Loves the wind among the branches."

Through the palisaded pine trees—ever sighing—ever sighing as they softly gleam o'er the landscape, tinted, too, with the most delicate possible tinge of golden-green that glimmers a softer sheen over the sunlit hair—these come almost hiding the clustered cones that tip the final twigs. The bark is peculiarly striking, of bright yellowish-brown, and of lamellated soft corky character and color, its surface laid off in large, flat, smooth plates from 4 to 10 inches long or so, one-third to one-half less broad; these oblong divisions, for the most part, follow the law of cell forms and forces combined, bounding the chinky water-lines, the leading channels of which are somewhat deepened below. The ease with which jaybirds and woodpeckers honeycomb their thimble-sized holes and drive in their winter supply of acorns, point or germ end foremost, renders the bark of these pines the preferred repositories; even bushels of acorns are sometimes seen so stored in a single tree. As the germ end is thus kept dry, and by pressure quite prevented from swelling, it cannot germinate, although some species are so prone to sprout they scarce wait until the fall to the ground, and never long after—a hint to the wise is sufficient.

Although this far Western yellow pine comes in second above Sabin's gray pine as we ascend the Sierras, and is very abundant and of the best types on the higher ranges, more especially east, yet it is also a Coast Range pine. In this latter region the cones are much smaller, seldom

* From "The Forest Trees of California," by A. Kellogg; published by the State Mining Bureau, State Printing Office, Sacramento, 1882.

over three or four inches long by two to two and a half inches broad, and the brown seed, although rounder and not so sharp, is about the size of apple seed. Whereas, the *Jeffreyi* form (by some considered a good distinct species, certainly a quite characteristic variety for the culturist), found at middle and higher altitudes, has cones at least three or four times as large, from six to eight inches long, by four to six broad, old straw beehive shape, and striped or variegated, seeds twice the size. Where transient mountain streams lave the roots, and perhaps other conditions favoring, the cones are often more elongated or not so strictly ovate-conic—this we take to be the *Beardsleyi* variation—and so others besides the extremes one sees beneath every tree, but the general resemblance of the several synonyms of the type is such that it may warrant their union into one species, even if we reckon them eminent and choice varieties. Some of these majestic trees, 75 to 100 or 150 ft. high, are found with massive spreading branches of peculiar aspect, unwonted among pines; but for the most part, this species is towering, lofty, and clean colonaded below, hence its availability as timber for manifold economic uses. In a brief historic point of view, as connected with this pine, it may be well to note the import of those little basins or ring-ridges of sand so often seen encircling the base of these pines. It is the work of the Indian—designed to entrap and collect the fat, luxurious worms that infest these trees—who, firing the straw on the still air of late summer and early autumn, the rising smoke among the boughs offending them, they let go, swinging down to the ground, whence they betake to the trees again, and, falling into these pits, their futile hold upon the treacherous sandy margin, causing a continual backward tumble into the bottom of these shallow pits; thence the squaw gathers them into baskets for food; thus a double purpose is subserved; that also of cleaning the ground preparatory to the fall of seed. In allusion to the pine, the native, in a metaphoric sense, often unwittingly bears the highest testimony to his great estimation, judging from their highly figurative style of speech, graphic force, great eloquence and pathos of many tribes of North America. We say, judging from his choice of words and figures, his wild woods and high mountain home must have for him still much genuine poetic charm; perchance sounder significance than the pale face is wont to perceive akin to, if not the real relic of a lost Eden of some celestial bygone.

Take as an example the Chief Saginaw, when asked of his welfare and that of his family (two lovely daughters, meanwhile having died), characteristically answered (pathetically breaking a long, fixed, statue-like gaze of silent retrospection): "Saginaw? Saginaw was once a tall pine among sapplings of the forest! The pale faces came and sold him fire-water; he became depraved; the Great Spirit's anger was kindled against him, and His lightning struck away his branches!" Long may they wave their fadeless banners aloft to the pure mountain breeze, and sing their sweet æolian spirit song to entranced and fondly listening ears, soothing the soul to peace and to inner contemplation.

This ponderous Pacific pine is so called from its great weight, the timber being unusually heavy from its dense, generally resinous, often hard and brittle character, although, as before observed, softer and tougher in the middle Alpine belt of about 6,000 ft. or more. Wood usually yellowish, largely appropriated to mining, building in general, and for a great variety of useful purposes, among the best timbers of the Pacific.

This tree, like the long leaf pine (*P. Australis*) of the south, to which it bears strong resemblance in general appearance, is rather more apt to be blown over by high winds than most other pines of this coast.

UNSINKABLE STEEL SHIPS.—Unsinkable ships, according to Capt. R. B. Forbes, of Boston, will, in a few years, carry all the first-class goods and first-class passengers between Europe and the United States. He supposes these ships to be built of steel and to be divided into at least 10 compartments, exclusive of those occupied by machinery and fuel; every compartment to have the means of pumping in air and pumping out water. Such a ship could not very well sink, but if, as an additional security, all the freight was secured in water-tight packages, the vessel would float even if every one of the compartments had a fracture in it. There is nothing absurd in this supposition. It is more than probable that all heavy and coarse merchandise, such as metals and soda ash, will be excluded from the fast mail and passenger steamers. It will only be necessary, in that case, to see that the compartments of the two lower decks are without defect, and to introduce a complete system of pumps for air and water, and thus adopt the old Chinese method of packing silks and teas, using either casks or metallic coverings so far as practicable. The hazards of an ocean voyage will be reduced to a minimum, but no safety can be guaranteed where steamers are run ashore, as too often happens.

THE CAPE COD CANAL TO BE BUILT.—Capt. Nathan Appleton, a well-known Boston capitalist, states De Lesseps and General Turn, the Hungarian canal builder, will be interested with him in building a ship canal across Cape Cod. The application is on file in the State House to complete the job in three years, with \$2,000,000 expenditure.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 282 Market St., S. F.

FOR THE WEEK ENDING NOVEMBER 14, 1882.

267,407.—RETURN FLUE VERTICAL BOILER—Patrick F. Dunoon, S. F.
267,410.—STEAM PUMP—W. M. Ferry, Park City, U. T.
267,524.—CAN WASHING MACHINE—Jas. O. Hawthorn, Astoria, Oregon.
268,432.—STAMP MILL—F. A. Huntington, S. F.
267,543.—CLEANING ASH PANS OF LOCOMOTIVE ENGINES—Kilborn & Smith, Tucson, Arizona.
267,442.—PREPARATION FOR MASKING THE NAUSEOUS TASTE OF MEDICINES—W. H. McLaughlin, S. F.
267,664.—KITCHEN CABINET—J. W. Rose, Santa Clara, Cal.
267,402.—DEVICE FOR ILLUSTRATING FRACTIONS—A. A. Byron, Alameda, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

SAW FILING MACHINE.—John Palm, Monitor, Alpine Co., Cal. No. 267,756. Dated Nov. 21, 1882. This invention relates to an apparatus for holding and filing saws, and it consists of a post or stand, which may be fixed to a bench or other support. This post has a slotted arm hinged to it by a joint, which allows of a horizontal or a vertical movement. A transverse bar is fixed at any desired point in this slotted arm, and the saw holder rests and is adjusted upon this bar so as to bring the teeth of the saw at the proper height and angle for the action of the file, which is fixed in a guide so as to move across the teeth at any desired angle. The file is peculiarly constructed and supported in its guide so that it may be turned upon its axis.

GATE.—Charles A. Wyman, of San Jose, California. No. 267,765. Dated Nov. 21, 1882. This invention relates to the class of gates, and more especially to those which are intended to be opened by the passerthrough without having to alight from his conveyance. This invention consists in the arrangement of cords and levers hereinafter described, when applied to a swinging gate, whereby it may be unlatched and swung open by power applied to the cords hung conveniently within reach. The object of this invention is to provide such an arrangement of devices for opening gates as shall be operated with the greatest ease and to the best advantage.

VENTILATOR.—Michael H. Dorgan, S. F. No. 267,741. Dated Nov. 21, 1882. This invention relates to certain improvements in that class of ventilators which are swiveled upon the tops of soil-pipes, flues, etc., and it consists in a conical casing with spaced walls opening at the frustum into a cylindrical pipe, in which and in the opening of the cone is placed a double conical plug. The device is provided with a vane for keeping in the wind and with a suitable coupling swiveling it in place.

COUGH REMEDY.—Hannah Branch, North San Juan, Nevada Co., Cal. No. 267,738. Dated Nov. 21, 1882. This is a new and useful compound to be used in case of coughs, colds, asthma, whooping cough, and all diseases of the throat and lungs.

CAR COUPLING.—Eliza M. Hobbs, Santa Rosa. No. 267,749. Dated Nov. 21, 1882. This is a novel automatic car coupling, the invention consisting in certain details of construction difficult to clearly describe without the aid of engravings.

ANOTHER TALL BUILDING.—Another addition to the high buildings of New York will shortly be finished. The Welles building, on Broadway and Beaver streets, 10 stories high, is constructed in pink granite, in the renaissance style. The entrance on Broadway is of striking proportions, being lined with gray polished marble. The passages are paved with Spanish tiles, and wainscoted in colored marbles. The cost of the site has been \$200,000, or equal to \$14 50 per square foot. Nearly two-fifths of the entire space has been sacrificed to the requirements of light and air, which are excellent throughout the building. There are four elevators, one capable of raising heavy weights. The building possesses its own artesian well, sunk over 1,000 feet in the bedrock.

THE waste of wild cocoons gathered in the woods of China, Japan and Australia, is made into a felt one-half the size of hair felt, and is used for the manufacture of hats and for furnishing purposes. It has the peculiar bright color of silk, and is sometimes used with hair, wool, cotton and other substances.

STRENGTH OF INSECTS.—In his experiments with the strength of insects, Plateau, the French naturalist, has ascertained that, in proportion to its size, a June-bug is as powerful as a locomotive.

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD,

For sale at Low Prices, consisting of the finest market varieties of

APRICOTS, ALMONDS, PEACH, PLUM and NECTARINES.


These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties.

Send for Catalogues and Prices to

C. W. REED & CO.,
Sacramento, Cal.

Oakland Poultry Yards,

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,
Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.
Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,
WHICH IS MADE IN THREE SIZES.

No. 1, Capacity,	550 Eggs,	Price, \$90.
No. 2, " "	250 " "	65 " "
No. 3, " "	180 " "	45 " "

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to

GEO. B. BAYLEY,
Box 1771, San Francisco.

WEBSTER'S UNABRIDGED.

In Sheep, Russia and Turkey Bindings.



"A LIBRARY IN ITSELF."
GET THE BEST HOLIDAY GIFT.

Most acceptable to Pastor, Parent, Teacher, Child, Friend; for Holiday, Birthday, Wedding, or any other occasion.

It is the best practical English Dictionary extant. London Quarterly Review.

It is an ever-present and reliable school master to the whole family.—S. S. Herald.

G. & C. MERRIAM & CO., Pub'rs, Springfield, Mass.

PACIFIC COAST HEADQUARTERS

—FOR—

Hansell (Extra Early Red) Raspberry, Fay's Prolific Currant, James Vick and Manchester Strawberries.

All the best Small Fruits. New Illustrated Catalogue free. Address,

C. M. SILVA & SON,
Newcastle, Placer Co., Cal.



J. M. HALSTED'S
Self-Regulating INCUBATORS.

From \$20 up. Send for descriptive price list. Thoroughbred Poultry and Eggs.

1011 Broadway, Oakland, Cal.

MUSCAT, GREY RISSLING, ZINFANDEL and BLACK MALVASIA.

Cuttings of the above varieties of Grapevines will be furnished in lots to suit purchasers, and delivered on the cars at Oakville, Napa Co., for Four Dollars (\$4) per 1,000. Apply to

F. A. BUCK, Oakville, Napa Co., Cal.

Also a limited amount of Cuttings from

Imported Rooted Vines

From the Champagne District of France (Eperney and Mareuil-sur-Ay). The Grapes from these vines sell at the place of their production at from 20 to 30 cents per pound. Price of Cuttings, \$20 per 1,000.

—THE—

MUSICAL SUCCESS

Of the Season.

MINSTREL SONGS,

Old and New.

Nearly 100 of those world-famous PLANTATION SONGS and POPULAR MELODIES that have made the fortunes of Minstrel Troupes, and of which Ditson & Co. hold the copyrights of a large number. More true, original, pleasing melodies may be found in this volume than in any other extant. Of course Foster leads the van, and his

OLD FOLKS AT HOME

Cannot be excelled. This statement, however, will be questioned by many, who prefer:

Old Kentucky Home. Oh, Susannah!
Old Dog Tray. Old Uncle Ned.
Old D-n Tucker. Old Cabin Home.
Farewell, Lilly Dear. Dixie Land.

Or the more modern nonsense songs of the Jubilee order.

Gospel Raft or Cross Roads.
In the Morning by the Bright Light.
Or the truly beautiful
Lilly Dale, Mocking Bird, or Twinkling Stars.

Price \$2, Boards. \$2 50 Cloth. \$3 Fine Gilt.

Mailed anywhere for above prices.

OLIVER DITSON & CO., Boston.
CHAS. H. DITSON & CO., 843 Broadway, New York.

Arrears

of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1882.

Pensions

for all soldiers disabled in line and discharge of duty, either by accident or otherwise.

Widows

of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents

In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty.

Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges.

Honorable Discharges procured; also duplicates. Send for blanks.

Increase of Pension.

Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps,

STODDART & CO.,
Washington, D. C.
Box 623

U.S.★ WINDMILL.

First Premium at the State Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out. It does its work with less loss of power from friction than any other mill. It is easily regulated to do as little or as much work as may be required of it. It is self-governing, and very sensitive to the least change in the wind. It will run with less wind than any other mill of the same size, doing the same amount of work. It is simpler and more compact in construction than any other first-class mill. It is the most durable windmill known. It is offered at as low a price as any other first-class mill.

D. G. PAUL, General Agent,
Livermore, Cal.


Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

Only "PEBBLE" Establishment.

1863 1882



Muller's Optical Depot,
135 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

Commission Merchants.

Grangers Business Association,

SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT and FOR SALE ON CONSIGNMENT. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

References.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

PETER MEYER. LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,
Front Street Block, bet. Clay & Washington, San Francisco.
Special attention given to country traders.
P. O. Box 1940.

JAS. P. HULME, Late Miller & Co. JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,
SAN FRANCISCO.

MOORE, FERGUSON & CO.,
COMMISSION MERCHANTS
Grain, Flour, Wool, Etc.
(Members of the San Francisco Produce Exchange)
211 and 213 Clay St., S. F.
Liberal advances made on Consignments.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,
Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,
SAN FRANCISCO.
CONSIGNMENTS SOLICITED.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments

J. H. CONGDON & CO.,

General Commission Merchants,

34 California St., San Francisco.

Doing business exclusively on Commission. Liberal advances made on Consignments at Low Rate of Interest. Personal attention given to all Consignments.

Special attention given to WOOL, GRAIN and COUNTRY PRODUCE.

Sole Agents for
Paradise Mills' Flour, Modesto.

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT

HOUSEHOLD

SEWING MACHINE.

GEN'L. AGENCY, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

OAKLAWN FARM,
Wayne, Du Page County, Illinois.
55 miles west of Chicago, on C. & N. W. R. Y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

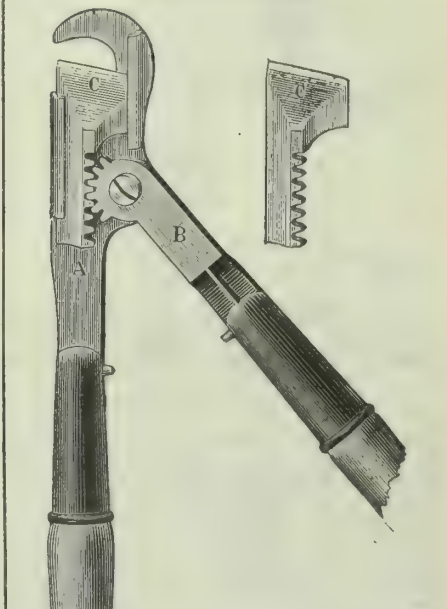
In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.

THE BOSS PRUNER.

Patented January 8, 1878.



The best Pruner made. Small size, cuts 1 inch, price, \$3.50. Large size, cuts two inches, price, \$4.50. For simplicity, ease, rapidity and Durability they are unequalled.

Apply to

GEO. WOOLSEY,
Ione City, Amador County, California,
General Agent for the State.

DEWEY & CO

PATENT

SOLICITORS.

SCIENTIFIC PRESS OFFICE, 252 Market (Elevator 12 Front), S. F. Pamphlet for Inventors free.

Attention, Book Buyers! Dig Pay to Agents!!

FARMERS,

Engineers, Mechanics, Mill Owners, Merchants, etc., will find in DEWEY'S UNIVERSAL ASSISTANT and COMPLETE MECHANIC, a work containing 1016 pages, 500 Engravings, 461 Tables, and over 1,000,000 Industrial Facts, Calculations, Processes, Secrets, Rules, etc., of rare utility in 300 Trades. A \$5 book free by mail for \$2.50, worth its weight in gold to any Mechanic, Farmer, or Business Man. Agents Wanted. Sure sale everywhere for all time. One agent reports \$137.50 earned in 6 days. Another has paid for two farms. For full Contents Pamphlet, Terms, and 128 page Catalogue of nearly 3000 Standard Books, address NATIONAL BOOK CO., 73 Beekman street, New York.

Agents Wanted.

A Library in One Volume. New, authentic and exhaustive. The largest, handsomest, most comprehensive and best illustrated Work on Live Stock ever issued in this country.

Endorsed by Veterinary Surgeons and the Agricultural Press everywhere. The "Object Teaching" Stock Book for every day use.

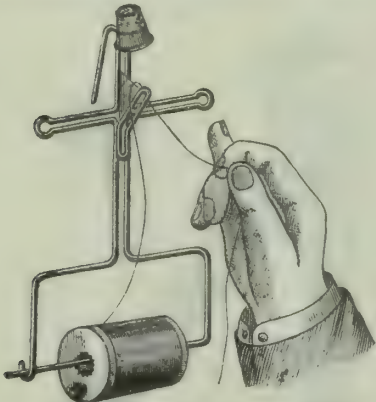
The "American Farmers' Pictorial Cyclopaedia of Live Stock," embracing Horses, Cattle, Swine, Sheep and Poultry, including Departments on Dogs and Bees; being also a Complete Stock Doctor, combining the effective method of Object Teaching with written instructions. For Terms and Circulars apply to J. DEWING & CO., 420 Bush St., San Francisco, Cal.

A Useful Household Device.

We illustrate herewith a combined spool and thimble holder and thread cutter, which has just been patented through the *Mining and Scientific Press* Patent Agency by A. M. Barrett, of Ione City, Amador county. The invention consists of a suitable spindle or shaft for receiving the spool, of a standard for supporting the thimble, of a cutter for severing the thread, and of a hook or pin for affixing the device in a convenient position. These are the results of a construction, as follows: A single wire is bent to form a cross above and an open base below, one end of the wire fitting into a hook on the other end at one corner of the base and forming the spindle for the spool. Upon the front of the cross above is soldered a wire, the upper portion of which is bent outwardly and receives one end of a small blade extending from the main piece. Upon the back of the cross is affixed a bent pin or hook which sustains the device and forms with the top of the cross a secure resting place for a thimble.

The engraving represents the vertical or central portion, having arms of a cross having an open base, at right angles. These parts are formed of a piece of wire bent double to form the center and arms. At the base of the center the wire extends in opposite directions, thence downwardly where one end is bent to form a hook. The other end extends across to the center in front is attached a small piece of metal, shown as a bent wire, the upper portion of which diverges from the center wire. There is also a small cutting blade, as shown. A piece of wire is attached and bent down to form a hook or pin.

This device is intended to be secured to the garment of the person using it, in some convenient position by simply inserting the pin or



A USEFUL HOUSEHOLD DEVICE.

hook. To insert the spool the end of the spindle is released from the little hook and the spool fitted upon it, after which it rehooks, and the thread may be drawn from the spool which is thus secured. The thread may be cut upon the blade above, and when it is necessary for any purpose to lay aside the thimble it may be fitted upon the top of the center. Its edge will pass down between the loose top of the pin and the back of the center, and be held securely from falling off. The cross arms and wide blade lend stability to the device, and cause it to lie in a convenient position. This little implement is useful to persons who do any kind of hand sewing. Its convenience and effectiveness, together with its small cost, render it a desirable article. Territorial and State rights in this device will be sold by the inventor.

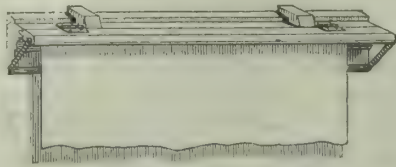
SEVERAL PLANS.—To get rid of the objectionable odor of paint in a chamber or living-room, slice a few onions and put them in a pail of water in the center of the room; close the doors, leave the window open a little, and in a few hours the disagreeable smell will have almost gone. Another method is to plunge a handful of hay into a pailful of water, and let it stand in a newly-painted room over night; this plan is also effectual. The foregoing have the important advantage of being simple remedies, as the necessary materials are always obtainable. Yet another plan, but it is rather more complicated: Place a grate of lighted charcoal on a piece of flag or slate in the center of the room, and throw on it a handful of juniper berries; shut out all ventilation from the room for 24 hours; the doors and windows can then be opened, when it will be found that the nasty, sickly smell of paint has entirely gone. The furniture may be left in the room during the process, and none of it will be injured.

SHEET BARRELS.—The Michigan concern that makes sheet barrels has machinery for cutting the logs into barrel lengths, softening the wood by steaming, and then shaving each piece into a long sheet, unrolled like a carpet. Each sheet is then cross-cut into such a length that when the two ends are brought together it has the size and form of a barrel without heads. The improvement over the stave barrel is great in cost and utility. The great drawback to manufacture is that clear lumber is required, knotty stuff being rejected. The staveless barrel factories on Puget Sound use cottonwood, of which there is an abundance that is suitable.

Blake's Paper File.

Mr. H. H. Blake, of this city, has recently patented through the *Mining and Scientific Press* Patent Agency a peculiar paper file or "bill post," the nature of which is shown in the engraving on this page. It consists of a stationary pad or stick provided with a groove and securing pins, adapted to be sustained from a wall, and of a swinging pad or stick provided with a tongue and holes to receive said pins, and hinged to the edge of the stationary pad with which it is held in relation by means of springs. The object is to provide a simple and effective means for holding a file of papers, or for securing posters, playbills, quotations, ship's manifests, etc., which are usually tacked or pasted on the walls.

It is particularly adapted for use in hotels, offices, saloons, barber shops and all public places where it is desired to exhibit such advertising matter without defacing the wall with tacks, or daubing them with paste. By its



BLAKE'S BILL POST.

use the paper is not mutilated, nor can it be removed without first throwing back the clutch or fastening, which extends the entire length of the apparatus. If desired, any number of bills may be exposed at one and the same time, those having been placed in first being temporarily held in place by means of pins, properly arranged for that purpose. Finally when the clutch is brought down, all are firmly held in place by means of the tongue and groove clutch. Warren Holt, 413 Montgomery street, is the agent. Different sizes of this device are made.

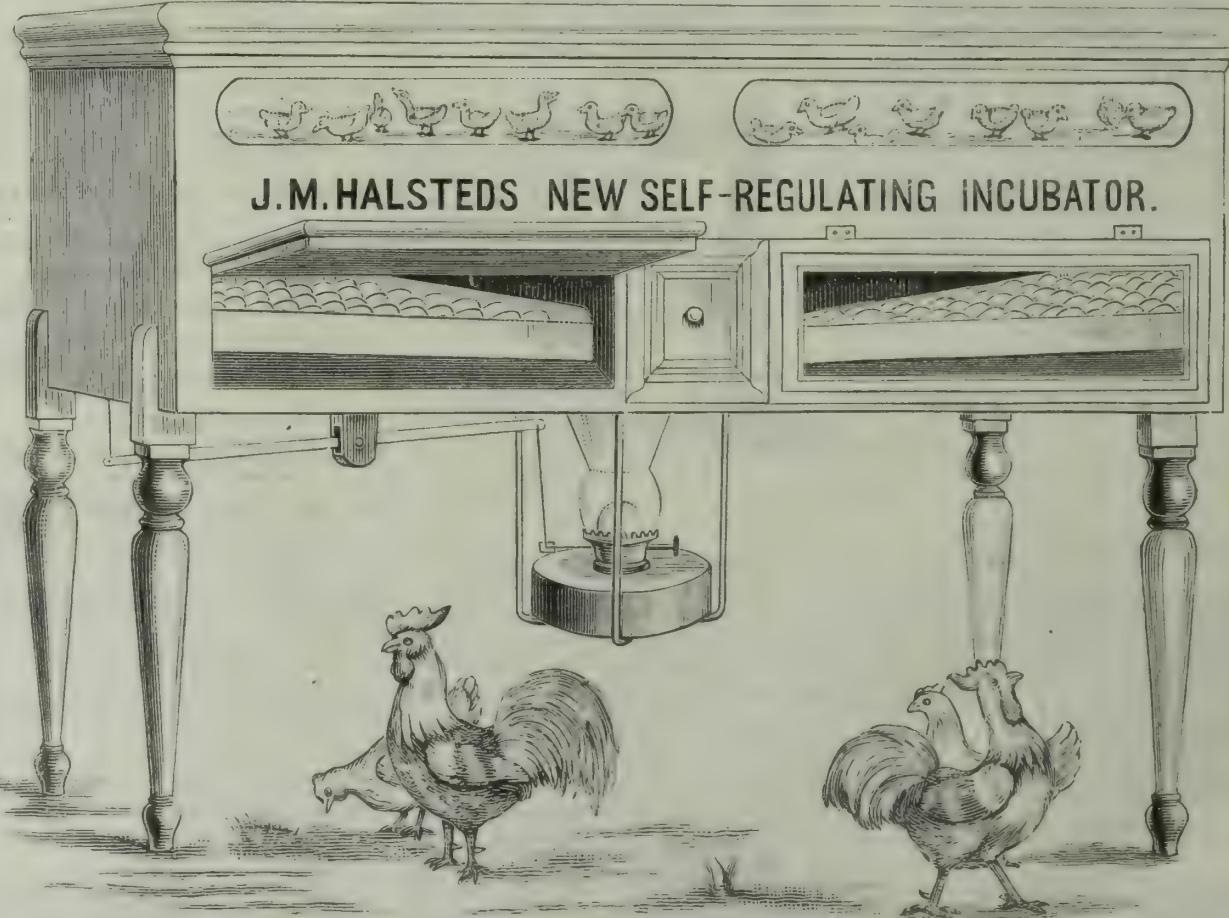
At the MILAN EXHIBITION a solid wine was introduced. It was in the form of a paste, which, when, dissolved in a glass of water, was said to yield instantly a generous wine of good appearance and bouquet.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

New Self-Regulating Incubator.

We give herewith an illustration of J. M. Halsted's new self-regulating incubator, patented through Dewey & Co's. Agency, August 8, 1882, by J. M. Halsted, of Oakland. The incubator is a hot-air machine, warmed by a kerosene lamp, and burns about 1½ gallons of oil to hatch 100 eggs, or 3 gallons to 250 eggs in this climate.

It is made of five of the best non-conducting substances



known to science and thoroughly constructed. The front is furnished with double glass doors through which the eggs and thermometer are visible without opening the machine. By the scientific manner in which the heating apparatus is constructed, every particle of heat is utilized and a great saving of oil is effected. The air thus warmed is automatically moistened by an ingenious device before entering the egg chamber, through which it passes in a constant current over the eggs and then out through the ventilators, which are always open, yet placed in such a position that no cold

The formation of the heating apparatus is such that neither smoke nor gas can enter the egg chamber, in which the air is constantly changing, therefore it must always be pure and wholesome. Underneath the eggs a current of cool—not cold—air is kept circulating which as it becomes impregnated by carbonic acid gas from the eggs passes out through the bottom ventilators.

The new patent regulator is the perfection of simplicity, is strong, reliable and will last a lifetime. It is connected directly with the lamp and turns the flame up or down with

the least variation of temperature, thus dispensing entirely with mechanical contrivances, which are always more or less subject to derangement, and which have caused so many failures and so much disappointment in the successful use of other incubators. Above the egg chamber is an artificial brooder, thoroughly warmed and always of the right temperature, in which the young chicks can be placed as soon as dry.

These incubators can be used in any ordinary building and do not require a place especially built and regulated for them. Or, if more convenient, can be placed in the house, as they emit no disagreeable odor—the lamp making no more smell than any good kerosene lamp in constant use. It requires but a few minutes' attention each day, simply to air and turn the eggs.

These incubators have been used during the past year with success by many parties, and abundant references will be given on application. For fuller information, address J. M. Halsted, 1011 Broadway, Oakland, Cal.

No Drug Medication.

Compound Oxygen is simply a new combination of the two elements which make up our common atmosphere, and in such portions as to render it much richer in the vital or life giving quality. It contains no medication, unless the elements of pure air are medicines, and its administration introduces nothing into the body which the system does not welcome as a friend, accept with avidity and appropriate as entirely homogeneous to itself. Our Treatise on Compound Oxygen, its nature, action and results, with reports of cases and full information, sent free. Drs. STARKY & PAVEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

All orders for the Compound Oxygen Home Treatment directed to H. E. Mathews, 606 Montgomery St., San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

To Printers and Publishers.

We offer Scotch brevier type (same as used on this paper) for sale in any quantity from 100 lbs. to 1,000 lbs. for 20 cents per lb., if ordered soon. Also, several hundred pounds of nonpareil at favorable rates. The type is in good condition and is of a very durable character.

Also for sale, desirable fonts of second-hand display type at less than half the price of new.

DEWEY & CO.

Successful Patent Solicitors.

As Dewey & Co. have been in the patent soliciting business on this coast now for so many years, the firm's name is a well-known one. Another reason for its popularity is that a great proportion of the Pacific coast patents issued by the Government have been procured through their agency. They are, therefore, well and thoroughly posted on the needs of the progressive industrial classes of this coast. They are the best posted firm on what has been done in all branches of industry, and are able to judge of what is new and patentable. In this they have a great advantage, which is of practical dollar and cent value to their clients. That is this understood and appreciated is evidenced by the number of patents issued through their agency from week to week and year to year.

Type Nearly New For Sale.

We have a font of O. S. bourgeois body type (several hundred pounds), used for a short time only on the "Californian" Monthly, which we will sell at greatly reduced rates. Also, 100 to 200 lbs. each of nonpareil and minion O. S. All of these fonts are in prime condition and of Miller & Richard's hard-metal Scotch type, and will be sold at a bargain, with or without the cases, which are also nearly new.

DEWEY & CO., Publishers, S. F.

Engraver.

A good Wood Engraver, with fair references, can obtain a steady and desirable situation by calling at this office. One who can draw from models or nature preferred.

Our Agents.

Our FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
L. L. WOODMANSEY—Nevada State.
B. W. CROWELL—Los Angeles county.
L. WALKER—Butte, Tehama and Shasta counties.
E. A. WILLIAMS—San Francisco.
S. E. BAKER—Eastern States.
J. WILSON, Amador county.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Attend to This.

Our subscribers will find the date they have paid to printed on the label of their paper. If it is not correct or if the paper should ever come beyond the time desired, be sure to notify the publishers by letter or postal card. If we are not notified within a reasonable time we cannot be responsible for the errors or omission of agents.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

How to STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address: E. G. RIDEOUT & Co., 10 Barclay St., New York.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

HOW FLIES CLIMB.—Herr H. Dewitz has communicated to the Berlin Society of Natural History some facts that bear very strongly against the generally received theory that flies adhere to perpendicular walls and ceilings by virtue of some sucking power in their feet. He asserts that the feet of flies cannot possess the sucking property ascribed to them, for they are hard and destitute of muscles. The theory has long been contradicted by the experiments of Blackwell, who found that flies could climb the sides of a jar under the receiver of an air pump, where there was no atmospheric pressure, and who asserted that the power of adherence was due to a sticky matter secreted from the foot-hairs of flies. This assertion was generally regarded as not proved, and the case has rested there. Dewitz reports that his investigations have shown that Blackwell was right. He has watched the exudation of the sticky matter from the feet of the flies by fastening one of the insects to the under side of a plate of glass and viewing it under the microscope. A perfectly clear liquid was seen to flow from the ends of the foot hairs and attach the foot to the glass. When the foot was lifted up, to be put down in another place, the drops of the sticky matter were perceived to be left on the glass, in the exact places where the foot-hairs had rested. The adhesive fluid appears to pass down through the hollow of the hair, and to be derived from glands which Leydig discovered in the folds of the foot in 1850. A similar adhesive matter appears to be possessed by bugs, by many larvae, and probably by all insects that climb the stems and the under sides of the leaves of plants.

The House has passed a bill relating to the American shipping laws which is similar in its provision to one of the bills recommended by the San Francisco Board of Trade and introduced by the California members. It provides for such a modification of the shipping laws as will relieve ship-owners from the payment of three months' wages to American seamen discharged in a foreign port, and makes provision for their return to this country without payment of any wages.

WILLIAMS' NURSERY.—We have received a neat catalogue of W. W. Williams' semi-tropical and general nursery, located on the Eastern Rancho, three miles east of Fresno city. The list of plants and fruit trees includes a general array of popular varieties, and can be consulted to advantage by planters. Some months ago we copied a description of Mr. Williams' place from a Fresno paper, which showed it to be excellent in all respects.

OIL ON THE WATER.—The authorities of Aberdeen, Scotland, have decided to place perforated pipes on the bar at the entrance of that port, by which oil can be forced into the water, for the purpose reducing the force of the waves and smoothing the surface of the water during storms. This will be the second ocean port they propose to render the passage of shipping to and from the harbor more smooth during storms.

DR. PROTHOROE has blindfolded with long stockings the 22 ostriches at Central Park and shipped them to the ostrich farm to be established in California. The farm consists of 800 acres, about 75 miles south of San Francisco, and the cost of taking the ostriches thither from New York is \$2,000.

BARBED FENCE.—Attention of those using barbed fencing is called to the Buckthorn fence advertised by J. A. Rebling's Sons Co., at 14 Drumm street, San Francisco. This style is made in one piece, barb and all, and has many advantages.

GRANGE STATISTICS.—In our article on the history of the Grange last week it was stated that the number of Granges in 1876 was 1,800. The correct figures are 15,800.

A Valuable Paper.

It is a fact that there are but few agricultural papers that are so well adapted to meet the agricultural wants of a State as the PACIFIC RURAL PRESS, published in San Francisco. It makes fruit growing a specialty, and devotes, as it should, more than usual attention to the vital subject of entomology. As the suggestions and experience of practical growers of the orange and lemon and other sub-tropical fruits is given, our readers in Florida, and along the gulf, would find them of great advantage. The many warm friends of Prof. Hilgard throughout the South will be pleased to know that he is a regular contributor to the RURAL PRESS, and that his scientific researches are proving of great value to the agricultural interests of California. — *Louisville (Ky.) Farm and Fire* title.

Every Agriculturist Should Take It.

The sterling agricultural journal, the PACIFIC RURAL PRESS, is advancing in excellency with each succeeding number; and its managers propose in 1883 to make it superior in excellency to all previous years. Every agriculturist on the Pacific Coast should take a copy of the RURAL PRESS. — *Los Gatos News*.

Deserves Well of the People

The publishers of the PACIFIC RURAL PRESS announce that they are determined to make that paper for 1883 superior in excellency to all previous years. The RURAL PRESS is a good agricultural journal and deserves well of the people. — *Visalia Delta*.

STRAW LUMBER.—The California Architect suggests that some of our California inventors should grapple with the problem of straw lumber. There is no State in the Union that presents so many advantages as California in regard to obtaining large quantities of the raw materials. If a ton of straw will make 1,000 ft. of lumber, surely the plains of Colusa and Stanislaus can be relied upon to produce thousands of tons of straw, and therefore thousands of thousands feet of lumber. Who will be the first to move in the matter? Such lumber is used principally for store finish and wainscoting, where it is desirable to have a contrast of light and dark woods.

OWING to land frauds of startling magnitude in connection with the Osage Indians' lands in Kansas, the Commissioner of the General Land Office has issued an order suspending all cash entries made by single men since June 23, 1881, where the lands lie within the counties of Sumner, Harper, King and Comanche.

WHEELER'S Patent Canner,

—FOR THE—

Cooking of Fruits, Jellies, Marmalades, Vegetables, Meats and Fish.

Cooks in Glass (without breakage), Earthen Jars and Tins.

Can be Adapted to the Largest Canneries as well as Cooking Stoves.

NO ORCHARDIST OR VEGETABLE GARDENER SHOULD BE WITHOUT ONE!

No standing over a hot stove. No danger of burning the contents. Its management extremely simple. It saves 50 per cent. in fuel and 25 per cent. in labor over any other Canning Apparatus.

The introduction of this new invention places the fruit raisers and vegetable growers in a position of independence, and gives disposition of their products so as to make their raising profitable at all seasons of the year and at all times.

THE MARKET

For canned fruits is world-wide, and the consumption of them is constantly increasing.

The great waste that has hitherto fallen to the fruit and vegetable growers is entirely obviated by a

WHEELER PATENT CANNER.

Fruit put up by the WHEELER CANNER Stands stronger tests than that put up by any other method, and challenges contradiction in this respect. We are ready to contract with responsible persons to

Put Up Canneries of any Capacity,

No money to be paid until all terms of the contract are fulfilled.

PRICES:

Capacity of Ten dozen per hour.....\$250 00
Capacity of Twenty dozen per hour..... 450 00
Capacity of Fifty dozen per hour..... 900 00

FAMILY CANNERS

Made to fit any stove, for \$7.50 and upwards. In sending orders send the name and number of stove.

For the Making of Jellies, Marmalades, etc.,

Steam the fruit until well cooked down; strain through a fine strainer, then mixed, proportionate sugar with juice, dissolving well the sugar in the juice. Fill jelly glass with this mixed material; then place these in the cylinders of the tray, which is put in the oven, on the upper flange. Place the oven on the top of the stove and cook with a slow fire. In a few minutes the juice will be cooked sufficiently to jelly. No scum arises, therefore there is no need of skimming, and a fine clear jelly or jam is obtained.

Hotel Keepers, Bakers and Fruit Men

Will find this a valuable assistant in putting up canned goods rapidly and in saving articles from going to waste, converting them into saleable goods. They are rapid in their operations—great labor savers. The family canner can be put upon any cooking stove.

WHEELER'S FRUIT DRIER.

To each Canner of Ten dozen and upwards per hour a WHEELER FRUIT DRIER can be attached at a very small cost, which will be heated by the fuel of the canner when in operation, which makes this invention one of the most useful combinations ever offered to the horticulturists of this State.

At the State, San Joaquin District and Mechanics' Fairs the Very Highest Endorsements were passed upon the utility of this new invention.

STATE AND COUNTY RIGHTS FOR SALE.

A discount of ten per cent. will be made upon all orders sent in by February; canners to be delivered by May 1st.

Address,

T. A. MUDCE,

322 Montgomery Street, San Francisco.

TEACH YOUR GIRLS TO SEW!

Just Out. The Finest Toy of the Age.

A CHEAP, HANDSOME AND USEFUL PRESENT!

By Mail, Post-Paid, to any Address on Receipt of Price.

THE AUTOMATIC FAIRY SEWING MACHINE

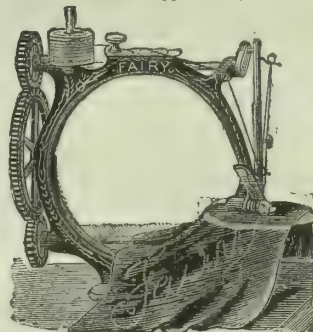
(Patents Applied for.)

Reduced to

\$6.00

FOR THE

HOLIDAYS.



Useful,

AMUSING,

Instructive

AND

SAFE.

"THE FINEST TOY OF THE SEASON."—N. Y. SUN.

It will do a variety of Family Sewing and is very useful for Embroidering Designs in Silk.

It is the Simplest Sewing Machine Ever Made.

NOT THE LEAST APPROACH TO COMPLICATION OF MACHINERY.

Any six-year-old child can comprehend and learn to use it. Every machine is finely ornamented and finished with Berlin Bronze and Nickel Plate. It makes the Celebrated "Elastic Twisted Loop Stitch" said to make the strongest seam. It sews from a single spool—No bobbins to wind. It feeds the work automatically without extra machinery. It runs easily and silently. It uses Singer Family Needles, which cost the least, and can be found the world over. It cannot be turned the wrong way, and is not liable to be put out of order. It is very durable, and, with care, will last for the use of generations.

THE MACHINE FOR THE MILLION!

Nothing like this to take care from the Mother's mind. The machine will clamp on any ordinary table, and is furnished complete with full directions, and put up in a neat, strong box, weight, 2½ lbs. Every machine is fully tested, and is threaded and furnished with a spool of silk, ready for instant use. Fully protected by several Patents.

The "FAIRY" is unequalled for the Amusement and Instruction of Children. With it they can Make Doll Clothing and learn to do Family sewing. Goes safely by mail. All orders for

"FAIRY MACHINES"

Must be addressed to

MARK SHELDON,

Largest Dealer in Sewing Machines and Supplies in the U. S.,

9, 11 & 13 First St., San Francisco, Cal.

GENERAL AGENT FOR THE ENTIRE PACIFIC COAST REGION. AGENTS WANTED.

BYRON JACKSON,

<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>
<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>	<p>The best, cheapest and most durable Wind Mill.</p> <p>Runs in the lightest winds. Fully reliable in storms.</p> <p>Never blows down.</p>

BYRON JACKSON,
625 to 631 Sixth St. SAN FRANCISCO.

GEORGE TREFZER,

Breeder of High Class

Langshans, Black Cochins, White and Brown Leghorns, Pekin Ducks and Toulouse Geese.

My stock is all first-class, and are mated to secure the best results. Eggs and fowls for sale at very low prices. Send stamp for Circular.

GEO. TREFZER,
Napa City, Napa Co., Cal.



SMITH'S POULTRY YARD,

Blanding Avenue, bet. Everett and Broadway,
ALAMEDA, CAL.

Importer and Breeder of Thoroughbred Fowls. Langshans (Grand Strain) American Sebrights, Plymouth Rocks, Brown and White Leghorns. Eggs for hatching. A. H. SMITH. CHAS. W. SMITH, Manager. Address: Brooklyn, Alameda Co., Cal.

California Inventors

Should consult DEWEY & CO., AMERICAN AND FOREIGN PATENT SOLICITORS, for obtaining Patents and Caveats. Established in 1860. Their long experience as journalists and a large practice as patent attorneys enables them to offer Pacific Coast inventors far better service than they can obtain elsewhere. Send for free circulars of information. Office of the MINING and SCIENTIFIC PRESS AND PACIFIC RURAL PRESS, No. 252 Market St., S. F. Elevator, 12 Front St.

W. M. Williams' Semi-Tropical and General Nurseries.

FIVE HUNDRED THOUSAND TREES for sale of the following varieties: Apples, Peaches, Pears, Plums, Apricots, Nectarines, Cherries, Figs, etc., of standard varieties; trees free from scale or other noxious insects. Also, grape roots and cuttings of all leading Raisin and Wine varieties Seedless Sultanias, Muscatelles, etc. W. M. WILLIAMS, P. O. Box 175, Fresno City, Cal.

PRINTERS, AUTHORS, INVENTORS, PATENTEES, BUILDERS, MANUFACTURERS, MACHINISTS, MERCHANTS, and other trades-people can have satisfactory Engravings and Electrotypes made at moderate prices by the S. F. ENGRAVING CO., No. 405 KEARNY ST. Send photographs, sketches, drawings, models or samples for estimates. Map and Woodcut Engravings enlarged or reduced by the aid of photography, at less than one-half the cost of the originals and in short time. Photo-relief, Zincograph and other improved methods employed.

LAND Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

Lands for Sale and to Let.

Redlands.

Good water, rich soil and magnificent view.
High elevation, dry air, few fogs and northerly.

No brush or fences on the land, which is especially adapted to the culture of the orange and raisin grape.

Near to church, school, store and depot.
Hotel open. Telephone Communication.

Stage from San Bernardino Tuesdays, Thursdays and Saturdays.

SEND FOR CIRCULAR.

JUDSON & BROWN,

Redlands,

SAN BERNARDINO, CALIFORNIA.

Good Crops Every Season
Without Irrigation.

Free by mail, specimen number of "The Californian Real Estate Exchange and More," full of reliable information on climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange and More," Santa Cruz, Cal.

Educational.

STOCKTON
BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.

The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address: P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

CALIFORNIA
COMMERCIAL COLLEGE

417 Kearny Street, San Francisco.
C. N. ANDREWS, President. C. B. BARNARD, Business Manager.

Send for Circulars.

W. E. CHAMBERLAIN, JR.

T. A. ROBINSON

PACIFIC
Business College,
320 POST ST.
SAN FRANCISCO.

LIFE SCHOLARSHIPS, \$70.

Paid in Installments, \$75.

Send for our circulars.

THE DAVIS
IRON WAGON.

E. A. SCOTT & CO.,

Sole Importers and Dealers for the Pacific
P. O. Box 293, Sacramento, Cal.

THE LA FRANCE STEAM FIRE ENGINE.
Circulars furnished on application.

REISTER'S
PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,

Chico, Butte County, CALIFORNIA

GILES H. GRAY.

JAMES HAVEN.

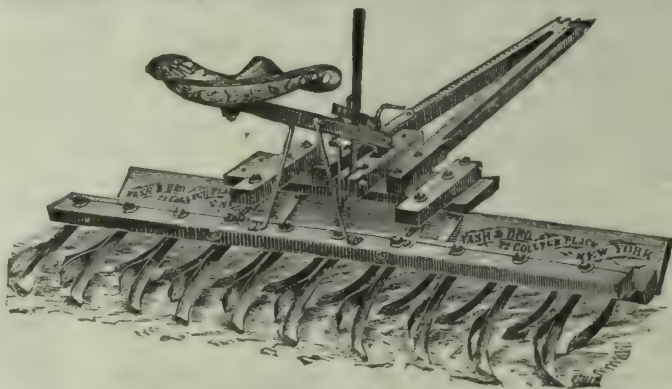
GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

530 California St., SAN FRANCISCO

"ACME"
PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.

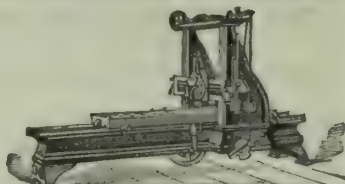
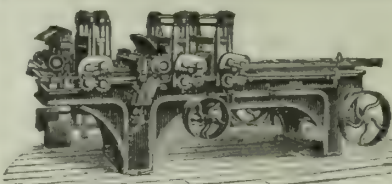


Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,
22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia. Sold in Utah, Montana and Idaho by George A. Lowe, Salt Lake City.



Berry & Place Machine Company,

PARKE & LAOY Proprietors.

No. 323 and 325 Market Street, San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,
Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS.

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.
201 AND 203 EL DORADO STREET, STOCKTON, CAL.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds,
Mice, Etc.

Endorsed by the Grange and all others who have used it
INFALLIBLE SQUIRREL and GOPHER
EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.
Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

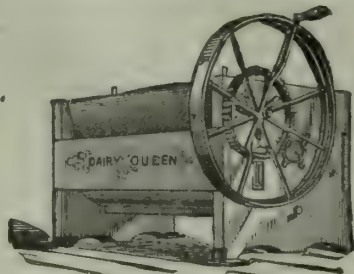
FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS.



"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.
RECEIVED TWO DIPLOMAS.



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Janesville, Cal.,

Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.



CLUB-FOOT SHOE.

AUTENRIETH'S CELEBRATED

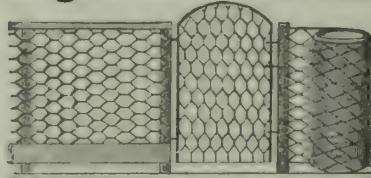
Fig. 2

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Foot and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins, Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

Sedgwick Steel Wire Fence



Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will turn dogs, pigs, sheep, and poultry, as well as the most vicious stock, without injury to either fence or stock. It is the fence for farms, gardens, stock ranges and railroads, and very neat in appearance, makes school lots and cemeteries. Covered with wire mesh and is not injured by rust. It will last a lifetime. It is superior to Boards or Barbed Wire in every respect. We ask for it a fair trial, knowing it will wear itself into favor. The Sedgwick Gates, made of wrought-iron pipe and steel wire, defy all competition in neatness, strength and durability. We also make the best and strongest All Iron Automatic or Self-Opening Gate, also Cheapest and Neatest All Iron Fence. For prices and particulars ask Hardware Dealers or address the Manufacturers,

SEDGWICK BROS.,
Richmond, Ind.

Mention this paper.



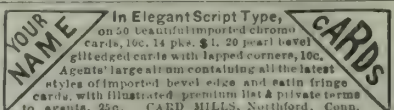
Is the best Pump in the World. Another
New Improvement is Lewis Patent
Spray Attachment.

Can change from solid stream to spray instantly. Regular retail price, \$6. Weight, 4 1/2 lbs. Length, 52 inches.

FOR SALE BY JOHN H. WHEELER,

111 Leidesdorf St., S. F.

P. S. A sample can be seen at this office.



JOHN ELLIS,

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.
Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wiltred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St. S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

FOUNTAIN GROVE POULTRY YARDS, Santa Rosa, Cal. High-class Poultry. Eggs for hatching. Langshans, \$3.50; Light Brahmas, \$2.50; Brown Leghorns, \$2 per setting.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE



20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

Silos Reservoirs, Head Gates, ARTIFICIAL STONE AND CONCRETE.

RANSOME, 402 Montgomery St., S. F. Send for circular

BOONE & MILLER,

Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9

No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

HOG RINGING A FAILURE!

OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror," \$1 each.
"Tendon Cutter," \$3.00 each.

Sold by the trade generally, or address
G. G. WICKSON,
General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

NAPA VALLEY POULTRY YARDS.



I have for sale all the leading varieties of Pure-bred Poultry: Single Birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn chickens, and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list.

R. G. HEAD,
Napa, Cal.

POULTRY.

Hogs & Cattle.



Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. B. Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland Turkeys. Peacocks, Etc. Also Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

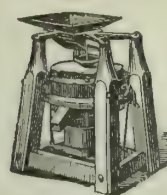
WILLIAM NILES,
Los Angeles, Cal.

LANGSHANS.



My Langshans are genuine Major A. C. Crook's strain. A fine lot of these beautiful and valuable Chicks for sale. Also, Light Brahmas, Plymouth Rocks and Brown Leghorns. Breeding stock all imported. Eggs for hatching.

MRS. J. RAYNOR,
1416 Folsom St., S. F.



Queen OF THE South PORTABLE FARM MILLS
For Stock Feed or Meal for Family use.
10,000 IN USE.
Write for Pamphlet.
Simpson & Gault Mfg Co.
Successors to STRAUB MILL CO.
CINCINNATI, O.

CAUSTIC SODA,

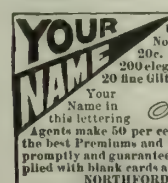
Common and Powdered.

ALL OTHER SOAP-MAKING MATERIALS.

T. W. JACKSON & CO.,

304 California Street, - - San Francisco.

SOLE AGENTS FOR THE PACIFIC COAST.



On 50 large size CARDS. Rememberance, Sentiment, Handkerchief, &c. No 2 alike, 10c, 14 pks. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine Gilt Bevel Edge Cards, turned corner, 10c.

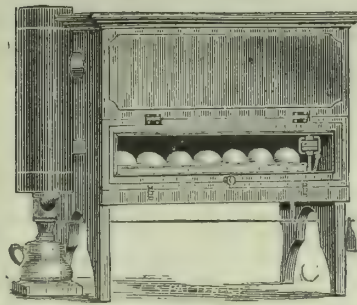
CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, **DR. J. McLEISH**, No. 215 West Fourth Street, Cincinnati, O.

SPLENDID! 50 Latest Style chromo cards, name, in case, 10c Premium with 3 packs. E. H. Pardee, New Haven, Ct.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1871, in lots to suit. Address
J. A. POPPE, Sonoma, Cal.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity, \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over

PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium, Diploma and only Special awarded in the entire Fair, in competition with

NATIONAL (Axfords)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon ovens, heat entering center; 240 eggs, \$60; 110 eggs, \$75; 630 eggs, \$90; Circular free. Address,

I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps **I. S. JOHNSON & Co.**, Boston, Mass., formerly Bangor, Me.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office.

For particulars apply to **CHAS. DUSENBERG & CO.**, Sole Agents, 314 Sacramento Street, San Francisco.

LITTLE'S SHEEP DIP.



Price Reduced

TO \$1.25 PER GALLON.

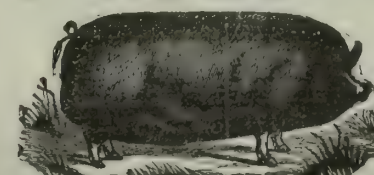
Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to **FAULKNER, BELL & CO.**, San Francisco

AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy, but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As Fanciers, Amateurs and others are ready to use a good, reliable, self-regulating incubator, that can be produced cheap, we now offer one that holds 150 eggs. The Baby Price, \$28. Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast,
630 Howard St., San Francisco.



We have for sale at our farm at Mountain View thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pigs from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, **I. J. Truman**, S. F.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,000
In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, \$1,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co
J. H. GARDNER, Rio Vista
T. E. TYNAN, Stanislaus Co
URIAH WOOD, Santa Clara Co
J. C. MERYFIELD, Solano Co
H. M. LARUE, Yolo Co
I. C. STEELE, San Mateo Co
THOS. MCCONNELL, Sacramento
O. J. CRESSEY, Merced Co
SENECA EWER, Napa Co
A. D. LOGAN, Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

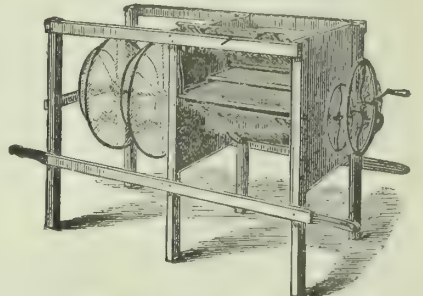
ALBERT MONTELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief" GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

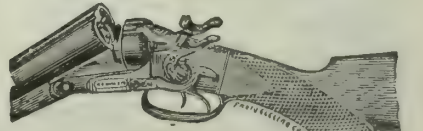
And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

THE DAVIS GUN.



The best Shooting Gun for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. **E. T. ALLEN**, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

Mission Rock Dock and Grain Warehouse,
San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt

CALIFORNIA DRY DOCK CO. - - Proprietors

Office—812 California Street, Room 2

DON'T FORGET Where to Send for 50 very best NEW CARDS, just issued for 1883, for 10c. 15 pks. \$1. All Chromos. The loveliest fancy designs ever seen. To excel in quality is our aim. Name in new list type. Sample Book of all styles. Bevel Edge Imported Holiday and Birthday Cards, with 24 page illustrated French list, 25c. Outfit 10c. **E. F. EATON & CO.** Northford, Conn.

A Valuable and Useful Present for Christmas or any Other Time!

A Splendidly Illustrated Book Free with Each Machine, Obviating the Necessity of Personal Instruction.

Delivered, Freight Paid, upon Receipt of Price, to any Railroad Station or Boat Landing in California or Nevada.

AGES AHEAD OF ALL OTHERS

PERFECTION AT LAST.

SIMPLICITY SIMPLIFIED!

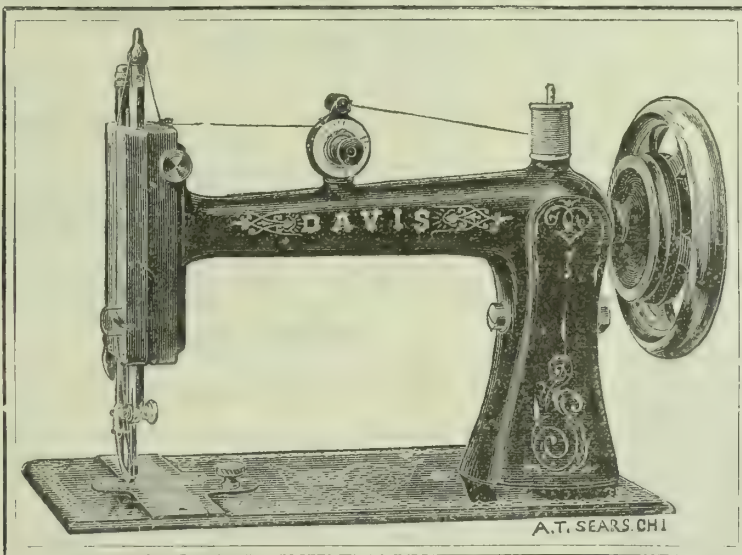
THE NEW DAVIS HIGH ARM

Self-Threading Sewing Machine.

THE LIGHTEST

The Simplest!

LEADS BY



THE LATEST

The Best!

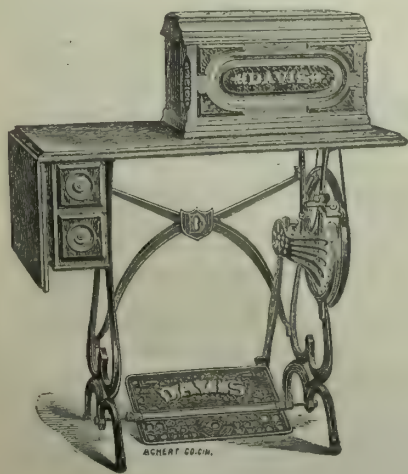
100 YEARS

Of Special Interest to Sewing Machine Dealers and Everybody Else.

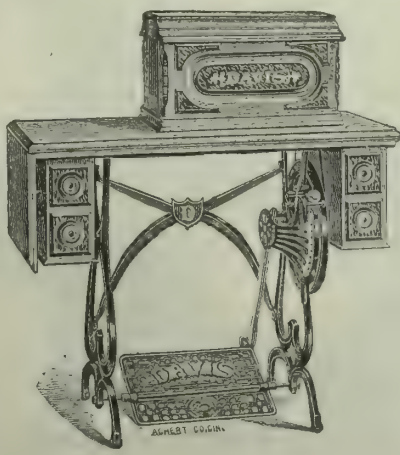
Above is given a cut representing the head of the New High-Arm "DAVIS," a machine whose points of superiority are but feebly outlined in the following item clipped from the Water-town, N. Y., Daily Times:

"THE NEW 'DAVIS' SEWING MACHINE.—People who are acquainted with the machine heretofore manufactured by the Davis Sewing Machine Company, would naturally suppose there was no occasion for their attempting to produce a machine of greater excellence, inasmuch as it is a well-known fact, that no other sewing machine possessed equal sewing qualities; but the experience of the manufacturers has enabled them to produce in the new high arm machine, one possessing even more fully the highest perfection attainable. In the new machine, the superior vertical feed principle is retained, and the mechanical construction is perfect. The material used is of the finest quality, the greatest strength and durability insured. At all places where wear is possible by long use, proper devices for adjusting are provided. The complete machine is very attractive in appearance, being of beautiful design and highest finish. It is exceedingly light running, and adapted to a greater range of work than any other machine: in fact, its capacity, coupled with its latest improved accessories, enables the operator to produce easily everything known in the line of plain or ornamental needle work. No description we can give would convey fully a correct idea of this the latest triumph in sewing machine mechanism. The extensive facilities of the company have been used to their full extent to supply the demand for their machine; their constantly increasing popularity will be greatly quickened by the introduction of the new high arm machine. Its advantages will make it the favorite. It was exhibited for the first time at our county fair and received the first prize over all competitors."

I take pleasure in announcing that I have secured the General Agency for this admirable machine, and am prepared to fill orders promptly, and to answer inquiries cheerfully.



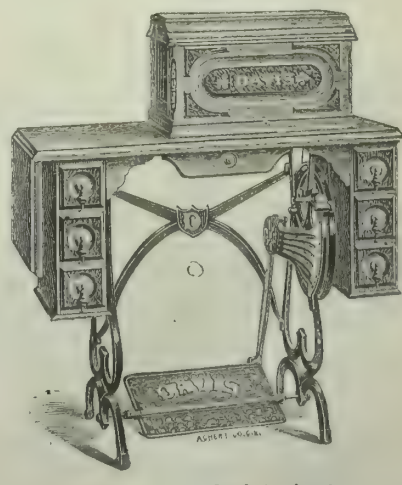
No. 4 {Cash Price} \$50.



No. 8 {Cash Price} \$55.



No. 9 {Cash Price} \$75.



No. 10 {Cash Price} \$60.

A Full Set of Attachments, Including Ruffler, Tucker, Binder, Hemmers and Braider with each Machine, in Addition to the usual List of Accessories.

If I have no Agent in your place, order direct from me. Every Machine Guaranteed to give entire satisfaction. In ordering please give shipping directions plainly. Forward money by Express, P. O. Money Order, or Check on San Francisco.

MARK SHELDON,

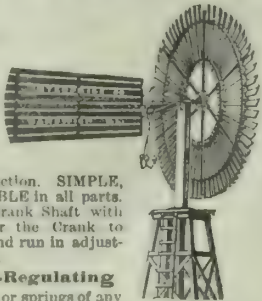
General Agent for the Entire Pacific Coast Region,

9, 11 and 13 First St., SAN FRANCISCO, CAL.

HORTON & KENNEDY'S

FAMOUS
ENTERPRISE
Self-Regulating
WINDMILL

Is recognized as the
Best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,
GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.
San Francisco Agency, LINFORTH, RICE
& CO., 323 & 325 Market St., S. F.

Moore's Prepared

SQUIRREL
POISON



The most successful Poison in use for Squirrel Killing
C. E. WILLIAMS & CO, Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

MRS. C. V. TURNER,

Inventor and Manufacturer of the

**EXCELSIOR**

Perfect Fitting
CORSET.

(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice the above Corset.
Rules for self-measurement sent on application, and Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St.,
SAN JOSE, CAL.

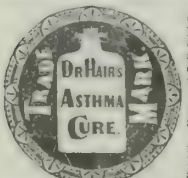
All parties are cautioned against making or causing to be made the above Corset without my License Stamp under full penalty of the law.

STOCKTON SAVINGS AND LOAN SOCIETY.

I. U. SHIPPEE, President
FRED M. WEST, Cashier

Authorized Capital \$500,000
CAPITAL PAID UP \$500,000

Receives Deposits payable ON TIME and ON DEMAND. Pays interest at the rate of 5 per cent per annum after 30 days from date of deposits. Buys and sells United States Currency, Domestic and Foreign Exchange and transacts a General Banking Business.



ASTHMA. The greatest proof of the genuine merit of an article can be found in the amount of patronage it receives, and the thousands of testimonials respecting Dr. Hair's Asthma Cure, proves most conclusively that it is all that it is represented to be. Dr. Hair's Treatise on Asthma and Hay Fever contains a list of cures from every State and Territory in the United States, also from every Dominion of Canada, England and Scotland. Treatise sent free, address Dr. B. W. HAIR & SON, Cincinnati, Ohio.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET, STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations.
A. & J. HAHN, Proprietors.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 509 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorety, 522 Commercial St., S. F.

J. P. SWEENEY & CO.,**Seedsman,**

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.

GARDEN SEEDS.**THOS. MEHERIN,**

Importer, Wholesale and Retail Dealer in

SEEDS, TREES AND PLANTS,

Alfalfa, Red and White Clover.

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass, Red Top, etc.

Also a large and choice collection of FRUIT and ORNAMENTAL TREES.

BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES.

Budding and Pruning Knives, Greenhouse Syringes, Hedge and Pole Shears.

Price List Ready Jan 1st.

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for R. D. Fox's Nursery.

KELLER'S NURSERIES,

Oakland, Cal.

FOR SALE, AT BEDROCK PRICES,

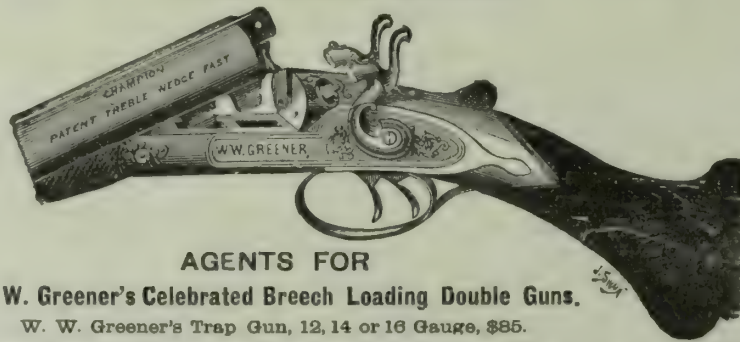
Fruit Trees, Ornamental Evergreen Trees, Plants and Shrubs; also several thousand Gum and Cypress trees, Flowering Bulbs, Roses Fresh Seeds. Please send for catalogue and price list.

P. J. KELLER, Seedsman and Florist,

Nursery near Cemetery; Seed and Floral Store, 509 & 511 Seventh Street, bet. Washington & Clay, OAKLAND, CAL.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco

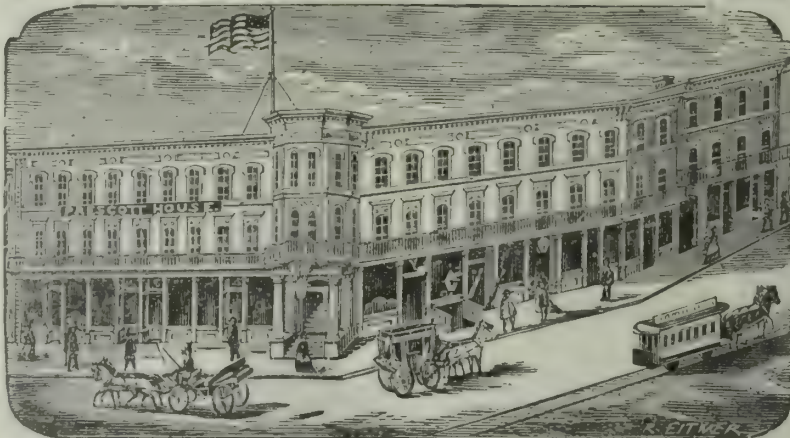


AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

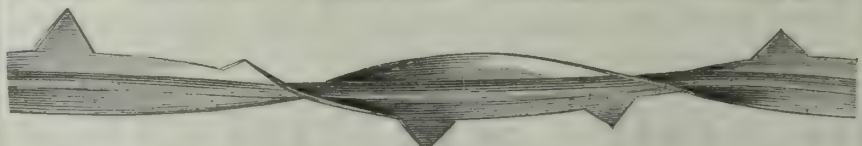
A full stock of Colt's Parker and Remington Guns, Sharp's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

PRESCOTT HOUSE.

S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

THE BUCK THORN BARBED FENCE.

One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

BARREN HILL NURSERY,

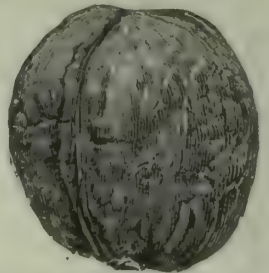
Nevada City, California,

FELIX GILLET, Proprietor.

SPECIALTIES—Nuts of all Kinds (Walnuts, Chestnuts, Almonds and Filberts).

STANDARD PREPARTURIENS,
Or Early-Bearing Walnut.

Introduced into California from Europe in the Spring of 1871, by Felix Gillet, Nevada City, Cal.



The most precocious of all soft-shell varieties of Walnuts, bearing sometimes at three years from the planting of the nut. A late bloomer; a regular and prolific bearer. First bearing trees in California at Felix Gillet's Nurseries, eighth crop, 1882. The hardiness and late blossoming of the Preparturiens render it possible to cultivate the Walnut in localities where it has been heretofore deemed impracticable, while its precociousness strongly recommends it to all those who are impatient of the time required to bring the common sorts into bearing. One, two, three and four-year old trees of that valuable variety for sale, all

California-Grown Trees!

From six inches to eight feet. One year old Trees, heavily rooted, sent by mail to any part of the United States, free of charge, packed in damp moss and oil paper, at the following prices: 75 cents to \$1 per tree for less than half a dozen; \$8 to \$10 per dozen, according to sizes.

Also, Serotina or Late Walnut—Giant or Jeweler's Walnut Chaberte Walnut—Mayette Walnut—Black Walnut.

BUTTERNUT, HICKORY, PECAN.

GRAFTED CHESTNUTS—(Marron de Lyon and Marron Conchal).

Italian and American Chestnuts:

Paper-Shell Almond—Spanish and Italian Filberts—Pears, Cherries, Prunes, Plums, Raspberries, Gooseberries, Currants, Etc., Etc.

French, English and Dutch Strawberries (magnificent varieties). Forty varieties of Grapes.

A Novelty in the Vegetable Line:

"Invincible" Peas, per quart, \$1.00 per pint, 65 cents, per packet of five ounces, 25 cents, including postage.

MORUS NANGAKI or JAPONICA—Large Leaf Mulberry of Japan, for Silkworm raising. Grows splendidly from cuttings. Trees and cuttings for sale.

SILKWORM EGGS.

Italian and French Annuals from FELIX GILLET'S COCONERY, Nevada City, at \$5 and \$6 per ounce, mailed free of charge.

New Illustrated "DESCRIPTIVE CATALOGUE AND PRICE LIST" mailed free to all applicants.

FELIX GILLET,

Nevada City, Cal.

GILL'S NURSERIES.

Special Offer of

Blue and Red Gums. Also Monterey Pines and Cypress 1, 2 and 3 years old, in large lots at low rates. Prices on application. Address

E. GILL, Nurseryman,

28th St., near San Pablo Ave., Oakland, Cal.

LOS GATOS NURSERIES.

I offer the trade this season a large and general assortment of Fruit and Ornamental Trees, and Small Fruits. My Trees are healthy, stalky and well grown. Address,

S. NEWHALL, San Jose, Cal.

Napa Valley Nurseries.

FRUIT TREES, GRAPE CUTTINGS, \$1 to \$5 per 1,000 Rooted Vines, Riparia and other stock. Unirrigated and healthy. For particulars and prices, address, LEONARD COATES, Napa City, Cal.

M. COOKE

R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOK & SONS, Successors to COOKE & GREENE

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co., 163 Tremont Street, Boston, Mass.**



Best in the World! Latest Improvement. Powerful. Warranted one year.

RUPTURE Guaranteed cured in 30 to 60 days by Dr. Pierce's Method.

"Pierce's Journal" for November, with full particulars, free. **MAGNETIC ELASTIC TRUSS & BELT CO., 704 Sacramento St., San Francisco, Cal.**

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDSField, Grass, Flower and Tree Seeds,
CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants
to our unusually low prices. Trade price
list on application.We issue the most complete guide to the Vegetable
and Flower Garden ever issued upon this coast. It is hand-
somerily illustrated, and contains full descriptions of Vege-
tables, Flowers, Grasses, Trees, etc., with full instruc-
tions as to their culture; mailed free on application.SEVIN VINCENT & CO.,
607 Sansome Street, S. F.**GOOD SEED**Of best varieties, true
to name, is the basis of
Nice Vegetables.
Beautiful Flow-
ers, and BIG
Farm Crops.
All seeds tested
for vitality and
purity, and only
the BEST offer-
ed. We are the
largest farmers,
seed growers and
seed dealers any-
where. Spring Cata-
logue of over 2,000 va-
rieties of Flower, Vegetable, Farm and Tree Seed, FREE.
Catalogue of Flowering Bulbs and Plants for house and
garden, FREE. Sibley's Farmers' Almanac, \$5.00 prize
essays on special crops, Northern or Southern edition,
10 cts. Grain and Farm Seeds Manual—history, descrip-
tions, culture of best Grains, Grasses, Potatoes, 10 cts.
HIRAM SIBLEY & CO., Seedsmen,
CHICAGO, ILL. or Rochester, N. Y.**TURNER'S NURSERIES,**

San Bernardino, - - - Cal.,

Box 275.

Fruit and Ornamental Trees
OF ALL KINDS.150,000 Trees in Dormant Bud to be delivered when one
year old at the lowest rates. This offer is equal to 1 year
old trees for the price of Dormant Buds. Also, 80,000
June Budded Trees at the very lowest rates.BUDS HAVE ALL BEEN TAKEN FROM BEARING
TREES.Principal Nursery located just south of Colton.
DAVE TURNER.**GUARD AGAINST
PHYLOXERA**
By Planting Resistant Vines.I offer for sale all the leading varieties of Riparia,
Rupestris and Aestivalis, especially Lenoir,
Hertemont and Elvira.Price List and Circular Sent on Application.
Stock guaranteed true to name and in good condition.
Orders should be sent early, as the stock is limited. For
particulars apply toGEORGE HUSMANN,
Napa Cal.**PEPPER'S NURSERIES.**

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees
and Shrubs, Shade Trees, Roses, Flowering Shrubs,
Plants, etc. Grown without irrigation, clean and
healthy. The demand is likely to exceed the supply of
some kinds of Fruit Trees. Prices and kinds will be
given on application. Address W. H. PEPPER,
Petaluma, Sonoma County, Cal.**JAMES HANNAY'S NURSERIES.**

East San Jose, Cal.

For sale, a large and general assortment of healthy
well grown Fruit Trees, comprising Apple, Pear, Peach,
Plum, Prune, Apricot, Cherry, etc., of all the leading
varieties now mostly in demand. Address,
JAMES HANNAY, San Jose, Cal.**CHOICE FRUIT ROOT GRAFTS!!**Complete assortment of Apples, Pears, Plums, Prunes,
Cherries, Quinces, etc. Send for free Price List. Now is
the time to order. Address,**PHENIX BROS. & EMERSON,**
Nurserymen,
BLOOMINGTON, ILLINOIS.**PASADENA NURSERIES.**
A General Assortment of Semi-Tropical and Northern
Fruit Trees.A fine assortment of Canning Varieties and those suited
to this climate. Also Forest Trees, Hedge Plants and
Ornamental Shrubbery. Address,**BYRON O. CLARK & CO.,**
Pasadena, Los Angeles Co., Cal.

CEO. F. SILVESTER,
IMPORTER, WHOLESALE AND RETAIL DEALER IN
SEEDS,
Fruit and Evergreen Trees, Plants, Etc.
ALFALFA, GRASS AND CLOVER SEEDS
In Large Quantities and Offered in Lots to Suit Purchasers.
Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.
Seed Warehouse, 317 Washington St., San Francisco.

FRUIT TREES FOR SALE.
Of the Leading
ORCHARD AND FAMILY VARIETIES,
COMPRISING:
PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.
APRICOTS.—Royal, Moorpark, etc.
NECTARINES.—Hardwicke, New White, etc.
PEARS.—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.
PLUMS.—Yellow Egg, Washington, Jefferson, etc.
PRUNES.—Petite, German, Hungarian, etc. Also,
TREES IN THE DORMANT BUD.
—Of all the—
Standard Varieties of Fruits.
R. J. TRUMBULL & CO., Seedsmen,
419 & 421 Sansome Street, San Francisco.

W. R. STRONG & CO.,
WHOLESALE SEED MERCHANTS.
Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. can be obtained at our establish-
ment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a
Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Deal-
ers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for
Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers
attests to the fairness of our prices and quality of our goods.
Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES, **ORANGE HILL NURSERIES,**
Sacramento, Cal. Penryn, Placer Co., Cal.
W. R. STRONG & CO., Proprietors,
Successors to WILLIAMSON & CO.
A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and
free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Priced
catalogue on application. Address,
W. R. STRONG & CO., - - - - - **Sacramento, Cal.**

SEEDS
DEALER IN
Timothy, Clover, Flax, Hungarian, Millet, Red Top,
Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.
POP CORN.
WAREHOUSES: Office, 115 Kinzie St.,
115, 117 & 119 Kinzie St. CHICAGO, ILL.
104, 106, 108 & 110 Michigan St.

W. R. ALLEN & CO.,
IMPORTERS OF
Iron Pipe and Fittings,
Lift and Force Pumps,
Brass Cocks and Valves,
For Steam, Water and Gas,
Sheet Zinc, Iron Sinks,
Plumbers' Goods.
Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

PACIFIC COAST LAND BUREAU.
President, Wendell Easton; Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank,
Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.
SAN LUIS OBISPO LANDS.
180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every
branch of farming can be made prosperous, from stock-raising or dairying down to fruit culture. On the coast of San
Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, un-
surpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of
pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted
to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.
For Sale.—The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth
cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.
Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands
at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$6.50 an acre; 840 acres fine grazing
land, 7 miles from San Luis Obispo, \$6 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.
These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate,
water and timber, this section is not excelled on the Pacific Coast.
Send for Catalogue.

SANTA CLARA NURSERIES,
San Jose, Cal.
On account of having to move from leased ground the
coming winter, we offer a large and fine lot of the follow-
ing varieties of evergreens at greatly reduced rates:
Austrian Pine..... 2 to 3 feet.
Lawson Cypress..... 2 to 3 "
Myrtle, Common..... 2 to 4 "
Repluolepis orata..... 1 "
Magnolia Grandiflora..... 3 to 5 "
Golden Arborvitae..... 3 "
Monterey Pine..... 3 to 4 "
Monterey Cypress..... 2 to 3 "
Balsam Fir..... 2 "
Blue Gums (transplanted)..... 6 "
California Palm..... 2 to 3 "
California Palm..... 3 to 4 "

WE HAVE ALSO FOR SALE
The usual large and well assorted stock of
Miscellaneous Fruit Trees, Small Fruits,
Ornamental Shade Trees, Evergreens,
Roses, Bulbs, Greenhouse Plants,
Etc., etc.
RICHARD D. FOX,
San Jose, Cal.
THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.

ROCK'S NURSERIES.
TREES!
For Sale,
A LARGE ASSORTMENT OF
Thrifty, Well-grown Fruit, Shade and
Ornamental Trees.
NEW AND RARE EVERGREENS,
Palms, Bamboos, Shrubs, Roses, etc. Small Fruits, in-
cluding a large variety of Grapevines, for table, for wine
and for raisins.

STRAWBERRIES
Of newest and best varieties for market and for profit
Descriptive Catalogues will be sent as follows:
No. 1. Fruits, Grapevines, Berries, etc. 3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc. 3 cts.
JOHN ROCK,
San Jose, - - - California

THE DINGEE & CONARD CO'S
BEAUTIFUL EVER-BLOOMING
ROSES
SPLENDID POT PLANTS, specially prepared
for immediate bloom. Delivered
safely by mail postpaid, at all post offices, 5 splen-
did varieties, your choice, all labeled, for \$1; 12
for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for
\$10; 100 for \$13. WE GIVE a Handsome
Present of choice and valuable ROSES free
with every order. Our NEW GUIDE, a complete
Treatise on the Rose, 76 pp. elegantly illustrated—free
to all. **THE DINGEE & CONARD CO.**
Rose Growers, West Grove, Chester Co., Pa.

THE O. W. CHILDS NURSERY.
FOR SALE.—A first-class, thrifty, healthy stock of
Temperate Climate and Semi-Tropic Fruit Trees. Apricot,
Peach, Pear, etc., one year old. Orange and Lemon one to
four years from bud. Also Seedling Orange Trees.
Semi-Tropic Tree Culture a Specialty.
Price List Mailed Free. O. W. CHILDS, Proprietor.
Address, THOS. A. GAREY, Agent,
P. O. Box 452, Los Angeles, Cal.

RIVER BANK NURSERIES.
The undersigned offers for sale a fine assortment of
Apples, Pears, Cherries, Peaches, Plums, Prunes,
Apricots, Grapes, Small Fruits, Shade Trees, Evergreens,
Roses, Shrubbery and Greenhouse Plants, etc.
NURSEY corner of Twelfth Street and Berryessa
Road, and on Milpitas Road, adjoining John Rock's
Nurseries.
L. F. SANDERSON, San Jose, Cal.

TREES AND SEEDS TRUE TO NAME
APPLES—4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. PEACHES—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. PLUMS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. APRICOTS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. GRAPES—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. SMALL FRUITS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. SHADE TREES—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. EVERGREENS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. BULBS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. GREENHOUSE PLANTS—3 to 4 ft., 18 to 20, Autumnal, Harvest, Lorraine, Pomeroy, Wistful, Py-
gmy, Ben Davis, etc. **W. A. SANDERSON, SAN JOSE, CAL.**

50,000 APRICOTS
And a large stock of Peaches, Apples, Plums, Keifer and
Leconte Pears, Grapes and Small Fruits; sizes suitable to
send by mail, express or freight. Also Pear, Apple,
Cherry and Quince Stocks. Grafts put up to order in
large and small lots. Catalogues showing how and what
to plant, with much valuable information, gratis.
Great Northern and Southern Nurseries,
Wilmington, Delaware. **RANDOLPH PETERS.**
1838-1883. **POMONA NURSERY.**
5,000 KIEFFER'S HYBRID PEARS
in orchard, 5,000 in nursery propagated ex-
clusively from healthy STANDARDS. NO
BUDS or SCION3 taken from DWARFS.
APRICOTS in dormant buds, by mail or
express. Catalogue free. **W. L. PARRY,**
Perry P. O., N. J.

PACIFIC RURAL PRESS

DAIRYMEN'S EDITION—TWENTY-FOUR PAGES.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, DECEMBER 16, 1882,

Number 25

Two Pictures.

We give our readers on this page the opportunity to contrast two scenes—one representing an existing dairy establishment with its extensive barn, large dairy manufacturing rooms and necessary adjuncts, the whole presenting a view of the achievements of a successful and great industry, ministering to the wants of the people by the furnishing of a delightful and wholesome article of food and yielding a livelihood to a neighborhood of industrious people. Such scenes are representative of the present greatness and prosperity of the dairy industry, and the creation of such establishments is one of the shining marks of the industrial development of our country. Millions upon millions of money and millions of people are now involved in the prosecution of legitimate dairying, and he who speaks lightly of endangering the prosperity of this interest, or endeavoring to undermine its wholesome work for the nourishment of the people, is blinded by greed, or naturally deficient in his faculties.

And yet men arise in public place and proclaim that the time-honored practices of the dairy are wrong; that it is unnatural to draw the milk from the udder for the human food, but that the animal must be

our splendid dairy establishments and the substitution of the poverty, the squalor and the listless indolence which the scene depicts? And yet men talk in apparent earnestness of such things as these. The pictures hold up the idea to the mind more forcibly than words. Think that the capital gained by industry, the pro-

THE Northern Pacific R. R. Co. having secured nearly all the right of way over the surveyed route, are beginning preparations to build the line from Portland to Kalama. This will connect the entire system of railways in Oregon and Washington Territory with Puget Sound. The transfer across the Columbia will be made by a

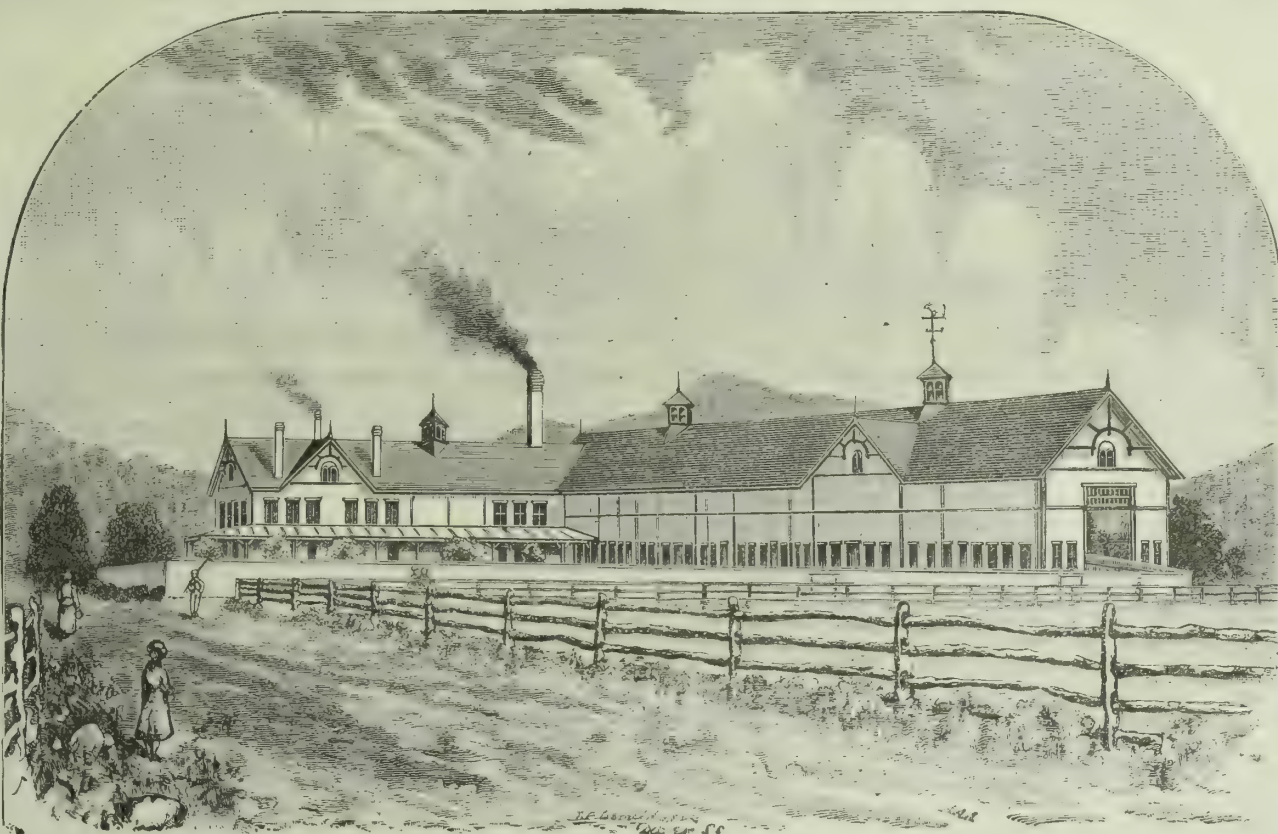
Sericulture.

The regular monthly meeting of the California Silk Culture Association was held on Thursday, Dec. 7th, in the hall of the Academy of Sciences, President G. W. Frink presiding.

After the reading of the minutes a business report was given of the details and results of the late Authors' Carnival, and a committee appointed to take charge of the valuable costumes which had been used in the Chinese and Homer booths.

The Corresponding Secretary then reported 64 letters answered during the months of September, October and November. The Treasurer also made a statement showing the financial prosperity of the Association.

Mrs. Gordon then reported on the successful exhibit of silk at the late San Joaquin Valley fair in Stockton, at which 13 counties were represented and prizes awarded to the following ladies: Mrs. S. A. Sellers, of Contra Costa; Mrs. N. E. Downing, of Marin; Mrs. Parrington, of Sonoma, and Mrs. C. E. Babb and Mrs. Julia Farnsworth, of Santa Clara counties. Some very fine cocoons were then displayed and compared with specimens sent from various parts of the world, thus demonstrating the superiority of those raised in



THE OLD WAY—THE CREATION OF PROPERTY AND PROSPERITY BY THE LEGITIMATE DAIRY INDUSTRY.



THE PROPOSED REFORM—SCENE ON A DAIRY FARM ON THE PLAN ADVOCATED BY THE OLEOMARGARINE PHILOSOPHERS.]

slaughtered and from its entrails you must scrape the grease to supply your table instead of using the fragrant, delicious product from the cream. They even go so far as to argue that dairymen would do better to abandon their enterprises and embark in growing cattle, which might be slaughtered for their tallow, which might be sold to the bogus butter makers. This is a piece of intolerable nonsense. Our artist has caught a scene from one of the ideal dairy farms of these reformers of dairy methods. Is it a pleasant scene to contemplate? Is it inspiring to think of the abandonment of

gress which is instinct with skill and intelligence, and the growth of the specialty, which is now the pride of our country, is to be endangered and harrassed by a subtle scheme of counterfeiting from which a few men hope to grow rich. Will the people allow it? We think not.

THE action of Bishop Dunham, in excluding from the sacrament Irish Catholic parents who allow their children to attend the Normal School is causing great excitement in Ottawa, Ont.

large iron ferryboat, capable of holding 20 cars, which is now in course of construction in New York. It will be sent here by rail in detached sections. Work next summer will be delayed by high water, but it is expected the link will be done November 1st, next year.

OWING to the statement that China is making great preparations to resist the French designs on Tonquin, the French Government is urged to take active measures. A telegram from Saigon reports that 10,000 Chinese have crossed the Tonquin frontier.

California. The Committee on Trees reported that every variety could be obtained from Mrs. Sellers, of Antioch, Contra Costa county, and Mrs. Laurie, of Santa Clara; also of Mrs. Downing, of Marin county. It is the intention of the Association to compete for the \$500 prizes offered by the National Association at the exhibition to be held next February in Philadelphia. Mrs. Henry Merwin, of Sacramento, and Mrs. J. M. Parker, of San Francisco, were elected members of the Association.

The meeting then adjourned until the first Thursday in January, 1883.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

A Mountain Trip.—No. 2.

EDITORS PRESS:—From Patchen we rode along the summit, past cultivated farms, orchards and vineyards, to J. B. Burrell's cosy cottage. This is the pioneer home of this region, now one of the most noted and attractive districts. The orchard and vineyard, first planted as an experiment, is through re-grafting and renovating with best varieties of fruit, a model fruit farm for profit. Here we were charmingly entertained by our intelligent and enterprising friend and his young wife. One in quest of information, as to the culture of fruits upon the mountains and the comparative merits of select varieties, could spend days to advantage right here. The superiority of mountain grown fruits over those of the valleys can be already seen upon trees and vines. So advantageous are the choice localities for fruit here, that unimproved lands, which four years ago could be purchased at from \$10 to \$20 per acre, are now held at \$40 to \$100. The product of bearing grape vines of fine table and shipping varieties average \$200 and \$300 per acre yearly, while orchards of peach, apple and plums have in a single season sold for \$500 and \$1,000 per acre.

The steepest hillsides produce the finest quality of grapes. Mr. Burrell grows grapes for table use, shipping and canning, to the exclusion of wine varieties, as do also his neighbors, finding them more profitable. While grapes for wine sell at \$15 to \$25 per ton, the choice varieties for table use bring from \$30 to \$75 per ton. I was glad to find a strong moral sentiment in favor of making the best use of grapes, and against wine making. This season has been an unfortunate one, on account of early and continued rains rotting many grapes upon the vines and cracking others, making them unfit for market. The season here is three or four weeks later than in the valleys, and thousands of dollars' worth of the finest grapes have been lost by our mountain friends. It was in the midst of their misfortune that we chanced upon them, and while we were in full and deep sympathy with them, I felt a keen pride in witnessing the cheerful and heroic spirit shown—a truly Californian way of bearing misfortune.

Here, as at Patchen, I found a new school-house, nicely finished and well furnished inside. The building of the narrow-gauge railroad from San Francisco to Santa Cruz, which tunnels under the mountain near here, has undoubtedly done much to give stimulus to improvements. It certainly brings a market to the doors of producers of fine fruits, and the people all praise the management of the road, which seems to be exceptionally fair. We all take a just pride in speaking of it as "our road." Wright's fine hotel and Reed's large mansion are among the substantial improvements hereabouts. The elder Burrell, the pioneer patriarch of this place, is still hale and hearty, and recently celebrated his 82d birthday, an event which called about him hosts of friends and relatives. From the Burrell to the

Highland District

We took the new road past Profs. Norton's and Allen's residences. Our initial point here was to visit our warm friend Judge Anson S. Miller and family. There, in a handsome house of modern appointments, near a magnificent grove of oaks, surrounded by broad grounds, under improvement, and overlooking the Sequel and Santa Cruz valleys, and Monterey bay in full view, near enough to see the sails upon its waters, with Salinas valley and redwoods, ocean, scenery and varied views, the Judge, with his venerable look and snowy head, is as cheerful and erect as a sprightly youth, while his mild, earnest wife seems a fit companion and appreciative helpmate.

Several years ago the Judge bought the Hester estate, and with broad, humane and social instincts divided up and sold off his surplus acres, till here is now a new neighborhood and school district with a fine new school-house, and while he has thus surrounded himself with enterprising home builders, he has made money and has still as many acres as himself and sons need. Would that some others upon these mountains, who are now "dogs in the manger," would profit by his noble example.

Upon this farm has been demonstrated the profits of grafting wine grapes to table varieties, also of producing best late sorts of apples and pears on our mountains. A walk through the orchard and vineyard was truly a sight to be remembered for a lifetime—apple trees like pyramids of gold and crimson, so full did they bear! The Judge is as ambitious and ardent in his extending orchard culture and vineyard grafting as his sons, whose families and domains are included in his own. Our time was too limited to long enjoy their hospitality or dive far into the Judge's library, but our boys were more than delighted with the collection of stuffed birds, most skillfully collected and prepared by one of the sons. I also met here a very charming school-ma'am of 19, with thoughtful face and eager eyes. Strong, good sense seemed her characteristic, and I found also something more than the ordinary wants of girls—a desire to be and do something. She is teaching with the hope of

fitting herself for an M. D. some time. My heart goes out to such girls, and I would advise them to study with some honest practitioner for a year or two before they begin the college course of medicine. To become familiar with anatomy, physiology and the treatment of disease first is of great benefit to the student of medicine, and tends to make one earnest and alive to the life work and self-abnegation to follow.

In my last I mentioned the need of a summit road to be jointly owned by the two counties, the summit being the dividing line between the counties. I also think we need summit school districts, to be established independent of county lines, so as to accommodate families living on or near the summit upon either side. The climbing of a mountain side to and from school is of quite as much importance to children as the distance they go. And the people who have children to school, and who pay the taxes to support the schools, and really have the whole interest in the matter, should be allowed to manage such things. It seems as if no arbitrary county lines should prevent them from drawing their quota of money in support of schools, even though the school district (to suit the convenience of the children attending) be situated in both counties. We women who raise families and help pay taxes should have a "say" in the matter, if we cannot vote.

As a word of encouragement to the boys and girls, let me tell them of two noble examples for them to follow. A home builder in these mountains with three daughters and a son of 20 has been the past three years almost supported by the elder daughter, who is a teacher, and the son, who has just served his apprenticeship of three years at one of the fruit factories in San Jose. The little farm is now paid for, and we found them comfortably situated with horse and cow, and a fine crop of fruit waiting to be gathered and sold. Such examples of well-raised boys and girls, willing and ready to return to their aged parents the care and money expended on them in their youth, are rare to meet with in California. J. W. JEWELL.

Deer Ridge Farm, Santa Cruz Mountains.

Northern Sonoma Notes.

EDITORS PRESS:—It is refreshing to notice the rapid growth of our little out-of-the-way towns. For instance, the little town of Geyserville, in Sonoma county, was a very insignificant place with a bad reputation some six years ago, but now how it has changed! A flying visit a few days ago recalled vividly to my mind the time when two saloons dispensed liquid poison, and fights and shooting scrapes were quite common. Now the scene is entirely different. It would be hard to find a more quiet, peaceful place in California. True, it is small, but the houses are covered with vines and surrounded by flowers. Geyserville is the railroad station for Skaggs' Springs, which have achieved a considerable reputation for some years past, and seem to be steadily increasing in popularity. About five years ago average farming land in the near vicinity of town commanded about \$50 per acre, while now sales are usually refused to a \$150 offer. At first glance the reason for such an increase is not evident, for the land produces less grain and corn now than then, the common system of repeated crops having exhausted much of its fertility. But it has been discovered that no place in the State is better suited to fruit of all kinds than the strip of land on Russian river from Healdsburg to Cloverdale. One man near Healdsburg has this year sold, from 15 acres of peaches, over \$4,000 worth of fruit. The orchards round that town are older than further up the valley, but scattered and half-tended trees all the way up show the grandest possibilities. Two men at Geyserville, Charley Rimmel and Abe Lee, set out 10 and 3 acres respectively of peaches and plums last spring, and the beautiful growth for this year, as well as the delicious fruit, is more than encouraging. Of course they propose to increase the acreage at once.

Many grape vines have been set out in this vicinity, principally Zinfandel. Where cuttings of this variety were hard to obtain, Black Malvoisie, Mission and Muscat and some other varieties have been used.

At Asti, five miles above Geyserville, a colony of Swiss and Italians have purchased 1,500 acres of rolling hill land, and have already planted over 300 acres to vines. They pronounced the land eminently suited to that and other fruit. Stimulated by the judgment they declare, some other ranchers are planting on a small scale, with every promise, so far, of grand success.

Gold is found in this land of promise, not through fruit and sheep raising exclusively, but in the pure state. In only one place, however, has its gathering been made to pay. On the ranch of E. C. Parker, opposite Asti, over \$3,000 has been taken at intervals by Tom, Dick and Harry from about one-fourth acre of ground. Mining can only be pursued in the winter season, owing to lack of water, but has usually averaged the miners, in every instance perfectly green hands, about \$3 per day. Evidently, from the sharp character of the coarse gold found, there is a ledge close by, but it has not yet been discovered. The size of gold is from specks to \$12. Mr. Parker intends to plant peaches and vines this winter if he does not sell and go East. How few people know when they are well off. Vox.

Tuolumne County Notes.

EDITORS PRESS:—After the rains of October, which were closed by a heavy downpour on the 3d, 8th and 9th of November, the weather has been simply magnificent. November gave us 13 frosty mornings, some very heavy. The lowest temperature was 32°, with thin ice. More ground has been seeded in this portion of the county than in any previous season, and still the plowing and sowing go on.

The fruit growers of Columbia and vicinity have been greatly benefited by the operations of the Walter dryer establishment, now owned by Mr. Chas. Koch, and the erection of a distillery, by which the grapes of all sorts, heretofore nearly worthless, have found a ready sale, the muscats for raisins, at \$25 per ton, and all common kinds \$15, for wine and brandy making. If now growers will make a united effort to extirpate the codlin moth and other insect pests, the halcyon days of our mountain fruits may return to us again. There is need of a county Board of Horticultural Commissioners, in order to compel obedience to the requirements of the law, to which no attention has yet been given. Our fruit crop is threatened with nearly total destruction from the yearly increase of the insect depredators.

After three years' experiment and test of the *Sorghum Halapense* ("Green Valley grass," "Johnson's grass," "Evergreen millet"), I am thoroughly satisfied of its superior value as a forage plant. But I have found it almost impossible to propagate this grass from the seed, owing to its lightness and uncertainty of germination, which the method by planting roots in the early spring has insured vigorous growth and a great spread of the roots, sending up constantly new stalks. From a single joint I have had as many as 70 stalks, and a bed of roots more than a foot deep, and two or three feet in diameter, yielding a weight of 15 lbs. The second season the entire surface of the ground is covered with a thick mass, and after the first year no drouth affects it. I cut my "Halapense" three times in the season, and no other hay is eaten by the stock with such avidity as this, while the yield is many times greater.

About potatoes, I must report the experience of Mr. Shive, my neighbor, with the "Burbank Short." Having no suitable ground, I arranged with Mr. Shive to plant the seed I had secured in some of his newly made or "alumniated up" ground. The space planted was 25x86 ft.—about eight square rods. I assisted in the digging, and we had a product of nine sacks of fine, large tubers, being at the rate of five tons per acre. Potatoes of a finer quality were never served at the dinner of prince or peasant. Our entire product will be kept for next season's planting.

Tuolumne county is surpassed by no other equal area in the State for fruit growing, while its mines are numerous, prosperous, and there is a constant influx of new capital for their development.

While I write, I have a call from one of the live horticulturists of the county, Mr. I. L. Dickinson, formerly of Shaw's Flat, near Columbia, and now of Mountain Pass, where he has the largest nursery in these foot hills—over 23,000 young trees of the choicest varieties to meet the growing demand. Mr. Dickinson came specially to examine the claims of the Kieffer pear, in which he takes a deep interest, through information derived from the *RURAL PRESS*. His satisfaction took the form of an order for scions sufficient to graft 500 trees as a starter.

Could agriculturists and horticulturists realize the value to them of the *RURAL PRESS* your list would be augmented faster than your clerks could enter the names. It has been worth hundreds of dollars to me in the past three years, and it would be cheap at a subscription of \$10 a year, while it is given away at a third of that price. J. WINCHESTER.

Columbia, Dec. 4, 1882.

EARTH CURRENTS AND TELEPHONES.—Mr. Preece pronounces the venerable theory that the earth is a great reservoir of electricity, from which either positive or negative electricity could be extracted at will, exploded. Currents are traversing it. The return current of telegraph lines, one wire of which is grounded, can be picked up as it traverses the soil. Telephones placed in the attic of a building and connected on the one hand with the gas pipes, and the other with a wire coming up from the ground floor, have been found to steal the messages sent from a telegraph office 250 yards away. Several cases are known where telephones have picked up messages from telegraph lines miles away. It is therefore desirable that the earth should not enter the telephonic circuit. When electric light wires are grounded this is seen to be not only desirable but essential, and in case of a thunderstorm, the expediency of cutting the earth out is shown to be of the highest order. Every flash of lightning, no matter how far off, is indicated when the earth forms part of the telephonic circuit. There are "earth currents" which are at times so strong that when taken up by the telephone they make a noise "as if your brains were boiling." These are, however, so weak ordinarily that the telephonist has little to fear from them.

THE DAIRY.

What Cow for Milk.

EDITORS PRESS:—In your issue of Nov. 25th is an inquiry for "the best breed of cows for a milkman to have—what breed will give the most milk of good quality in a year—reference is now had to milk to be sold? How much milk should a good cow give in one year?"

You refer the subject to the dairymen for discussion, at the same time recommending the Holstein breed for quantity of milk, apparently without any particular regard to quality. As no one has replied to "Milkman" in your last issue, I take it for granted that everyone, like myself, is satisfied with his own choice of breeds, and hardly thinks it worth the trouble of taking up his pen to write in defense of his favorite breed; but it must be granted that the subject is one worthy of further discussion, notwithstanding all that has been written and said about it.

In their native country both abundance of green grass and a low, level country and moist climate, there can be no doubt about the Holsteins giving "a perfect river of milk." Under such conditions, any breed cultivated for its milking qualities would become a milking breed; but transfer them to our drier climate, with dry feed for seven or eight months in the year, and what would they come to? Under anything but a perfect forcing system of feeding, most likely they would, in a generation or two, become a breed of good ordinary milkers, the milk improving in quality as it decreased in quantity.

The Milking Premium

The Holsteins are practically an untried breed in this State, but we have herds of Jerseys, Ayrshires, one of Guernseys and several of Short Horns in the State, all claiming more or less superiority as dairy cattle, and all represented at the last Oakland cattle show, where was offered a premium of \$50 for the cow that would give the most milk and butter in a given time. A similar premium, I believe, was also offered at the last State fair, but I have looked in vain for any public report on the same, and do not yet know whether the premium was awarded or not at either of the fairs named. I hope that both the above named societies will give us the benefit of a full report on the quantity of milk and butter given by each competing cow of all the breeds that competed, for surely there must have been some friendly rivalry amongst the exhibitors of the above named breeds, in order to give the public the benefit of such a practical trial of cows for dairy purposes. It is the first year, I believe, in which a premium has been offered for a cow giving the greatest quantity of both milk and butter.

The test for a comparative quantity of butter at either of the fairs is not a satisfactory one—churning the cream of two milkings only. If the test is to be by churning the cream only, a longer space of time ought to be covered by the test—three days at least—as there are so many conditions connected with the setting of milk, down to the feeding and milking of the cows in a strange place—the milking being of necessity watched by strangers—any of which would have an effect on the quantity of cream, if not on the milk, that the cows ought to be well settled down in their places before the test is begun.

At the English dairy show started at London some five or six years ago the milk is measured for quantity and analyzed for solids. The various breeds have their separate classes, after which comes the award of the champion prize for the best dairy cow of all the breeds, which has invariably been won by either pure-bred or high grade shorthorns. I believe that no cow of any other breed has ever gained the champion (or sweepstakes) premium; the milk of the shorthorn has always been larger in quantity than that of any other breed, including Holsteins, and of such superior quality as to more than counterbalance the superior butter qualities of the Jersey breed. In one case the analysis of the milk of a Holstein cow proved the quality to be below the established standard for pure milk.

How Much Should a Cow Give?

But, after all, to milkmen the most important question will be, how much milk should a good cow give in one year? Under the head of "Best Yields of Breeds," in the *Live Stock Journal* for April, 1876, are given some examples of what the different breeds have yielded in milk, butter and cheese. After giving the quantities produced (for the year) by some small herds of native cattle, the writer sums up the whole average thus: "Here are 477 cows, averaging 7,227 pounds of milk, which would make 722 pounds of cheese or 289 pounds of butter. This is more than double the average yield of all the cows in the dairy States."

The examples of Ayrshires are summed up thus: "Here we have 5 herds, 37 cows in all, tested from 1 to 5 years, yielding an average of 6,000 pounds per cow;" and adds: "This may be considered an average of the breed, because we have to take all to whom the test has been applied, whilst in the other case we could have produced tested herds of half the yield."

This is followed by the yields of single individuals of grade Ayrshires, but as only one

test is given for a full season, we only give that one cow, which gave, in 1869, 9,241 pounds of milk, and in 1870 9,650 pounds.

The largest yield given is by a grade Jersey—13,065 pounds in 365 days. In summing up on the Jerseys, the *Journal* says: "The foregoing presents statistics of 65 cows with an average of 295 pounds of butter per year. We do not think that this would be the average if we had a record of all the Jerseys in this country, for most of these are selected from the most (best?) manipulators. * * * It will be noted that the most remarkable yield of milk is from a high grade. Whatever thoroughbred dairy breed we take, judicious crossing of the thoroughbred male upon selected common cows will show this remarkable improvement."

The same year, 1876, I kept a full account of the produce of my herd of 66 cows, which resulted in an average of 2,690 qts. for the year, for all the cows that had calves, nearly one-half (31) of the whole, were two and three year old heifers. Since that time we have records of enormous yields for simple individual cows; but milkmen and buttermen must look to obtain a large average for the whole herd to make it profitable.

As there is to be a dairyman's convention in San Francisco, we hope that some little time may be spared from the all-absorbing topic of oleomargarine to discuss the relative merits of the most prominent breeds of dairy cattle for the various purposes for which they are wanted on this coast—for the butter maker and the milkman. There can be little doubt that for the farm of mixed husbandry the shorthorn stands pre-eminent.

ROBT. ASHBURNER.

Baden, San Mateo Co., Dec. 4, 1882.

POULTRY YARD.

Practical Poultry Raising—No. 1.

EDITORS PRESS:—Breeding up or improvement is what all should seek, and a good selection for the breeding pen is sure to result in chicks of a higher order. The experienced poultry breeder does not need to be told this, nor is the series of articles to follow intended for him, but, perchance, even he may find something of value. Improvement is steadily going on. Even many who scout at the idea of one variety being superior to another are themselves unconsciously striving to improve upon what they have. Who that has not heard persons, on gathering their eggs, remark, "That's old Biddy's egg. We save all her eggs and set them, she is such a good layer." This is just the way the intelligent breeder proceeds, but he carries out the principle in its different phases, selecting such hens for breeders as are known to possess some desirable characteristics, and in order to perpetuate these traits he is careful not to introduce a male that did not come from stock possessing these same desirable features to some extent at least.

Now, as it is the little things that count in the poultry yard, it becomes every one who keeps even a dozen fowls to have the best. I have settled down upon such varieties as I deem the best, and am perfectly willing that every one should keep whatever fowls they may fancy, and will offer no suggestions further than to say that fowls of our improved types will lay more eggs, are better flesh producers, can better be adapted to surroundings and accommodations, besides affording infinitely more pleasure to the keeper, than mongrels.

In reviewing the career of poultry breeders for the last decade, we find that while many are growing rich others are meeting with failure. Several reasons may be assigned for the latter. A great majority imagine when embarking in the business that all that is necessary is to get a large lot of fowls together, throw out some feed occasionally, and gather up the eggs—those, of course, come to grief.

The successful poulterer is a man of pluck, with his sleeves rolled up and working to make it come out right. The unsuccessful poulterer is simply a man with his hands in his pockets and a pipe in his mouth, looking to see how it will come out. In this as in any other enterprise regular and ceaseless attention must be given to insure success. Thoroughness is the great secret.

We do not aim to point out the royal road to fortune, but simply to lay down a few general rules for the guidance of the novice, and such as all who expect to succeed will do well not to disregard. As the season is now upon us for rearing young stock, those who have not already done so should select the finest hens of the flock—be they thoroughbreds or dunghills, it matters not, the same rule holds good—and pen up 10 or 12 with the best male bird that can be procured, for it is to be remembered that the cock is one-half the breeding pen. If you cannot afford to patronize one who makes it his business to breed poultry of a high class, use the very best at your command. From these select your eggs for hatching, and you will have taken the first step on the right road to success. The fowls selected, the next thing is to place them in clean, dry, well-ventilated quarters and free from drafts. Assuming that the fowls are kept healthy and in good condition, yet none overfed, the foundation has been laid for a fine lot

of active, vigorous chicks. This method of procedure will not only insure greater fertility of eggs and better chicks, but creates a disposition to still greater improvement.

Now, having thus far acted in accordance with suggestions offered, we will allow some little time for the fowls to become acquainted with their mates, new surroundings, etc., and then advise you how to proceed further.

Petaluma, Cal.

L. C. BYCE.

THE VINEYARD.

Raisin Culture.

[The following essay was read at the last meeting of the California State Horticultural Society.]

In addressing you on the above subject I will necessarily have to go over much ground familiar to many of you, but believing that raisin culture is but in its infancy, both as to our knowledge on the subject as to the practical details of the process of curing, etc., and as to the future magnitude of the business and its importance financially and socially, I have presented a few details from my own experience, hoping that the remarks may help to extend our knowledge on the subject, and aid those who are extending their hopes and purposes in that direction. When my attention was first directed to this industry 10 years ago in Riverside (and my experiences have all been in Riverside, and from this standpoint alone can I speak), there was nothing definitely known here, or indeed in California, about the business. We believed and hoped that our soil and climate were well adapted to raisin culture, and so we started in full of faith, but with no experience whatever. Information on the subject was not to be had, inasmuch as this department of horticulture was new to the English speaking race. Since that time our information has been largely re-enforced by the observations of Mr. West and others in the raisin districts of Spain, as well as the practical experience of Mr. Blower, Mr. Briggs and others in California.

The variety of grape mostly used for raisin making is the Muscat, of Alexandria, although one or two sub-varieties, such as the Muscatel Gordo Blanco and white Malaga, are by some thought to be superior, especially in the northern part of the State, but here in Riverside we have not been able to detect much difference, and we have known instances in which the resemblance was so close in the raisins that the grower had to mark them in order to know which was which. The fact would seem to be that in a soil and climate adapted to raisin culture, nature does her best, so much so that varieties which may be slightly inferior elsewhere are forced into such super excellence as to leave nothing more to be desired in quality. There is also another variety, which is coming much into favor, called the Sultan, which is a small, white variety, seedless, quite distinct from the Muscat; said to be very prolific, but not coming into bearing so soon as the Muscat. It is mainly used for cooking, like the Zante currant. As it seems to be lacking in the fine flavor for which the Muscat is so valuable, it is probable that it will never entirely supercede the Muscat for cooking.

Conditions for Raisin Making.

The best soil for raisins is the red granite soil of California, and the hot, cloudless weather of the interior is the best fitted to develop the rich saccharine properties of the grape and the fine aroma of the raisin. On the coast, where fogs are frequent, or on rich bottom soils where water is near the surface (say within six ft.), the grape, although it may be large, is apt to be sour and watery and to lack the fine appearance (which only perpetual sunshine can give), and which can be best expressed by the Spanish word Muscatel Gordo Blanco, which is applied to a variety of raisin grape in Spain, and which signifies "rich, fat, white grape." Where there is not sufficient rainfall to produce a luxuriant growth of vine, the grapes, and consequently raisins, are apt to be what you might call lean.

Cultivation.

In Riverside the rainfall is so light and the atmosphere so dry in summer that irrigation is an absolute necessity, and experience has amply proved that it pays to irrigate in the increased yield, as well as the certainty of a crop in the driest seasons. The best practice in irrigating, judging from results, is to irrigate before winter, or just after getting the fruit all out of the vineyard; then plow after the rainy season has commenced; then let it lie to get the benefit of the sun and rains—as late as possible in the spring, or until the weeds and growth of the vines, which must be pruned before first plowing, warn you not to be too late with your work. We then give another thorough irrigation and plowing, and keep the cultivation going as long as practicable during the summer. This will keep them in good growth until the middle or end of July, when another irrigation will be sufficient to ensure a bountiful crop. Irrigation has a tendency to retard the ripening of the grape somewhat, but as our winter rains are later in southern California, and our sun is stronger than in the northern part of the State, it is but a trifling drawback. About the beginning of September the grapes put on that rich, golden amber, semi-transparent hue which indicates maturity, and about the 10th of September, in ordinary years, we expect to begin picking.

Raisin Making.

One essential of a good raisin is that your grape must be fully ripe. Unripe grapes will not make a raisin at all, and at best are only a poor dried grape. In picking, the branch is held by the stem and all imperfect berries removed, care being taken that the bunches are not touched by the hand, as it destroys the bloom and very much mars the appearance of the raisins. They are then laid on wooden trays, two feet by three feet, made of half-inch lumber, planed on one side and nailed to cleats or end pieces two feet long by one and a half inches deep and one inch wide. The trays are usually filled with 20 lbs. of grapes, which shrink two-thirds in drying, three trays containing 20 lbs. of grapes making 20 lbs. of raisins.

In September from two to three weeks are usually sufficient to dry them. When about half dry they are usually turned, which is a very simple process and is usually done in the early part of the day by placing an inverted empty tray on top of a full one and turning both over at the same time, two men being requisite in the operation. The grapes are usually left in the vineyard during the drying process, although some have alleys through the vineyard for drying, while others carry them out entirely to clear ground, but neither process is necessary until later on in the season, when, if the weather is at all damp and the vines in full leaf, it is very advantageous to carry them out to some sunny spot, where, being canted slightly to the sun, they may have full benefit of the sunshine. Now comes the

Benefit of Trays.

In the early days of raisin making we tried raisin drying on the ground; but we soon found that we would have to have some safer and speedier way. In turning by hand it was a very slow process, and you necessarily broke off more or less raisins off the stems, deteriorating their market value, and also making it a slow process picking up. Besides, if it should rain, you had your raisins damaged by sand, etc.; and if the rain was at all prolonged, you run the risk of losing the entire crop. Then paper was tried, with no advantage except cleanliness. Boards were also tried, which were found to be inconvenient and expensive. Then frames made of laths were tried, but were too cumbersome and inconvenient in gathering up the raisins. Finally trays were evolved, which seem to be the acme of perfection. The advantages of trays are economy in turning and in gathering into the sweat box, as all you need to do is to pick up your tray and slip your trayful of raisins into your box. Trays are also conducive to cleanliness, as also convenient in handling and moving, while, should it threaten rain, they can be easily stacked in piles on top of one another, and protected by empty trays.

Packing, Etc.

When your raisins are fully dry they are put into large boxes, called sweat boxes, a little larger than the tray and eight inches deep, and holding 130 to 140 lbs. Although the boxes are called sweat boxes, the raisins do not really sweat. It is impossible to get the raisins uniformly dry, but by putting them in bulk in this way the moisture in the raisins get uniformly diffused throughout the mass and the stems, which previously were hard and brittle, get damp and pliable, rendering them in a suitable condition for packing, and at the same time the nice aroma is developed which greatly enhances the pleasure in eating them. After being in the sweat box a few days, they are in fine order for packing, which requires considerable skill in order to make them as attractive as possible. The best raisins are packed in layers of 5 lbs. each in boxes of 20 lbs. weight, while extra choice are packed in halves, quarters and eighths containing 10, 5 and 2½ lbs. respectively. Forms or molds are used to pack each layer separately and to press them, which is done generally in a screw or lever press (the latter preferred). They are then slipped into the boxes neatly wrapped in white paper, the top layer in each box being wrapped in fancy paper, accompanied with a lithograph of a vineyard or other suitable scene. The boxes are then nailed up and suitably stenciled preparatory to sending to market.

It may interest some to know something of the cost, as also the profits. Assuming that the land has been bought, starting with one-year-old vines the first year, your total expenses for the first year would be per acre—

680 roots 1 year old at 2c. each.....	\$13.60
Planting and care of the same.....	30.00
Water for same.....	3.50
Staking and incidentals.....	10.00
Total.....	\$57.10
Labor per year after.....	\$20.00
Water, etc.....	5.00
Per year.....	\$25.00
Returns after two years—	
Third year, 50 boxes per acre at \$1.60.....	\$ 80.00
Fourth " 150 " " ".....	240.00
Fifth " 200 " " ".....	320.00
Sixth " 250 " " ".....	400.00
Total, 650 boxes.....	\$1,040.00
Thus, in less than six years, the balance sheet, in ordinary circumstances, should stand—	
Expenses first year.....	\$ 57.10
5 years, at \$25 per acre.....	125.00
500 trays at 14c. each.....	70.00
30 sweat boxes at 60c. each.....	18.00
.....	\$270.10
Returns in six years' gross.....	\$1,040.00
.....	\$769.90
Expenses of picking, packing, etc.....	390.00
Net returns per acre at end of 6 years.....	\$379.90

I have put the cost of labor at the highest possible figures, while the prices of raisins are perhaps lower than we have reason to expect, and we know of growers who have done much better than that; for instance, one grower sold 615 boxes from two acres in about 30 months from the time of planting, realizing a total of over \$1,200, at a cost of not over \$300. Another realized \$600 from one acre, at a cost of \$100 on an old vineyard; but these are perhaps rather more favorable instances than the average, and it is much better to figure under than over the mark. Then there are contingencies to be provided for. It may come an unusually rainy fall and early winter, and great loss may ensue. Each raisin-maker who has anything over five acres ought to guard against emergencies, by getting some kind of a drier. Ordinary driers are of no use, as raisins take so long a time to dry that the ordinary processes are not available. The Blower system promises the best, so far as he uses as far as possible the method employed in sun-drying, by passing currents of heated air over the surface of the grapes, while the dryer is so arranged that the ordinary tray can be used without any disturbance of the grapes, and the building for the drying can be extended indefinitely.

Raisins are unlike any other dried fruit, as a shower of rain does them comparatively little harm, provided it does not stay damp for 8 or 10 days after. They can also be half dried in our climate and put under cover for the winter and come out in the spring first-class raisins. The only thing to be dreaded is a heavy rain before they are half dry, with close, damp weather after for a few days, as they then begin to mildew and get quite useless. A good drier would be quite an assurance against such a contingency, and we would like to hear from those who have used the Blower system.

I had intended to go somewhat into the future of raisin making, but perhaps that would be more in the line of those who handle them, and it will be time enough to consider the market question when we have fully supplied the United States; then it will be in order to consider the question of other markets.

Riverside, Nov. 1, 1882.

JAMES BOYD.

HORTICULTURE.

The Fruit Growers' Convention.

Full Reports of Addresses and Discussions.

[By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS. We shall continue the report from week to week, and issue it, when complete, in pamphlet form.—EDS. PRESS.]

[CONTINUED FROM LAST WEEK'S RURAL PRESS.]

Destruction of Codlin Moths in Fruit House.

From beginning to May 27th inclusive.....	No. brought forward.....	No. brought forward.....
2671 June 21.....	9,399	14,873
28 July 16.....	288	66
29 " 22.....	397	157
30 " 23.....	179	65
31 " 24.....	154	47
1 " 25.....	336	108
2 " 26.....	314	46
3 " 27.....	447	24
4 " 28.....	447	15
5 " 29.....	315	22
6 " 30.....	415	36
7 " 31.....	307	43
8 " 1.....	233	14
9 " 2.....	278	16
10 " 3.....	85	7
11 " 4.....	No count	31
12 " 5.....	177	13
13 " 6.....	95	14
14 " 7.....	490	15
15 " 8.....	231	4
16 " 9.....	143	5
17 " 10.....	111	20
18 " 11.....	112	3
19 " 12.....	90	26
20 " 13.....	62	7
Forwarded.....9,399	Forwarded.....14,873	Total.....15,627

* Cellar open.

I have kept 10 or 11 men working continuously in the orchard all through the season. Nine of them going over the trees and pulling off all the fruit that they could find that was infected with these worms; the others were picking them up and carrying them in, and the means that I used to destroy them was to put them in a large boiler and boil them up, trusting to the hogs or anything else to eat them, and I came to the conclusion that that was the surest way of exterminating them. I have carried that on until the apples got large, and they are now in the house. What the result will be I don't know. I have worked the bands very effectually, killing some days thousands of them. I never kept an accurate account.

Mr. Cooke: How many did the bats eat?

Mr. DeLong: That is a question I do not know anything about. I don't know that I can give any further ideas. We are working under the mode Dr. Chapin spoke of, which I think is most effectual.

Mr. Cooke: I merely wanted to call the attention of the convention to the fact that when Mr. DeLong filled all the windows on the inside of the three-story apple house, the upper story is formed with a high roof, and he had to put the mosquito bar over both ends; in doing that he enclosed probably 500 large bats. One thing we know, that a bat lives on insects, and it is certain that the bats lived on the codlin moths, and of those Mr. DeLong was unable to give any account. He had 34,000 boxes in his house, and he neglected to say he cleaned them to enable his men to pack them before the man went in there, and he got 10 or 12 larvae in some of those boxes, but at any rate he got 15,000, the largest stock in the world for his summer's work, besides what the bats eat.

(CONTINUED ON PAGE 470.)

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

The Alhambra Celebration.

[Written for the RURAL PRESS by J. STRENTZEL.]

The farmers being exceedingly busy with the work of the season, it was resolved by the Alhambra Grange to celebrate the annual Patrons' Day on Saturday, the 9th inst. The day was beautiful, the attendance numerous. All were delighted to see our good friends from Vallejo, the benignant face of our Bro. Adams, and the sturdy form of the worthy Secretary of the California State Grange, as chronicler of the day, who also kindly officiated in imparting the unwritten work of the Order to a class of three brothers and four sisters. Then our noon work began with earnestness and great hilarity, checked only by the necessity to carry out the final programme for the day, consisting of an address by the W. M. and the annual election of officers for the ensuing year.

Brothers and Sisters:—This is the 16th "Patrons' day" since the organization of the Order of Patrons of Husbandry and the ninth annual meeting of Alhambra Grange. By a happy coincidence combining pleasure with duty, we have provided a merry harvest feast for a class of three brothers who have joined our band as husbandmen, and four sisters honored with the degree of Matron—all initiated in the mysteries of the Grange, which teach us to labor for the good of the Order, our country and mankind—considering human happiness as the acme of earthly ambition, and striving for wisdom and knowledge as the foundation of happiness.

The ultimate object of this organization is for mutual instruction and protection, to lighten labor, to expand the mind by tracing the beautiful laws the Great Creator has established in the universe, and to enlarge our views of creative wisdom and power—Charity, our strongest co-operative bond. These are the principles on which the work of our Order is based.

Why is it that the hands that evolve with each succeeding season the sustenance of nations—the hands that hold the bread—are denied that just remuneration for their toil, while other classes of society as now constituted—those that neither toil nor spin—do revel in the fatness of the land? It may be assumed that our unavoidable isolation required by our calling to have our habitations spread upon the globe, the constant toil and care to provide for man and beast, leave us little time for social intercourse and combination to favor our interests, barring us from a diligent attention to our political duties, thus favoring our trustees as middlemen of all degrees, in the shape of of commercial agents, or the so-called governing class that formulates our laws in bewildering amplitude, and administers them on technical terms and small justice, or eat up the proceeds of labor by exhaustive taxation, look on the agriculturist as the "Hay-Seed" chained to the soil in perpetual bondage. All those evils, however, are but sequences of our culpable negligence. The principles underlying our form of government are justice and equal rights. To secure them we have to reassert them—thus of necessity as the outgrowth of time the organization of Patrons of Husbandry fraternity join the hands of all tillers of the soil to meet in the Grange, their symbolic farm, for social intercourse, for mutual protection, to gain knowledge, to educate themselves in the ways of the world; to assert their right to seek power in the potent forces of numbers; to raise a coming generation fully equal to fill any station under our representative form of government; to secure for our symbolic farm the respect of our fellow citizens.

A selection was then read from Bro. Smedley's "The Duties of Members and of a Master of a Grange," and the election of officers was effected with the following result: J. Strentzel, M.; H. M. Hollenbeck, O.; H. P. Hardy, L.; Elam Barber, S.; Mrs. M. B. Lander, Sec'y; James Kelley, A. S.; H. Raap, Treas.; James McHarry, C.; Geo. Griffin, G. K.; Mrs. J. C. McHarry, Ceres; Miss Adele Raap, Pomona; Miss Mary Kelly, Flora; Mrs. R. M. Jones, L. A. S.; R. M. Raap, Trustee.

Anniversary Celebration by Sacramento Grange.

EDITORS PRESS:—In remembrance of the birth and rise of our Order, Patrons of Husbandry, Sacramento Grange observed the day by assembling at their hall and holding an open meeting. At 11 o'clock J. Reith, W. M., called to order, and, with a few remarks appropriate to the day we commemorate, moved that Bro. Chas. Hull take the chair. After an opening song, Sister Raymond read an interesting sketch of the founding of the Order, its rise and progress, from the editorial columns of the RURAL PRESS. The District Lecturer read an article on education. J. Reith, W. M., gave a graphic sketch of the difficulties and trials of agriculture. Sister D. D. Hull read an appropriate extract, and, after a few songs, all went

to Fisher's banquet hall and partook of a sumptuous dinner. Afterwards the following toasts were read by Bro. A. S. Greenlaw, and responded to as follows:

"The Day We Celebrate," J. Reith, W. M.; "Our Worthy Master of the State Grange," Fay Raymond; "Our Order in California," George Rich; "California Patrons," Geo. Cone; "To Our Sisters," C. S. Flint; "To Our Brothers," Sister D. D. Hull; "To Our Homes," Sister M. L. Rich. G. R. Sacramento, Cal.

Annual Meeting at Alhambra.

[Written for the PRESS by CLARA DENING.]

The last Patron contained an invitation from Alhambra Grange to the "Patronistic brotherhood at large" to enjoy its hospitality once more. Knowing from past experience what the invitation meant, six members of Vallejo Grange concluded to accept it.

Unfortunately the wind did not blow, and although the tide served right, we did not dare to venture in a sail-boat, so concluded to wait for the unaccommodating ferry, which makes but two trips in the forenoon from the Benicia side. In going this route we either had to cross at 7:30 A. M. or wait until 12:10 P. M. The early trip was decidedly early for us, who had to ride six miles first, so we waited for the later boat, although we knew we would miss half the fun. Upon arriving in Benicia we found the other members of our party had been waiting since 10 A. M., and had employed the time as best they could in promenading about the railroad wharves. Our Worthy Master left his wife and daughter at the house of a friend while he put the horse in the stable, and told them when they were ready to go down to the ferry, which instruction they obeyed, but upon arriving at the ferry the W. M. was nowhere to be found, so his wife and daughter waited and passed the time in pleasant conversation with the other members of the party. The boat came, but not the W. M. The hackman found him up the street waiting for his family, and kindly brought him to the boat. How they could pass by without his seeing them was a mystery to him, but you know ladies do sometimes manage to slip by without being observed by the gentlemen.

We had a most delightful trip across the straits; not a ripple disturbed the surface of the water, and the clear atmosphere brought out all the beauties of the surrounding scenery. We would not have asked for a more perfect day. As we glided away from Benicia we could not help observing what a beautiful location it was for a city. We were soon landed on the Martinez side, and upon our arrival at the hall, the aromatic odor of coffee was the first greeting. In the ante-room we were cordially welcomed and informed that we were late, but not too late to test the quality of the viands produced from "the Matrons' generous larders." We were immediately seated at the tables, which extended in the shape of an L along the east and south sides of the Grange hall, a kindness for which we were secretly grateful. Our ride in carriage and ferryboat had a wonderful effect upon us in causing us to have a good appetite, and we were prepared to do full justice to the goodies prepared for our enjoyment. We can assure you that the sisters of Alhambra are generous and professional culinary artists; and we noticed among the visitors the worthy editor of the Patron and the ex-Secretary of the State Grange, who, judging from appearances, could corroborate the above statement. There were more people present than could be seated at once, so the tables were set twice, and then there was some to spare. There were many whom we recognized as old friends, and many whose faces were new to us.

The intermission was spent in pleasant intercourse, the renewal of old friendships, and observations upon the prospects of the weather, until we were called to order by the Worthy Master of Alhambra Grange, a Patron tried and true, who has held the helm of this Grange for so many years. After a song we were treated to a short address from Dr. Strentzel. The Grange then proceeded to the business of the afternoon, which was the election of officers for the ensuing term. Most of the officers were re-elected so far down the list as they had proceeded, when the warning hand of time told us that we ought to be wending our way in the direction of the ferryboat. We bade our good friends adieu, and regretted that we were unable to have witnessed the conferring of the third and fourth degrees in the morning upon a class of four bright young ladies and three young men.

It did our hearts good to sit in a Grange-room with so many members, and so many of them young people, and they all looked as though they enjoyed Grange meetings, and especially feast days. There were 62 votes cast on the first ballot. We heard it said that 70 or more were enrolled, and more coming. Alhambra must be the pride of the section in which it is situated, and the advantages of being a Patron well appreciated by the farmers of Contra Costa county.

TENESCAL GRANGE.—Two candidates are expected to take the first degree on Saturday, December 16th, the annual election meeting and harvest feast opening at 1 o'clock. All parties are invited. Bros. Wolleb, Dewey and Sister Babcock were appointed a committee on cooperation at the last meeting.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

PLOWING AND SEEDING.—Alameda Co. Reporter, Dec. 9: Plowing and seeding are now being pushed forward in this valley and vicinity with great rapidity. Farmers on adobe lands are particularly active, and never has there been a better season for the cultivation of this soil than the present. Thousands of acres are already seeded, and hundreds are being put in daily. Some fields of early sown grain are already up and growing rapidly.

ACTIVE PREPARATIONS for filling the places of dead cuttings with rooted vines are in progress in our vineyards, and work will be begun next month. All those which have to be reset have been marked with stakes, and the percentage of loss has been computed for nearly every vineyard. It ranges from 12 to 40, being effected principally by varieties planted and soil. The poorest results have been on red clays mixed with either gravel or loam. The best on black gravel loams.

FREEDOM FROM FROSTS.—The freedom from early and late frosts enjoyed by the lower foothills surrounding our valley has been clearly demonstrated during the past few weeks. On the vineyards of D. A. Mendenhall and Wallie Mendenhall, in Townsend school district, and on portions of C. A. Wetmore's vineyard, on Arroyo Valle, the vines are as yet untouched by frost, while in the valley every leaf was killed nearly a month ago. This fact is an important one, and will greatly add to the value of our foothills for wine growing.

BUTTE.

LARGE WOOL PURCHASES.—Butte Record, Dec. 9: Thos. P. Hendricks, of this city, informed us last evening that he had just completed his wool purchases for this season. Mr. Hendricks has been one of the most extensive wool buyers in this season's market, having purchased all the fleeces between Vina and Nelson Station. Large wool growers have been holding back their fall clip for a good price, which has come. There is not a bag of wool to be bought at present in Butte county.

THE WOOL TRADE.—Red Bluff, which is developing as an important wool-shipping point, has this year sent to market 1,526,000 pounds. Sheep raisers have almost universally sold their fall clip, preferring to part with it at lower prices than were realized last year rather than take chances on holding.

STOCK AFFLICTED.—Butte Record, Dec. 9: A disease known among cattle men as "black leg" made its appearance on the Fairchild ranch, in Butte Creek valley, three weeks ago. Since then 75 calves have died. It has also appeared on the Dorris ranch. It is fatal—none recover. The ranchmen are resorting to a system of inoculation with garlic, applied in the brisket, as a preventive.

COLUSA.

HORSE DISEASE.—Butte Record, Dec. 9: The glanders is quite prevalent in some portions of Colusa county. Several horses have died of it, and others have been killed by their owners to prevent the spread of the disease. In some instances it was mistaken for horse distemper, and was treated as such until the disease showed its true character, and that it was at a stage so advanced as to be incurable. Glanders is always fatal. Any horse known to be afflicted with it should at once be shot. The disease is highly contagious, and may be communicated to human beings.

KERN.

FARMERS' PROFITS.—Record, Dec. 9: Every farmer in Kern county who owns his land, and has industriously employed his time, has succeeded this season beyond all reasonable expectation. Many have made the cost of their farms. One man, Mr. Stockton, sold his farm in the spring for \$4,000, and the purchaser realized \$9,000 for the alfalfa seed on it. Mr. S. Jewett has a section of land on the north side of the river, one-half of which he has planted to alfalfa. He cut the clover three times this season, which averaged two tons per acre for each cutting, making six tons per acre. The cost of cutting, stacking and hauling to the depot, on contract, amounts to \$5 per ton, and the price paid at the depot is \$10 per ton, in car-load lots. This leaves net \$5 per ton, and \$30 per acre for the season. These are not mere estimates; they are actual facts, and are by no means exceptional in the valley. The demand for hay is increasing, and must increase for many years to come. The Atlantic and Pacific railroad will be finished to the Colorado early the coming year, and this valley will be the base of supply for the whole distance. Good alfalfa lands are sold here for from \$15 to \$25 per acre, and the first crop will pay for them.

LOS ANGELES.

THIRD CROP APPLE.—Los Angeles Herald, Dec. 7: Some apples were brought to the Herald office yesterday which were grown on the place of Mr. J. S. Hunt, on Seventeenth street, between Olive and Charity streets. They are of a third crop this year. The second crop was quite as large as the first and was perfectly seedless. This is about as remarkable a pomological showing as one can well meet with.

MENDOCINO.

SHEEP-RAISING AND HOP CULTURE.—Sonoma Democrat, Dec. 9: Mr. John Taylor, formerly of Sonoma county, but for several years past a resi-

dent of Mendocino, is at present in Santa Rosa, attending to some business in connection with the sale of his sheep ranch about eight miles above Ukiah. It contains 5,400 acres, and has been purchased for \$45,000 by Mr. C. H. English, an old resident of Mendocino, and one of the principal hop raisers in that county. He has 20 acres of vines in bearing, besides as many more which were planted this year. From his bearing vines, ten acres of which are five years old, the remaining ten having been planted but one year, he raised this year 19,260 lbs of hops, selling them at 65 cents per pound, thereby realizing the handsome sum of \$12,519 from his crop. No wonder he can buy sheep ranches.

SAN BENITO.

PLOWING.—Advance, Dec. 8: Farmers throughout the country are tilling the earth with a right good will. The soil is in good condition to work, and farmers feel in good condition to work it. Prospects are flattering for an exceptionally large acreage in grain, and an exceptionally large yield.

SAN MATEO.

HARD AT WORK.—Redwood City Times and Gazette, Dec. 2: Enough rain has now fallen to give the farmers good plowing, and they are hard at work. It will not do to wait too long ere the crops are put in, as experience has shown that in nearly all cases the early crops do the best. Some of the farmers are afraid to sow early, as they have been drowned out a number of times. But as the seasons are not alike in California, advantage ought to be taken of the present good weather. The oleomargarine, or bull butter, is agitating the dairymen in this section, and there is no doubt but that they will take a hand in the present movement against the same.

SANTA BARBARA.

EDITORS PRESS:—Santa Ynez is a new town situated in Santa Barbara county, about 80 miles south of San Luis Obispo. It is 16 miles south of Los Alamos, 18 miles from Gaviota. Los Alamos is the present terminus of the railroad. A daily stage runs to Santa Barbara, passing through Santa Ynez. There are two blacksmith shops, two stores, another store building, school-house, 29 buildings, and lumber for several other dwellings on the road. Two large water tanks will supply the town with water from the head of Santa Cota creek, by means of two dams. There is plenty of wood. There are about 12,000 acres of good farming land. Mr. Torrence will put in 640 acres of wheat; D. Coiner, 600 acres; Con. Murphy, 640; S. F. Coiner, 400; Edmond Fields, 320; T. B. Jamison, 600; E. J. Preston, 1,500; Mr. Hawk, 1,000 acres, and other parties like numbers of acres. This land is known as the College Grant, Bishop Alemany and Bishop Moro having consented to rent this land for farming, thus giving an opportunity to enterprising men who are good farmers and good workers. Santa Ynez has been built up since the farmers finished their harvest in the Santa Maria valley. The plows are busy turning the deserted valley of a few months since into a stretch of wheat and barley.—J. W. R.

SANTA CLARA.

DISEASED LEMONS.—San Jose Herald, Dec. 5: Mr. E. F. Hubbard, a stranger lately come from New York State, who is much interested in horticulture, brought to the Herald office this morning a lemon said to have been imported from Sicily, which is nearly covered with an ugly looking kind of louse. He informs us that fruit so infested is being brought to this State in large quantities, and thinks that the pests so imported cannot fail to find a lodgment upon the lemon trees of California, and perhaps spread to other kinds of fruit. Of course, this is not likely to make much difference to this section, but such a visitor might do much harm in the vast lemon orchards of southern California. At any rate, it is a matter to be looked after by those interested, and if there be any danger, the importation of fruit so infested should be promptly prohibited. A specimen of the lemon so infested may be seen at the Herald office, and may probably be found at every fruit store in the city.

SONOMA.

VINES.—Cloverdale Sentinel, Dec. 9th: Very few of our farmers seem disposed to set out orchards this year. They are determined to devote their available land to vines, and in this we think they are wise. We heard a Santa Rosa nurseryman say the other day, however, that if he were to plant any considerable acreage he would choose Petite d'Agne plums in preference to any other variety of trees or vines.

FINE POTATOES.—Petaluma Argus, Dec. 8: While other places are boasting about large potatoes, Two Rock valley is not disposed to yield the palm as relates to the growth of this valuable esculent. J. C. Parvine, of that valley, has sent to the Argus a gunny bag of ordinary size which is filled to its utmost capacity by 64 potatoes. They are beauties.

ARIZONA.

THE RAISE IN CATTLE.—Mohave Miner: Last August, when the Board of Equalization of this county raised the assessment on cattle from \$10 to \$12 per head, the stock men all over the county raised the cry that it was an imposition and that it was too much, and some even went so far as to say that they would drive their cattle elsewhere. The wisdom of the Board in taking the action they did has since become apparent in many ways, and at the present price of cattle in this county there is little danger of any cattle being driven away.

Cattle are now held at prices ranging from \$18 to \$22.50 a head, and there are more buyers than sellers in the market even at that high figure. Witness the recent sales of cattle in Mohave and Yavapai counties. C. T. Rogers, of Chino valley, recently sold 1800 head of cattle at \$18 per head. Fred Nobmann sold his entire herd a few days since, including calves, at \$20 per head. Charles Gross, of this place, has lately sold 30 head at \$20. Our Mineral Park butcherer has to pay 7 and 8 cents a pound for beef on foot. T. B. Shipp, the cattle king of this county, was the lowest bidder on the contract to supply Grant & McDonald's camp with beef, and his figures were 11 cents per pound dressed and delivered, which is equivalent to \$22.50 per head for beef cattle. Paul Eren and other stock-owners on the Colorado recently asked \$22 per head for everything that was branded.

NEVADA.

CATTLE MOVEMENTS.—Reno Journal: W. B. Todhunter is driving a band of some 1,500 head of cattle to Winnemucca from the north, about 500 of which will be shipped to California, and the others will be driven to Big Meadows to be fattened on alfalfa hay, over one thousand tons of which has been purchased by Mr. Todhunter of Marker Bros. The *Silver State* learns from reliable sources that about 6,000 head of cattle are now being fattened for the market in Paradise Valley and on Little Humboldt. Some 1,800 head are being fed at Crutcher's place, 700 head at Kochersperger's, as many more at Godchaux's, on George Carrel's old place, and the rest at different places up the valley. Peter French drove 600 head into the valley to feed, recently, from Harney Valley.

FEEDING.—Louis Dean is feeding a large band of cattle near Reno. They now average 600 pounds each, and he calculates they will gain one pound a day until spring, when he intends to sell them. He is paying \$7.50 per ton for hay. If the market price of beef rises one cent a pound he makes \$5,000. If it falls he doesn't lose anything, as he stuffs in hay enough to catch up with the deficiency.

Redlands, San Bernardino County.

Recently, while passing through San Bernardino county, we took occasion to visit the new colony which has recently been established at Redlands, a point some ten miles northeasterly from Colton, and three miles north of Redland station, on the Southern Pacific railroad.

The land is sufficiently elevated above the San Bernardino valley to bring it within the limits of the "warm belt" of the Sierra Madre, directly at the foot of which range of mountains it is located. The soil, as its name implies, is of quite a reddish hue, a characteristic which, all through that region, is considered especially favorable for the cultivation of the vine. The settlement comprises about 2,000 acres, divided into tracts of convenient size, from 2½ to 20 acres each.

The general characteristics and features of this colony are too well known to the readers of this paper to need any further rehearsal at this time. The object of this writing is merely to add the testimony of personal observation as to the truth of what has already been said. We spent an entire day in riding over the settlement and in visiting the source of its water supply.

The foundation of all success in cultivation in this part of California is water. No matter how favorable in temperature the climate may be, let the land be ever so rich in all the elements and general characteristics which go to make up a rich and productive soil, if there is any deficiency or uncertainty in the water supply, the land is next to worthless for all practical purposes. In this respect there is evidently no deficiency at Redlands. The settlement is located directly adjoining the point where the waters of the Santa Ana leave the mountain canyon, and where a dam is thrown across the stream to divert its waters into the several settlements, where they are utilized for irrigation purposes. In taking out water for the Redlands, the proprietors of the tract, Messrs. Judson & Brown, have been scrupulously exact in recognizing and respecting all prior claims which could be set up. Moreover, all the work, both upon dam and ditch, had been done in the most workmanlike manner, and in the way best calculated to prevent wastage, either from seepage or evaporation. The same care has been observed in the reservoirs immediately adjoining the settlement, where the storage supply is retained, and in the arrangements for the distribution of the same. The entire work has more the appearance of an engineering scheme for a metropolitan water supply than simply for a colony irrigation supply, so thoroughly has it evidently been planned and executed. The projectors, being experienced civil engineers, have done all their own engineering and superintended the construction of all the work, which has been so completed as to make accidents almost an impossibility, and with the view to its standing for centuries.

The population which is being attracted at Redlands is not that of an easy-going character, whose habit it is to live from hand to mouth, trusting to a productive soil and genial climate to furnish the means of subsistence; but men of energy and foresight are going there, with means sufficient and a willingness to wait for that kind of development which ever follows

industry, and a judicious investment of money and brains. Riverside, the most successful colony enterprise ever carried out in any country, is the model upon which this one is working, and if there is any such thing as "going one better" on that colony, Redlands is sure to do it.

The fame of this splendid body of fruit and vine land has already spread far and wide. Whoever visits it is sure to be more than pleased. Its claims and advantages can scarcely be over estimated. Situated directly at the foot of old San Bernardino mountain, its altitude corresponds with that of the highly-favored mesa lands which all through that and the San Gabriel valley have long been famous beyond all others in California for producing the choicest and finest citrus fruits and the very best table, wine or raisin grapes. The attractions of this colony are greatly enhanced by the associations and institutions which are growing up in and around it. None but the best class of settlers are invited there or desired, and thus far none others have come. Already a school and church have been established there, and the place is beginning to assume the character of a New England settlement transplanted from the wintry north into the sunny regions of a semi-tropical clime where neither heat nor cold annoys, but where universal springtime flourishes from January to December. Too much credit cannot be given to Messrs. E. G. Judson and F. E. Brown, under whose enterprising and intelligent management all these desirable advantages have been thought out and carried into practical effect.

Viticultural Commission Meeting.

The regular semi-annual meeting of the Board of State Viticultural Commission was called to order at 11 o'clock yesterday, President Arpad Harazthy in the chair. Present—Commissioners Wetmore, Krug, DeTurk, Blowers, West, Chief Executive Horticultural Officer Matthew Cooke and the Secretary, John H. Wheeler.

The resignation of Mr. Cooke as Chief Executive Horticultural Officer was first considered. Mr. Cooke stated that the salary attached to the office was insufficient to meet even the expenses, laying aside the question of remuneration. He stated that by request of the Horticultural Board he had consented to continue in the duties of the office until the next meeting of that Board. The Viticultural Board expressed regret, and as Mr. Cooke affirmed his determination to quit the office, the Board suspended the considering of his resignation.

The chief business of the meeting was the consideration of legislation to be recommended to the State Legislature and Congress. After several hours' discussion argument was had on details, which President Harazthy was requested to formulate in an address to the Governor, members of the Legislature and Congress. The points may be summarized as follows:

The Commission Recommends:

First: That the Legislature should relieve the Commission of all duties pertaining to horticulture, and take action on horticultural matters by creating an independent commission. The Viticultural Commission would not object to being united with a Horticultural Commission, Stock Breeders' Commission, etc., so far as maintaining offices in common, with one Secretary for all, but would favor only distinct appropriations for the use of each commission.

Second: That the appropriations for the State Printing Office be increased, and that the State should largely increase the facilities of the Commission for the publication of translated works on the culture of the vine, fermentation, etc., and that all books of special and permanent value be sold by the State at a reasonable price to defray the costs and risks assumed in publication; a sufficient number of copies for the use of the Commission and for exchange in correspondence to be allowed free to the Commission, the regular reports of the Commission to be distributed free as usual.

Third: That the Legislature should provide that any funds donated to the State from any public or private sources, or granted by the United States Government, for the use of the State for the promotion of viticulture, should be added by the State Treasurer to the funds controlled by this Commission.

Rebate of Tax.

Fourth: That in order to encourage the improvement and perfection of all spirits intended for consumption as beverages or for medicinal purposes by giving them sufficient age, the general Government should allow spirits to remain in bond at least five years, and should grant for each year they remain in bond, not exceeding five years, a rebate of the tax on the same of ten per cent.

Fifth: That wine makers be allowed to use pure grape spirits in all necessary fortifications of pure wine, without paying tax on the spirits so used, provided the wines so fortified do not in any case exceed 21% in alcoholic strength; and provided, also, that this privilege be extended only to the use of pure grape spirits added to wines in which no ingredient is used, either in fermentation or subsequent compounding, that has not been directly produced from grapes.

Sixth: That permission be granted to fill packages of brandy in bond that have shrunk or

leaked before removing the same, so as to show full value of stamps, shrunken packages to be filled from those already in bond.

Seventh: That the duty on raisins be retained as at present.

Eighth: That the duty on so-called cherry juices should be in accordance with its alcoholic strength, based on duty on spirits.

Ninth: That the duty on wines should be in accordance with their alcoholic strength, the unit of measurement being spirits at proof.

The following resolution, offered by Mr. Wetmore, was almost unanimously adopted:

Resolved, That the Senators and Representatives of this State in Congress be requested to urge the passage of a bill providing that 10% of all moneys collected by the general Government from Internal Revenue taxation on spirits produced from fruit of any kind be paid over to the several States in which said spirits are produced in proportion to the quantities produced therein, provided the Legislature of said States shall, by law, appropriate the funds so received for the promotion and protection of viticulture and horticulture, appropriating the same to viticultural and horticultural purposes, in proportion to the relative production of spirits in each State, whether from grapes or other fruits.

The Board adjourned.

THE PUTMAN CART.—In a recent visit of one of our business agents at San Jose he called at the establishment of N. Prindle, manufacturer of the improved Putman patent driving cart. He learned that the demand for this cart is increasing largely, and during his call he sold three, and now has orders for 20 more ahead. It is certainly one of the most desirable vehicles for light use, and something that every farmer should have.

News in Brief.

The whole State of Chihuahua, Mexico, is in arms against the Apaches.

WASHINGTON TERRITORY boasts of being out of debt with money in the Treasury.

The loss by the fire in London Thursday night is estimated at £3,000,000.

A RAILROAD is to be built from a point in the San Joaquin valley to the Calaveras Big Trees.

A SOLID piece of gold weighing 152 ounces was found in a placer claim in Del Norte county last week.

The State Prison Directors, who illegally collected mileage, have returned the amount to the State.

The German Government persists in its determination to prohibit the importation of American pork.

ONE out of every 10 of the inhabitants of Chester, England, has, it is asserted, joined the Blue Ribbon army.

PROF. BOSS sends word from Santiago that the American observation of the transit of Venus was completely successful there.

The New York brokers have appointed a committee to consider a plan for a clearing house in connection with the Stock Exchange.

It is expected that a decree will be issued in a few days degrading Arabi and the other condemned Pashas, and ordering the confiscation of their property.

The German Government will oppose the bill taxing bourse transactions. A large number of the bankers will transfer their business to foreign places if the bill becomes a law.

The Connecticut Legislature has voted \$50,000 for a soldiers' monument.

MR. PAGE has presented in the House recently a petition of citizens of California to the Tariff Commission, recommending an increase of duty on chicory. The petitioners claim that this industry needs protection, and that the reduction from five cents to one cent per pound has practically ruined their business.

The following dispatch was received from Kingston, Jamaica, on the 12th: The business quarter of Kingston was burned yesterday. Loss, £6,000,000. Hundreds of people are homeless. Wharves, warehouses, stores, banks and supplies are gone. Food supplies are needed. Charitable relief should be sent to W. K. Azbill, Secretary Kingston Charity Organization.

The California College of Pharmacy contemplates erecting a building and equipping it with apparatus necessary for their use, and to this end an appeal is made to druggists, pharmacists and the friends of pharmaceutical education on this coast generally, to contribute \$6,000, the amount that will be required to carry out the project.

At Wilcox, Arizona, there are four blacksmith shops, and they keep busy repairing wagons. The boxes of the coke wagons are six feet high, and on some they load 20,000 pounds, and have 14, 16 and 18 mules—draw two or three wagons—the second and third wagons being made smaller than the first; on the side of each wagon they have a barrel tied, and these they fill when the watering places are far from each other. Globe is 140 miles from Wilcox, and it takes from 22 to 30 days for these teams to make a round trip. More than 100 teams are hauling from Wilcox at present; the teamsters go armed with rifles and pistols, for they do not know when the red-man may go on the warpath.

AN enricher of the blood and purifier of the system; cures lassitude and lack of energy; such is Brown's Iron Bitters.

Parasites of Scale Insects.

EDITORS PRESS:—I am much pleased to see the progress that is being made in the destruction of scale insects, as noted from week to week in the PRESS, and this leads me to note a little of my own experience. For several years past I have cultivated the sword fern (*Nephrolepis Exaltata*) as a house plant during the winter, and have set it in the ground in the summer under a syringa bush. The first summer the fern and several other plants became covered with a species of *Lecanium* which were not noticed till the plants were transplanted in the fall. Unsuccessful attempts were made each year to rid the plants of the scale, resulting in the death of some of the insects and a few of the plants, but enough were always left to stock them well each summer. Last spring, when about to transplant the fern, I noticed a small *Hymenopterous* insect busy depositing eggs in the scales—probably it was one of the *Chalcididae*, known to infest scale insects. I did not capture it to see what species it was, for I was more interested in seeing what would be the result. This was all that could be wished for. In September, when the plants were taken up for the house, not a single scale insect could be found.—G. H. FRENCH, Carbondale, Ill.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR WEEK ENDING NOVEMBER 21, 1882

267,738.—COUGH REMEDY—Hanneh Branch, North San Juan, Cal.
267,975.—NEWSPAPER FILE HOLDER AND BINDER—A. T. Dewey, S. F.
267,741.—VENTILATOR—M. H. Dorgan, S. F.
267,658.—PREPARING BAKEN YEAST—Goll & Spinner, S. F.
267,877.—HORFLE—C. J. Gustavson, Salt Lake, U. T.
267,687.—ORE CRUSHER—W. P. Hammond, Napa, Cal.
267,749.—CAR COUPLING—E. M. Hobbs, Santa Rosa, Cal.
267,907.—AMALGAMATOR—W. H. Leininger, Salem, Or.
267,799.—CORK SWIMMING SUIT—P. Plant, S. F.
267,958.—CROSSCUT SAW—Geo. W. Wills, East Portland, Oregon.
267,765.—GATE—Chas. A. Wyman, San Jose, Cal.

FOR WEEK ENDING NOVEMBER 23, 1882.

263,351.—ORE CONCENTRATOR—L. M. Atchison, S. F.
268,352.—HOOD FOR STIRRUPS—Alex. Ayers, San Jose, Cal.
268,076.—CLOTHES DRIER—T. D. Brown, Oakland, Cal.
268,081.—STEAM TRAP—Geo. W. Coffee, S. F.
268,114.—SELF REGULATING LAMP—Vincent Di Marzo, Benicia, Cal.
268,087.—TWO WHEELED VEHICLE—Wm. C. Evans, Portland, Or.
268,092.—BRAKE BLOCK—U. M. Gordon, San Rafael, Cal.
268,093.—KNIT SHIRT—Thos. M. Grant, S. F.
268,235.—ELEVATOR—P. Hinkle, S. F.
268,115.—ONE STAMP BATTERY—J. M. McFarland, Virginia City, Nev.
268,371.—LYING JACK—T. J. Pearce, Oakland, Cal.
268,125.—WINDOW SCREEN—Geo. L. Reynolds, Oakland, Cal.
268,135.—ADDING MACHINE—Shattuck & Thorne, Jr. Oakland, Cal.
268,137.—SAW TEETH—N. W. Spaulding, S. F.
268,306.—FIFTH WHEEL—Edward Squires, Portland, Or.
268,145.—SOFA BEDSTEAD—Robt. W. Taylor, S. F.

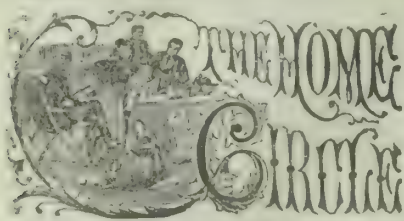
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Notices of Recent Patents.

Among the patents recently obtained through Dewey & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

WINDOW SCREEN.—G. L. Reynolds, Oakland, No. 268,125. Dated Nov. 28, 1882. This invention relates to certain improvements in window screens of that class in which upper and lower wire or other screens or curtains are attached at one end directly to the sashes, so that when the latter are raised or lowered to open them the screens or curtains will be extended over the opening, and thus exclude flies and other insects without excluding the air. The invention consists in a means for attaching the screens or curtains at the top or bottom of the window so that they may be easily detached; a means for keeping the edges of the screens tight, and also the space between the lower bar of the upper sash and the glass of the lower one, and the construction of the screen-weight which allows it to pass the pulley at the top, and thus have more distance through which to move.

LAMP.—Vincent Di Marzo, of Benicia, Cal. No. 266,114. Dated Nov. 28, 1882. This invention relates to a self-regulating lamp, and it consists in the details of construction of a lamp having an elevated oil reservoir, and a receiving chamber into which the oil flows through a passage, the valve of which is opened or closed by levers connected with a float rising and falling with the oil supply. The movement of this float also actuates a wick-ratchet, so that the wick may be constantly renewed. In connection with the apparatus is a cut-off valve, also actuated by a float, so that in case of a failure of the supply-valve to act this one will be moved by the overflow, and will entirely cut off the supply.



A Pastoral.

I sat with Doris, the shepherd maiden;
Her crook was laden with wreathed flowers;
I sat and wooed her through sunlight wheeling
And shadows stealing, for hours and hours.

And she, my Doris, whose lap encloses
Wild summer roses of faint perfume,
The while I sued her, kept hushed and hearkened
Till shades had darkened from gloss to gloom.

She touched my shoulder with fearful finger;
She said, "We linger, we must not stay;
My flock's in danger, my sheep will wander;
Behold them yonder, how far they stray!"

I answered bolder, "Nay, let me hear you,
And still be near you, and still adore I
No wolf nor stranger will touch one yearling—
Ah! stay my, dearling, a moment more!"

She whispered, sighing, "There will be sorrow,
Beyond to-morrow, if I lose to-day;
My fold unguarded, my flock unfolded—
I shall be scolded and sent away!"

Said I, replying, "If they do miss you,
They ought to kiss you when you get home;
And well rewarded by friend and neighbor
Should be the labor from which you come."

"They might remember," she answered meekly,
"That lambs are weakly and sheep are woolly;
But if they love me, it's none so fervent—
I'm a servant, and not a child."

Then each hot ember glowed quick within me,
And love did win me to swift reply:
"Ah! do but prove me, and none shall bind you,
Nor fray, nor find you, until I die!"

She blushed and started, and stood awaiting,
As if debating in dreams divine;
But I did brave them—I told her plainly
She doubted vainly, she must be mine.

So we, twin-hearted, from all the valley
Did rouse and rally her nibbling ewes,
At a homeward drave them, we two together,
Through blooming heather and gleaming dews.

That simple duty from grace did lend her,
My Doris tender—my Doris true—
That I, her warder, did always bless her,
And often press her to take her due.

And now, in beauty, she fills my dwelling
With love exelling and undefiled;
And love doth guard her, both fast and fervent,
No more a servant, nor yet a child.

—A. J. Munby.

The Invalid Clerk.

It was the twilight of a crisp, cold winter day. Outside, the cawing of a flock of belated crows made sorrowful music, as their wings were outlined against the deepening orange of the sunset, while in a cosy farm kitchen the lamp was already lighted, and Mrs. Flint was bustling about preparing the evening meal, while Marah, her niece, sat and sewed with flying fingers on the household linen.

"I should like it so much, aunt," said the girl, lifting her eyes wistfully to the old lady's face.

"But Marah," said Mrs. Flint, setting the earthenware teapot where its fragrant leaves could steep slowly on the back of the stove. "I don't see that I can spare you, my dear. There's so much to do, now that grandma is feeble, and your uncle has to hire two men for the wood cutting, and they've got to be boarded here, and your cousin Louisa coming here with her children until spring."

Marah sighed softly. Was it always to be her lot to be sacrificed for the general good of others?

"I never earned any money for myself, aunt," she said. "And this is such an excellent opportunity to get a place in Mr. Marchland's store. Sue Nellis has written to me that there will be a vacancy in the fancy department very soon, and—"

"John Marchland is a sort of a distant relation of ours too," said Mrs. Flint. "Though I've never seen him, I knew his mother well. And I dare say he would give you a good place and be kind to you, if you entered his store. It would be an excellent chance for you to see the world, too. For I know it's a dull place here, my dear, but I don't see any hope for it! Perhaps in a year or two we can spare you better."

So Marah Flint was compelled to give up the little plan over which she had dreamed so many pleasant dreams. For Marah was only eighteen and she had always lived in the backwoods, and worn her aunt's old dresses made over, and waited meekly on grandma and uncle Abner.

Mr. Marchland himself was, perhaps, a little disappointed, when Miss Nellis, the forewoman whose father owned the next farm to Abner Flint's, asked him if she should promote one of the packing girls to the van place in the packing department.

"But I thought you were going to write to that little unknown cousin of mine?" said he.

"So I did," said Miss Nellis, "but they can't spare her from home, it seems. It's a clear case of Cinderella among the ashes. She is the sweetest, most unselfish girl I ever saw; but all the same it's a shame that she should be buried alive in that sort of a way."

"Very well," said Mr. Marchland, "I sup-

pose she understands her own business best. Put Julia Finch in the place."

The next day Uncle Abner Flint, to his infinite amazement, received a brief note from Marchland & Co., asking if it would be convenient for him to receive, as a boarder for a few weeks, a young man from the store, whose health required change and rest.

"I will be responsible for his board," wrote Mr. Marchland. "He has only his own exertions to depend on, and I am sure I may so far presume on your distant relationship as to trust you will receive him kindly."

"Marah," said Mrs. Flint in some perplexity, "what are we to do?"

"Why, take the poor fellow, of course," said Marah.

"But it will make more work," said Mrs. Flint.

"Never mind the work," said cherry Marah. "I dare say we can manage it between us."

"Marah always did look on the sunny side of things," said Uncle Abner, who serenely left the domestic administration to his womenkind.

"We don't want no boarders here," said cousin Louisa, a low-spirited young matron, who talked through her nose and cried and sniffed a good deal over her troubles.

"There's the little room with the sloping roof close to the chimney," suggested Marah, "where we keep the chests of linen and herbs and seed corn. We might fit that up nicely. I could put down a breadth of new rag carpet beside the bed, and make curtains out of the worn out sheets; and, I dare say, the young man won't be particular."

"But he's a mere clerk—a porter, for all we know," whined cousin Louisa, whose deceased husband had been bar-tender in a railway saloon.

"I guess it won't hurt us to associate with him," said Uncle Abner, dryly; "and I tell you what, mother, if our Marah has all the extra work and care, she shall have the board money, eh?"

"Of course she shall," said Mrs. Flint.

And cousin Louisa sighed deeply and remarked "that some folks always had all the luck and she never got no chance to earn money!"

The young man from the store arrived—a mild, unassuming person, who was very quiet and made very little trouble. He walked in the pine woods—for his health, he said, and helped the stalwart wood cutters now and then. He sat by the fire and read. He answered Uncle Abner's questions about the house of Marchland & Co. with great frankness. Yes, he liked the business. He hoped in time to work his way up in it. Mr. Marchland was very kind to him. He did not consider Mr. Marchland a haughty miser (this in reply to cousin Louisa). Mr. Marchland probably had his faults, but it was not his place to criticize his employer.

"Poor fellow!" said Cousin Louisa, when he had gone out with Uncle Abner to ride with the ox team into the woods. "I don't s'pose he gets six dollars a week, to judge by his talk. I thought p'raps I might be induced to change my widowed condition if he was a likely fellow, with a good income. But I guess I shan't waste none of my attention on him."

"He seems very quiet and pleasant," said Marah.

"And he steps about awful spry for a sick man," remarked grandma, who sat knitting in the chimney corner.

"Oh," said Mrs. Flint, "he isn't real sick. He's only a little down with malaria and overwork. He'll be all right by spring; you just see if he won't."

At the end of the first week, when he offered to pay his board, Mrs. Flint gave it back to him.

"You needn't mention it to your employer, Mr. Johnson," said she (John Johnson was the name on the boarder's valise), "but we was thinkin', me and Marah, that p'raps you wasn't very well off, and so we'd make you a present of the board."

"You are very kind," said the young man, with a slightly flushed face, "but—"

"It's Marah's present, not mine," added Mrs. Flint, bluntly. "We told her she should have the money for the board." But he did not argue the point any further.

And Mrs. Flint confidently informed her niece that "she believed the board money was quite an object to Mr. Johnson, poor fellow."

While cousin Louisa elevated her Roman nose and remarked that "she didn't take much stock in paupers. If folks couldn't support themselves decently, she thought they'd ought to go to the poorhouse."

Marah, however, had all her sympathies thoroughly enlisted in behalf of the silent young guest. She mended his stockings on the sly; she saw that his linen was kept in good order; she made little dainties to tempt his feeble appetite from time to time.

"You are very good to me," he said one day, as he saw her swift needle glide in and out of the pocket handkerchief of his, which he got torn among the bushes from which he had been gathering scarlet wild berries. She smiled.

"We are both solitary and alone in the world," she said. "Only that you are friendless, and I have my good uncle and aunt to rely on."

"I am not so friendless as I was a few weeks ago," said he; "for I venture now to count you among the list of my friends. I have even dared to hope—"

"What?" she asked, without looking up, while the color deepened on her cheek, and her

eyes were intently fixed on the progress of her needle.

"That if I can provide a humble home in New York on my return, you will not disdain to share it with me. Tell me, Marah, do you think you could care for me?"

The tears sparkled in Marah's eyes. "Have I betrayed myself?" she said. "Have I allowed you to discover how dearly I love you?"

"And I loved you, Marah," he said, gravely, "when first I looked upon your face."

So Marah Flint promised to be the wife of the young man from the store.

Mrs. Flint sighed and shook her head, and said she didn't know how ever she would manage without Marah. Grandma expressed herself to the effect that "Marah would make the best little wife in the world." Uncle Abner said "he s'posed gals would get married, and they couldn't expect to keep her forever." Cousin Louisa said "she thought the gal was crazy to marry a poor clerkling fellow, like that!"

The young man smiled as he sat beside Marah, in the light of the huge burning logs, which crackled upon the evening hearth.

"I don't call myself a second Rothschild," said he, "and I am certainly conversant with all the duties pertaining to a clerk's office. But, after all, perhaps I am not a candidate for the almshouse. For I have not claimed all the name in this house to which I am entitled. I am John Johnson, it is true, but I am also Johnson Marchland, the head of the firm of Marchland & Co. And I am Marah's third cousin into the bargain."

"Je-rusalem!" exclaimed honest old Uncle Abner. "And what brought you here?"

"Well," said Mr. Marchland, "I had heard Miss Nellis speak of my cousin Marah, and I felt a sort of curiosity to see her just as she was. I had been sufficiently disgusted by the airs and graces of city young ladies to wish for a genuine wildwood blossom, so I came to the old Connecticut farm, and here I have succeeded in finding my ideal." "Bless me!" cried Mrs. Flint. "So our little Marah will be a rich lady after all, and wear a silk frock every day, and keep a hired girl to do the kitchen work!"

"She deserves it all," said grandma.

"Laws-a-massy!" said Cousin Louisa.

While silent little Marah was perhaps the most astonished of all. She felt like the heroine of fairy tales, whose sober, brown-coated peasant lover is turned suddenly into the beautiful young prince, all sparkling with diamonds.

But she was very happy. And it was as grandma said, she deserved it.

Chaff.

A QUARRYMAN said he couldn't see any danger in smoking while he was handling powder. He can't see anything now.

MIXED.—"Suppose a fellow that has nothin' marries a gal what has nothin', is her things his'n or his'n her'n, or is his'n and her'n his'n?"

A LITTLE girl asked her sister what was chaos that her papa read about. The elder replied, "It was a pile of nothing, and no place to put it in."

"SARAH," said a teacher to one of his pupils, "Sarah, can you give the definition of a skipper?" "No," answered Sarah, "but perhaps a cheese mite."

"LAY off your overcoat, or you won't feel it when you go out," said the landlord of an inn to a guest who was sitting by the fire. "That's what I'm afraid of," returned the man. "The last time that I was here I laid off my overcoat and I haven't felt it since."

PARISIAN lady of fashion to the family physician: "Doctor, I want my husband to take me to Italy for the spring. Now, what is the matter with me?"

"LOOK at you!" shrieked Mrs. Ecomi, as the nurse let the baby fall over the second floor baluster. "Two inches nearer the wall and that child would have smashed a \$50 statuette and the hall lamp." And then they picked up the baby.

THE king of Greece not only writes poetry, but he pays all the cost of publication and is willing to foot all damages.

A DETROIT citizen whose wife deserted him for a handsomer man, was just a bit pleased to learn that in less than a week the new man had his nose flattened and one eye destroyed by an accident.

AN Ohio farmer put \$100 into an old tea-pot to keep it from thieves, and the very next day his wife traded it with a tin-peddler for a cake-cutter. The dust won't settle in that house for 20 years to come.

A MAN'S bottom dollar seldom reaches the surface when wanted.

TRAMPS are complaining this fall of the loose manner in which hay stacks have been put together.

A WASHINGTON clergyman introduced into his sermon the names of several brands of champagne, under the impression that his congregation would take them for Latin quotations, and three deacons gave away their knowledge of drinks by getting indignant.

THE lady with "experience as a writer, and devoted to journalism," wanted a place on a first-class daily journal. She "would be content with her expenses for salary, till she showed her value." And the editor thought it would be encouraging cheap labor to engage her, till she sent down to the office her bill at an up-town hotel, with her laundry account charged \$21 a month for fluted skirts.

Home Politeness.

Too many of us seem to act on the principle that anything is good enough for those we associate with at home. They are "our folks," and it doesn't matter what we say or do, or how we say or do it, when no outsider is present. We have our everyday clothes and manners on then. When some one calls we put on our company garb, and are very different persons. We hardly know each other, so great is the transformation. We are polite to each other. We are a charming family, our visitors probably think, because of the harmony that seems to exist. But when the door closes on our visitors we draw a breath of relief and feel at liberty to relapse into our old ways again. We are so unused to "company ways" that we don't feel at home in them.

But this is all wrong. We ought to consider home and the members of the household as entitled to the first consideration in all things. What are those we meet in society to us that we should take such pains to be polite and agreeable to them, and neglect those who have the strongest claim upon us? It all comes about because we have got into a wrong way of thinking. We have put the home in the background, when it should occupy the foremost place in our thoughts. We should strive to make ourselves such pleasant members of the household band that our absence is like the loss of sunshine from a summer day. We can do it, and we will do it, if we enter into the right spirit—the spirit of home. The idea seems to exist among us that to be polite to each other in the family circle is foolish and like putting on airs. We must rid ourselves of this notion, and act on the principle that whatever helps to make our intercourse pleasanter with those outside the family circle, should be brought into use there. We should avail ourselves of any and everything that can be used to advantage in our daily intercourse. It is no exhibition of weakness or of "airiness," to say "thank you," or "if you please." These little courtesies are indications of refinement, and, costing nothing, they help to make the wheels of life move more smoothly. It is not in elaborate attempt at politeness that true gentility consists. It is in the simple, honest expression of the genuine feelings of the heart which is interested in the welfare of others. Our company politeness is generally superficial, because we care little or nothing for those we try to be polite to. It is assumed. But if we are interested in those at home, and are anxious to make their lives pleasant, we will endeavor to give expression to that interest, and in doing that we will be doing a really polite thing, for such feelings cannot be expressed in an impolite way. The cultivation of this expression will be the best possible education in true politeness.—ELEN E. REXFORD.

HOW FLIES CLIMB.—Herr H. Dewitz has communicated to the Berlin Society of Natural History some facts that bear very strongly against the generally received theory that flies adhere to perpendicular walls and ceilings by virtue of some sucking power in their feet. He asserts that the feet of flies cannot possess the sucking property ascribed to them, for they are hard and destitute of muscles. The theory has long been contradicted by the experiments of Blackwell, who found that flies could climb the sides of a jar under the receiver of an air pump where there was no atmospheric pressure, and who asserted that the power of adherence was due to a sticky matter secreted from the foot-hairs of flies. This assertion was generally regarded as not proved, and the case has rested there. Dewitz reports that his investigations have shown that Blackwell was right. He has watched the exudation of the sticky matter from the feet of the flies by fastening one of the insects to the under side of a plate of glass and viewing it under the microscope. A perfectly clear liquid was seen to flow from the ends of the foot-hairs and attach the foot to the glass. When the foot was lifted up, to be put down in another place, the drops of the sticky matter were perceived to be left on the glass, in the exact places where the foot-hairs had rested. The adhesive fluid appears to pass down through the hollow of the hair, and to be derived from glands which Leydig discovered in the folds of the foot in 1850. A similar adhesive matter appears to be possessed by bugs, by many larvae, and probably by all insects that climb the stems and the under sides of the leaves of plants.

TO KEEP SILVER-PLATED ARTICLES BRIGHT.—This can be done by dipping the articles occasionally in a solution of hypophosphite of soda. Large articles, like pitchers and salvers, should be wiped off with a rag dipped in the solution and dried with a soft towel. By rubbing a little with a piece of chamois leather they will be as bright as new.

SOLIDIFIED TEA.—One hundred grms. of ground sugar and 10 grms. starch sugar are boiled with the quantity of water required for solution, until the mass becomes tenacious, but yet remains transparent. After cooling, 50 grms. of tea previously mixed with 50 grms. of dry sugar, are added. The plastic mass is pressed into moulds, and when solidified forms the preserved tea.

THE EDITOR'S WORK.—We do not have much to say about ourselves as editors. We think some editors presume altogether too much on the popular interest in their personal affairs. There is, however, so much of absolute truth in the following from Henry Watterson, of the *Louisville Courier-Journal*, that we cannot refrain from reproducing it: "Some people estimate the ability of a periodical and the talent of its editor by the quantity of its original matter. It is comparatively an easy task for a frothy writer to string out a column of words upon any and all subjects. His ideas may flow in one weak, washy, everlasting flood, and the command of his language may enable him to string them together like bunches of onion, and yet his paper may be but a meager and poor concern. Indeed, the mere writing part of editing a paper is but a small portion of the work. The care, the time employed in selecting is far more important, and the fact of a good editor is better shown by his selections than anything else; and that, we know, is half the battle. But we have said an editor ought to be estimated, his labor understood and appreciated by the general conduct of his paper—its tone, its uniform, consistent course, aims, manliness, its dignity and its propriety. To preserve these as they should be preserved is enough to occupy fully the time and attention of any man. If to this be added the general supervision of the details of publication, which most editors have to encounter, the wonder is, how they find time to write at all."

A TEMPERANCE TOWN.—The *St. Louis Republican* in a recent reference to the Hon. J. B. Grinnell, of Iowa, states that that gentleman was the young man to whom Horace Greeley gave the oft-quoted advice, "Go West, young man, go West." The *Republican* gives a very interesting sketch of Mr. Grinnell's career, from the time when he purchased a tract of land in Iowa and founded the city of Grinnell. He has been a preacher, a farmer, a lawyer, a railroad receiver, a college president, a State Senator, a college trustee and a member of Congress. He said of himself: "When I took Horace Greeley's advice—by the way, I am having his famous letter photographed—I had purchased a large tract of land, but not from mercenary motives. My first business was to lay out a town; and I determined that no intoxicating liquors should be sold there, and up to this time I may say that not one drop of ardent spirits has ever been sold upon that tract of land. I began three miles away from any house, and three years ago, when we had our quarter-centennial celebration, no fire had desolated a human habitation, no man had found his way to the poor-house, not one had gone to the jail, and not one to the State Prison. And happening to be Mayor of the city for the past two years, I will say there was only one person brought before me and fined for drunkenness."

INFLUENCE OF POETRY ON SNAKE BITES.—There is probably nothing older in medicine than the belief that a hymn, if sung at the right time and place, will cure almost any complaint. When Odysseus was struck by the wild bear, Homer tells us that his friends sang a song of healing over the wound. Another classical writer advises us not to sing songs over hurts that need the knife, and this advice might have been recalled with profit by Ramchunder Ghose, lately a serpent charmer doing a good business in Puddooppokur. A cobra was found in a shop where poor Ghose happened to be sitting, and the public were anxious to put it to death. Ghose, from motives of humanity, and, perhaps, to advertise his skill, offered to "charm" the cobra. He did manage to collar it, and was about to place it in a chatty, when the cobra bit its charmer. Ramchunder Ghose, who seems to have been an earnest man in his way, refused to go to hospital, or to suffer any medical treatment. He repeated some *mantras* or sacred strains from the Vedas, and said it would be all right. The *mantras*, however, failed on this occasion and Ghose expired, the victim of misplaced confidence in his professional skill and in the influence of poetry on snake bites.—*London Graphic*.

ICE.—There are many remarkable things connected with the formation of ice. A lump of ice melted becomes distilled water. The fact that it is lighter than water is probably caused by its power to remove all impurities in the freezing process, and thus diminish its weight. Salt, air and coloring matter are expelled. Water colored with indigo will form ice as clear as the purest rain water. When there is a sudden fall in the temperature foreign matters have no time to escape, either by falling or rising, and are consequently entangled with the ice, but do not form any portion of it. Salt water gradually frozen will produce fresh water ice; but in the Arctic regions, where the temperature sometimes falls from 40 to 50 degrees in the course of a few hours, the frozen salt water when melted will not produce perfectly fresh water, on account of the particles of salt adhering to it in the rapidity of the congelation.

A GRIDLEY hunter has trained a cow to walk out to where a flock of geese have settled down on the grain, browsing all the way along, he walking alongside on the off side from the geese, and when near enough the cow lies down, and he shoots into the flock and captures 30 or 40

YOUNG FOLKS' COLUMN.

A Story of a Tooth.

It was a very troublesome tooth. Not a bit of anything sweet could Christie eat without making it ache. I cannot tell how many hours and hours in the night it had kept every one awake. "That child must go to the dentist to-morrow," said papa one night.

Christie was a little girl, not quite five years old, but she was tired of being a baby. It seemed to her that since all big girls have had teeth pulled, having a tooth out would make her a big girl. So she went down street beside mamma next morning feeling very happy.

"Hello," called out cousin Tom, whom they met, "where are you going?"

"I'm going to the dentist's to have a tooth pulled," replied Christie proudly.

"I wouldn't be in your shoes for anything!" added Tom.

"Is it very bad, mamma?" asked Christie.

But Mrs. Spencer told her not be frightened, for Tom was only trying to tease. I think the little girl's mother ought to have told her the whole truth. Don't you?

What a nice place that dentist's office was! There was a splendid great chair with a head-rest, and a pretty bowl beside it. There was a stand all full of funny little tools that Christie thought would be grand to play with.

What a pleasant man Dr. Snow was! He lifted her into the great chair and asked so kindly which tooth had ached. Then he took one of the little tools in his hand, and then such a straining and tugging and wrenching and breaking.

Christie didn't know that she screamed, but mamma told her afterward that her cries were frightful to hear. She only knew that she put both hands up to see if her head was still in place before she bounded out of the chair.

"You are just as mean as you can be, and I'll never come here again as long as I live! So there!" she cried.

In an instant she was in mamma's arms. She was told, between tears and kisses, that it was all over. Then Mrs. Spencer took from a paper a lovely new wax doll. In a little while Christie was as smiling and happy as ever.

"Now, dear," said mamma, as they started for home, "you run back and tell Dr. Snow you are sorry for being so naughty, and ask him to forgive you."

Back into the office went Christie.

"Please, Mr. Dentist, if you're sorry for being so naughty, I'll forgive you."

The doctor smiled and patted her head. Christie never knew that she hadn't said it right.

After all, she wasn't a big girl! That very night she was rocked to sleep in mamma's arms.

Smut.

Dick found her in the orchard one morning. Nobody knew where she came from; nobody ever claimed her.

She was a pretty little creature, snow white but for a tiny black spot on the tip of her nose, making her look for all the world as though she had been poking about among the stove pots and kettles.

One day Dick's wee niece, Maidie, came with her mamma on a visit to the farm; and her bright eyes soon spied the little white furry heap curled closely down beside the stove.

"Kitty's dot dirty face," she said, shaking her round yellow head solemnly. "Nose 'mutty; must be washed!"

So she got a dish of soap and water and scrubbed poor little Smut's black nose very hard and long, until Smut thought of the pias in her soft feet, and used them on Maidie's hand. Then Maidie let her go.

The next summer Smut became a proud and happy little cat-mother, with a family of three black-and-white kittens in the loft over Dick's hen-house. Dick's chickens were the delight of his heart. They knew their names, and would come in a hurry when he called them.

One night he forgot to shut the hen-house door. In the night there was a great outcry, then—a squalling and cackling, and a queer noise which nobody knew what to make of, all together.

Almost the whole family rushed out to see what it was all about, and there—there was a fox, a big, red fox, that had come to make a supper on Dick's cochine.

But he did not get even a bite; for down out of the loft had dropped brave little Smut, right upon his back, and there she hung, biting and scratching.

The fox was making the funny noise, which wasn't a bark nor a growl, but a little of both; and when he heard them all coming, he scampered away to the woods with Smut, who dropped off before long, and came back.

Wasn't she praised and petted! And didn't she live on cream for a week!

Of course the older folks said she was defending her own family, but Dick always declared she did it to save the chickens, because they were his, and because she was his own little cat.

WHAT AN ELEPHANT REMEMBERED.—During Barnum's exhibition in Oswego, N. Y., Jambo fixed his eye on a lady who was pushing her way through the crowd toward him, and strained at his tether, endeavoring to reach her. His

keeper manifested great surprise, and asked her if she had ever seen him before. She replied that she had often fed him with nuts and candy by the hour in the London Zoological Gardens. The brute's action plainly showed that he recognized her.

GOOD HEALTH.

Home Treatment of Croup.

[Written for the Press by Mrs. LUCY McCANN.]

In a late paper we find a notice of a suit for \$10,000 damages, brought by a father whose child had died of croup, against the doctor who attended it. This seems to us absurd, for we hold that when any parties assume the responsibilities of parentage there is implied a duty on their part to prepare themselves with the knowledge requisite for the protection of their children from the dangers to which they are liable to be exposed. Especially is this necessary in regard to the treatment of croup and its kindred diseases, which are so sudden in their attack, so swift in running their course, and, if neglected, so fatal in their termination. There can be no excuse for ignorance upon such subjects in these days of common sense, medical works, "Household Physician," etc.—particularly in regard to croup, in which delay is so emphatically dangerous.

This disease, taken in time, or as the doctors call it, "in the first stage," is a simple, easily-managed affair. If neglected from ignorance, want of care, or waiting till the doctor comes, the "second stage" quickly follows—wherein the skill of the best physician is often of no avail to save the life of the poor little sufferer, for whose death those having charge of the child are responsible, and not the doctor called in too late to save it. The season when children are most subject to croup is at hand, and we feel that a few hints regarding its home treatment may not be out of place at this time.

It is many years ago since we were first awakened at midnight by the shrill, barking cough of a baby with the croup. At that time we knew only enough of this disease to know that it was one which admitted of no delay in its treatment, and sent instantly for the doctor, who happened, luckily for us, to live near by, and came at once to the child's relief. We watched his every action with intense anxiety whilst he kindly explained to us the nature of the disease and the reasons for the remedies he applied.

Taking a narrow strip of flannel and dipping it into a mixture of sweet oil and ammonia, he put this around the child's throat to act as a counter-irritant and draw the blood from the seat of the disease (in the windpipe) to the surface. He left this cloth on until the little one's neck was quite red, warning us at the same time never to blister the throat externally, as that was not the object, but simply to redde it, when, if it caused the child much pain, a cloth dipped in the plain oil could be put on instead, which would relieve the burning sensation. The doctor then administered small doses of syrup of squills, from time to time, to soothe the irritation in the throat and relax the system, and under his care the little patient was sleeping quietly in an hour's time, with only a slight hoarseness left next day to tell of the danger through which it had passed. The fact, however, that it had had the croup and might be subject to it, alarmed us greatly, and we thought, with dismay, "Suppose we had lived five miles in the country with a 10-mile ride between us and a doctor? The child might have died before help could have been brought, and we, in our ignorance of what to do for it, would have been to blame for its death." We concluded to turn doctor ourselves, to that degree that we did not mean to rest until we knew all that a layman might concerning this dreaded disease, or at least enough to act intelligently for the child's benefit until the aid of a physician could be procured.

Our first study was old "Dewees on Children's Diseases," and other and later medical authorities followed after, until the cure of croup was reduced in our minds to the simple propositions of taking "time by the forelock," understanding the nature of the remedies to be used, and applying them instantly, thereby at once checking the progress of the disease, or ever letting it pass into that dangerous "second stage," for which so little can be done, wherein the windpipe or trachea becomes filled with a tenacious phlegm or "false membrane," which prevents the child's breathing, and, in a short time, chokes it to death. We learned, then, that the first step in the cure of croup was to check by counter-irritation or reddening the throat externally the rush of blood to the diseased part. This may be done with many things, and it is well to know them, as the effect is what is desired, and it matters little what agent is used, so that this end is accomplished. Let us suppose a case.

In a lonely farmhouse, miles away from doctors or even neighbors, a child is taken at midnight with the croup. "What shall be done?" cries the young mother in dismay. Put a counter-irritant around its throat at once. "Of what?" Sweet oil and turpentine, mixed together in about equal parts. "We have neither in the house." Some melted lard then, with a

little ammonia in it (not enough to blister, mind you). "Dear me, we are just out of both!" Quick, then, we are losing time. Get some coal oil from the lamp can. Put some in a saucer, dip your flannel in it, and pin it around the child's neck, or a weak mustard plaster, or red pepper sprinkled on a strip with melted lard—in fact anything which will produce the required effect, if you have not the turpentine, which the experience of many years has proved to us to be the best thing, for two reasons: First, because children usually dislike the strong smell of ammonia, mustard, etc., so much that they rebel at their application, and secondly, turpentine has, besides its rubefacient powers, a strong anesthetic effect, quieting the nerves and putting the little patient to a gentle sleep.

"The child's breath is still very hard," cries the mother. Give it 15 drops of squill. "Haven't a drop left." Give syrup, then. "We never keep that." No matter! Drop four or five drops of coal oil on this teaspoonful of sugar and give that to the child. It cuts the phlegm some way, and usually acts like a charm; or five drops turpentine will answer the same purpose. There! Keep the little one well covered, and he'll be all right by to-morrow. Don't let him out of the house for a day or two though, or he may take fresh cold and have a relapse, when you will have your first work to do over.

For the first stage, in which croup should always be treated, one hardly needs a doctor at all, as the remedies are such everyday affairs that they may be found in nearly every household, and the reasons of their use are so obvious as to be easily remembered, whilst the relief given is, in 9 cases out of 10, so instantaneous that the patient requires no further medication. In every case, in our experience, the first croupy cough has been to us the signal for immediate action. Our bottles of sweet oil and turpentine are always on hand ready for use, and we mix them together according to the age of the child and the tenderness of its skin—using only a few drops of turpentine in the oil for the baby's neck—whilst as a remedy for sore throats for grown people the turpentine may be used nearly pure, and sometimes without any oil at all. So efficacious have we found this external application, if used at once, that the patient rarely requires anything more than this, which we often apply to the little ones by taking them in our laps before the fire and rubbing the mixture well in around their throats and chests, putting a "cravat" of flannel on afterwards to prevent any cold and keep the throat warm. This flannel we keep on the throat for several days, finding it assists greatly in preventing any relapse on the part of our patient.

The recovery of the \$10,000 damages alluded to above cannot restore to that father his child—lost through the doctor's delay or his own ignorance, as the courts may decide—but the knowledge of the few simple remedies herein suggested (which have stood the test of many years' practice in the treatment of croup), may save the life of some little one, and deprive that scourge of childhood of most of its terrors in many a home. With this hope we send them forth, believing that where these remedies are promptly and properly applied this disease is no more to be dreaded in the household than an ordinary bad cold, into which it immediately merges as soon as its alarming symptoms have been checked by proper treatment.

Santa Cruz, Cal.

DOMESTIC ECONOMY.

Recipes.

[Written for the Press by A. E. T.]

GOLD AND SILVER PUDDING.—The yolks of four eggs, four heaping tablespoonfuls of brown sugar, three tablespoonfuls of cornstarch, one-half cup of milk; beat thoroughly with an egg beater. Let one quart of milk come to a boil, then pour in slowly this mixture, stirring briskly at the same time; flavor with vanilla; pour into the dish in which you serve it. Beat the whites to a stiff froth and add five tablespoonfuls of white sugar; put on the top and brown nicely in the oven. Can be eaten hot or cold.

BREAD PUDDING.—Over one quart of bread crumbs pour boiling water until soft, beat together thoroughly; into this put one cup of sugar, one large teaspoonful of cinnamon, one tablespoonful of melted butter, one cup of milk and one small grated carrot; stir well together and bake one-half hour. Sauce: One small cup of sugar, two tablespoonfuls of flour, one-half teaspoonful of cinnamon; mix thoroughly and pour over it one pint of boiling water, then add one tablespoonful of syrup; set it on the stove and let it come to a boil; serve while hot.—A. E. T.

GOOD PIE CRUST.—For one pie take one cup flour and about one-third as much lard (in bulk), rub together nicely with your hands; then add about one tablespoonful of water and a little more flour; mix as little as possible, and roll out. If you wish it not so rich, use half butter.

ROAST SPARE RIB.—Take a nice spare rib with part of the tenderloin left in; season with salt and a little pepper; sprinkle with summer savory; put in a pan with a little water; baste often and roast until nicely browned and thoroughly well done.



DEWEY & CO., Publishers.

A. T. DEWEY. W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

Address editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

Subscriptions are payable in advance at the rate of \$3 per annum. Transferring extra will be added to the above sum for EACH THREE MONTHS DELAY which occurs in forwarding remittance. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.50	\$2.25	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Entered at San Francisco P. O. as second-class matter.

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY. W. B. EWER. S. H. STRONG.

SAN FRANCISCO:

Saturday, December 16, 1882

TABLE OF CONTENTS.

EDITORIALS—Two Pictures; Sericulture, 461. The Week; The Proposed Law and What it is Hoped to Gain by It; The Rural Press—The Dairymen's Advocate; Seed Distribution, 468 The Dairymen's Convention; California Intelligence, 469. Patents and Inventions; Notices of Recent Patents, 465.

ILLUSTRATIONS—The Old Way—The Creation of Property and Prosperity by the Legitimate Dairy Industry; The Proposed Reform—Scene on a Dairy Farm on the Plan Advocated by the Oleomargarine Philosophers, 461.

CORRESPONDENCE—A Mountain Trip—No. 2; Northern Sonoma Notes; Tuolumne County Notes, 462 THE DAIRY.—What Cow for Milk, 462-63.

POULTRY YARD—Practical Poultry Raising—No. 1, 463.

THE VINEYARD—Raisin Culture, 463.

HORTICULTURE—The Fruit Growers' Convention, 463-70.

PATRONS OF HUSBANDRY—The Alhambra Celebration; Anniversary Celebration by Sacramento Grange; Annual Meeting at Alhambra, 464.

AGRICULTURAL NOTES, from the various counties of California, Arizona, Idaho, and Nevada, 464-65.

NEWS IN BRIEF, on page 466 and other pages.

HOME CIRCLE—A Pastoral (Poetry); The Invalid Clerk; Chaff; Home Politeness; How Flies Climb; To Keep Silver Plate Articles Bright; Solidified Tea, 466.

The Editor's Work; A Temperance Town; Influence of Poetry on Snake Bites; Ice, 467.

YOUNG FOLKS' COLUMN—A Story of a Tooth; Smut, 467.

GOOD HEALTH—Home Treatment of Croup, 467.

DOMESTIC ECONOMY—Recipes; Good Pie Crust; Roast Spare Rib, 467.

QUERIES AND REPLIES—Apricots in the English Market, 463.

Business Announcements.

Davis Sewing Machine—Mark Sheldon, S. F.
Barb Fencing—Jones & Givens, Sacramento, Cal.
Youth's Companion, Boston, Mass.
Wagons—Studebaker Bros Manufacturing Co., S. F.
Board Fence—Waldo F. Brown, Oxford, Ohio.
Eggs—L. C. Byce, Petaluma, Sonoma Co. Cal.
Brown's Iron Bitters.
Elastic Truss—Eggleston Truss Co., Chicago.
Floral Guide—James Vick, Rochester, N. Y.
Stallion for Sale—J. H. Willits, Watsonville, Cal.
Fruit Seedlings—E. P. Clark, Danville, N. Y.
Label—C. H. Dana, West Lebanon, N. H.

The Week.

The assembling of the dairymen, the organization of an association through which to exert their strength against the imposition of false butter upon the consumer, and the means by which they hope to accomplish this desirable result, are the agricultural sensations of the week. The meeting was seen from the first to be vigorous in tone and representative in character, as delegations from all the leading dairy counties were present, and they came for the most part in answer to the wish of considerable bodies of their fellow citizens in the several counties. For a body of men meeting for the first time as a society, and therefore somewhat in doubt as to methods of procedure, the convention made an excellent record, as the reports in this and next week's PRESS will show. There is great confidence that the Legislature will give the needed protection to the legitimate interest and the consumer, although the greedy co-operation which attacks the dairy interest is prepared to fling its coin freely to gain a free field for its impositions. Our paper is this week largely devoted to the discussion of oleomargarine and injurious insects, the bugs and humbugs of the day. We shall have greater variety hereafter.

The Proposed Law and What it is Hoped to Gain by it.

The central act for which the Dairymen's Association was called and for which it was organized, as described elsewhere, was to frame an Act which should secure the sale of false butter under its own name, and the use of it with an understanding that it was not the genuine article to which it has semblance. In order to emphasize as much as possible this part of the convention's work, we have taken from the record of proceedings the proposed law and the explanation of its provisions and aims, as described by its author, the President of the association. This will bring the subject into clearer light than otherwise, and enable all to understand it thoroughly. This is the proposed law, as presented to the Dairymen's Association on Wednesday of this week:

A bill to be entitled "An Act for the protection of the dairy industries of this State, and the consumer of dairy products."

The people of the State of California, represented in Senate and Assembly, do enact as follows:

Sec. 1. It shall be unlawful for any person or corporation in this State, in the manufacture of the article or substance commonly known as "oleomargarine," or "oleomargarine butter," to mix or to incorporate therewith any part or portion of butter, the legitimate product of the cow; or to put upon the market, or sell, or offer to sell, any of such substance, commonly known as "oleomargarine," or "oleomargarine butter," in the form of rolls or cubes commonly used in this State by dairymen for the marketing of butter.

It shall be unlawful for any person or corporation in this State to mix or incorporate with said substance, commonly known as "oleomargarine," or "oleomargarine butter," any part or portion of butter, the legitimate product of the cow, or to put upon the market, or sell, or offer to sell any such substance, commonly known as "oleomargarine," or "oleomargarine butter," in the form of rolls or cubes commonly used by dairymen in this State for the marketing of butter.

Sec. 2. Every person who shall manufacture for sale, or who shall offer or expose for sale any article or substance in semblance of butter, not the legitimate product of the dairy and not made exclusively of milk or cream, but into which the oil or fat of animals, not produced from milk, enters as a component part, or into which melted butter or any oil thereof has been introduced to take the place of cream, shall distinctly stamp, brand or mark in some conspicuous place upon every package of such article or substance the word "oleomargarine" in plain letters not less than one-fourth of an inch square each; and in case of retail sale of such article or substance in parcels or otherwise, the seller shall, in all cases, deliver therewith to the purchaser a printed label bearing the plainly printed word "oleomargarine," the said word to be printed with type, each letter of which shall not be less than one-fourth of an inch square.

Sec. 3. Every person dealing, whether by wholesale or retail, in the article or substance described in Sec. 2 of this Act, and every hotel or restaurant keeper or boarding-house keeper, in whose hotel or restaurant or boarding-house, such article or substance is used, shall continuously keep conspicuously posted up in not less than three exposed positions, in and about their respective places of business, a printed notice in the following words, viz: "Oleomargarine sold here," the said notice to be plainly printed with letters not less than one-half of one inch square each.

And each and every hotel keeper, and restaurant keeper, boarding-house keeper or proprietor of other places where meals are furnished for pay, who may use in their respective places of business any of the article or substance described in the second section of this Act, shall, upon the furnishing of the same to his guests or customers, cause each and every guest or customer to be distinctly informed that the said article is not butter, the genuine production of the dairy, but is "Oleomargarine."

Sec. 4. Every person, or director, trustee, officer, or agent of any corporation, who may violate any provision of this Act, shall be guilty of a misdemeanor, and upon conviction thereof, shall be punished by fine of not less than \$50, nor more than \$500, or by imprisonment for not more than three months, or by both such fine and imprisonment; and it shall be the duty of the Court trying said offense to order the payment of one-half of the fine imposed to the person giving the information upon which the prosecution was based and the conviction had, and such fine may be collected by execution, as in civil causes.

Comments by Judge Stanly

In explanation of the aims of the above bill, Judge Stanly spoke as follows: The committee have agreed upon a bill to present to the next Legislature for enactment into a law. They have caused that bill to be printed, and we want everyone to take one and read it over, in connection with the report of the committee.

Judge Stanly then read the first section and said: The object and purpose of the committee in inserting that provision is this: They have found upon the examination of the reports of various experts that it is the habit of manufacturers of oleomargarine, when they are prepar-

ing an article for the examination of experts, from whom they expect to obtain a certificate of their good character, to mix with the oleomargarine a proportion of genuine butter, for the purpose of so concealing its character as to prevent the expert from determining the chemical or microscopical difference between the oleomargarine and true butter. It is intended to prevent the oleomargarine manufacturer from adulterating his own production by our genuine production, and to facilitate us in obtaining evidence of the true character of the goods which he is selling.

The dairymen of the State of California have for a great many years adopted the form of the roll and cube for marketing fresh butter. It has become distinctive of California. Now, if oleomargarine is made in the shape of rolls the manufacturer asserts to the people—represents by the fact of putting it in this shape—that the article which is contained in that roll is genuine butter. It is false representation, and of itself is a fraud upon the purchaser resulting to our injury.

Now, the first provision which I read was intended to meet the case of the manufacturer of oleomargarine, of prohibiting him from adulterating his product with our butter, and from putting it up in rolls and cubes. The second provision is intended to meet the case of the corner groceryman who buys the oleomargarine and works it over in his back room with butter and then puts it up in rolls and cubes and offers it for sale as genuine butter.

The object of Sec. 2 is to compel the manufacturer to mark and brand every parcel and every package of his product with the name of oleomargarine, and to compel the seller of that article, when he breaks that package so that he can't sell the mark with the package, to hand the customer a printed notice that the stuff which he is buying is not butter, but oleomargarine.

The object of the first part of Sec. 3 is perfectly apparent. It is in order that the consumer of butter, when he goes into a store, shall find posted up where he can't avoid seeing it that oleomargarine is sold in that establishment. It puts him upon his guard. It compels the hotel keeper to have that printed notice put up in his dining-room.

The latter portion of Sec. 3 means that where you go into a restaurant and have placed before you a plate of stuff in the semblance of butter that the restaurant keeper is compelled to tell you in words, "This stuff which I have given you is not butter, but oleomargarine."

The object of Sec. 4 is to relieve the Dairymen's Association of at least a part of the expense of prosecuting the dealers in this fraudulent article. It is to impose a reasonable fine—one which would in all respects be reasonable and just—and to give the informer one-half of the fine. We thought that one-half of the fine given, with the salary or wages which this association will pay to him, would be sufficient inducement to have this matter thoroughly prosecuted, and the other half of the fine to pay the county in which the case is prosecuted for any expense of the prosecution.

After most careful and considerate deliberation, this production is the best and promises to be more effective than any legislation the committee could think of. They think they have met almost every possible contingency in which this article can be sold to the detriment of the genuine product of the dairy. The committee are satisfied that if this bill is enacted into a law that it can be enforced, that there is not a shadow of a doubt but that every single provision in it can be maintained in any court in any land governed by constitutional law. The committee would have been glad to have embraced the opportunity of making a written report upon this, in order that this written report might have gone with the bill and have been handed to the members of the Legislature, but as that was impracticable, they recommend that each and every member of the convention take one or more copies of the bill—take them home and explain it to their neighbors, interview the representatives and explain it to them item by item, and line by line. They are satisfied that no reasonable man, who is an honest manufacturer of oleomargarine can make any objection to any single one of its provisions, unless the palming off of this article as something else than oleomargarine is necessary to the success of their business. If not, they can have no objection to this bill. We don't wish to interfere with them as long as they don't palm off oleomargarine as genuine butter. If the gentleman who spoke yesterday told the truth, then he can't have the slightest objection to the enactment of this bill into a law. The committee instructed me to recommend to the convention that the Legislative Committee be given the responsibility of taking such measures as in their judgment is necessary for the procurement of this legislation. That is all that I have been instructed to say to the convention on that subject.

The Adoption of the Law.

The convention heard the reading and exposition of the law with much apparent interest, and some discussion arose upon several points. The document as originally presented was adopted, except that the penalty for transgression in the original bill was not less than \$100, instead of \$50, as was adopted.

NEW YORK ship calkers are on a strike. The Master Shipwright Association insists that no calker shall be employed unless the association has full control of the work.

The Rural Press—The Dairymen's Advocate.

The Committee on Resolutions at the State Dairymen's Convention, Dec. 13, 1882, reported the following resolution, which was unanimously adopted:

Resolved, That this convention regards with great satisfaction the able manner in which the PACIFIC RURAL PRESS has upheld the dairy interest in this important juncture, and that all dairymen are recommended to give their patronage to that paper.

The resolution was unanimously adopted.

Seed Distribution.

The following seeds, grown in the grounds of the College of Agriculture, University of California, will be distributed to citizens of California as long as the supply lasts. Applications are to be accompanied by postage stamps, as specified below, and addressed to Prof. E. W. Hilgard, Berkeley, Alameda Co.:

Dalmation Insect Powder Plant, *Pyrethrum cinerariaefolium*. Flowers, when dried and ground, producing a very valuable insecticide, which is growing in favor. Resembles a daisy, with yellow center and white rays. Blooms the second year. *Pyrethrum roseum* or *carnium*, from the Caucasus, yielding a very fine insect powder. Yellow center and rose or carmine rays. For the above no stamps are required.

Schrader's Brome Grass, *Bromus ciliaris*. A good pasture grass with large nutritious seeds. Highly valued in Australia, Texas and elsewhere, as giving early feed. **A Millet Grass, *miliun multiflorum*.** A perennial, valuable for its hardiness, keeping green under considerable frost, and resisting drought well when once established. Send six cents in postage for each of these two grasses.

The following cereals are in packages of about a pound; 18 cents postage to be sent for each variety applied for:

Wheat.—1. Defiance (Pringle's hybrid), of excellent milling qualities, resists rust; 2. Defiance (Paine's), black chaff, amber berry; 3. Snowflake, very productive and of excellent quality; 4. Egyptian Mummy, or Many-headed, prolific on rich soil; 5. Black-headed Macaroni; 6. Whittington, a favorite in England; 7. Odessa, yields well and resists rust; 8. Royal Australian; 9. Polish or "Wild Goose," makes excellent hay, grain valued for macaroni.

Barley.—1. Black, two-rowed, very productive. 2. True six-rowed, hardy and very productive. 3. Blue, smooth, valuable for hog pasture. 4. Nepal or Bald, fine for forage. 5. Rice barley, very hardy in frosty climates, grain cooked as rice in Germany.

Oats.—Polish.

It is understood that parties accepting these seeds will, at the end of the season, report to the institution as to time and mode of sowing, cultivation, soil, yield, and their opinion of value. As the supply of a given kind may be exhausted while others remain, the names of several should be given in the order in which preferred, with the understanding that the first one or others still in stock will be sent.

Please Remit.

We trust that as many of our subscribers as possible, will send in their renewed subscriptions between this and the first of 1883. Also, that fresh names from among new comers, young and rising farmers, and members of all branches of husbandry, from far and near, who will come forward and co-operate in utilizing and improving our medium of farm and household advancement. There can be no better season for making new and renewing old subscriptions to an upright farmers' journal.

QUERIES AND REPLIES.

Apricots in the English Market.

EDITORS PRESS:—One word more concerning apricots in the London market. Mr. Barbour's statement in the Fruit Growers' Convention is liable to mislead. Imagine a few cases, or a few hundred cases, glutting 4,000,000 of people! The point I wish to make, but which it seems I have not succeeded in doing, is that the English public, being strongly prejudiced against foreign canned goods, needs to be educated to a taste for our canned fruits. When this is done we shall find it is not so easy to glut the London market. I hope ere long to send to the RURAL a report of how the fruits I have recently forwarded there were received.—LEONARD COATES, Napa, Dec. 8, '82.

The Japan Clover.

The so-called Japan clover (*Lespedeza striata*) had on my place not the character of a bush clover, which is claimed for it by a Washington paper. On the contrary, it did not grow above an inch high in rich soil, but hugged the ground closely. I intend to make more experiments with it this season, as soon as I shall have procured the seed, and will let you know the result of them.—E. WOLLER, Fruitvale, Alameda Co.

The Dairymen's Convention.

Action Against the Oleomargarine Impostion.

[Reported Stenographically for the PACIFIC RURAL PRESS.]

The Dairymen's Convention, which met in San Francisco on December 12th, was called to order by W. B. Gaffey, in the following words:

I am a delegate from Santa Cruz county, and as that county was the first to form a protective association against counterfeit dairy products, I feel that it is quite natural that I should call this meeting to order. Nominations for a temporary chairman are now in order.

Judge Stanly was put in nomination, and was elected.

Judge Stanly: I thank you, gentlemen, for the honor you have done me in calling upon me to preside over you temporarily. We meet, gentlemen, as the representatives of a very material industry in the State of California. We meet, representing a capital in the neighborhood of \$15,000,000, producing an annual income to the State of nearly \$9,000,000, and employing about 6,000 laborers in this State. This great industry, and it is much greater than the few words which I can tell you would indicate, has been threatened by the introduction into the markets of this city of a compound known as oleomargarine. The margin of profit in the products—legitimate products of the dairy—has been so small that if that margin of profit is reduced to any considerable extent it means the destruction of this great interest.

As the law now stands, the gentlemen who are engaged in the production of this article, oleomargarine, are engaged in a lawful pursuit, and they have as much right to manufacture and sell oleomargarine as we have to produce and manufacture butter and cheese. The question is, whether there should be a law to prohibit the manufacture and sale of this article in this State, as it has been prohibited in Illinois and Missouri.

We meet, gentlemen, to consider these questions and determine on a line of action that we shall pursue. We are first to determine whether in our petition to the Legislature of this State we shall ask for the absolute prohibition of the sale and manufacture of oleomargarine as butter, or whether we shall take the more moderate course, and apply to the Legislature to give us effective regulations in the trade of this article, which may secure its being sold purely and simply upon its merits. I take it for granted that 99-100ths of the dairymen of California have no fear of the competition of the manufacturers of oleomargarine so long as that article is sold and consumed by the people with the knowledge that they are buying and eating "bull butter." But we should have some legislation which will not only protect the producing dairymen of this State against the sale of this article as butter, but to protect the consumers and those having forced upon them a counterfeit in the place of the genuine article.

This question, gentlemen, is one which greatly affects the interests of the State of California. It not only affects the butter producer and the butter consumer, but it affects the cheese manufacturer and cheese consumer as well. You are all probably aware that since the introduction of oleomargarine as an article of commerce, there has been devised a plan by which every particle of butter is taken out of milk and oleomargarine is substituted in its place. Therefore is manufactured an article which takes an expert in cheese-making to discover and distinguish from the genuine article.

Now, it occurs to me that we have got not only to protect the butter consumer, but the cheese manufacturer and cheese consumer; that any legislation that we ask for should prevent the adulteration of butter and cheese; that we should prohibit the manufacture of cheese in California except that which is produced wholly from milk. And, gentlemen, it is not only the dairymen of the State of California that are interested in this question. It is one which goes home to the entire agricultural community of this State. If you will consider one moment the relations of the dairying to the farming interest of the country, the importance of this interest will be apparent. At present a very large proportion is produced by new lands, but as time rolls round, a very great portion of the dairy products will come from lands which have been exhausted in the production of wheat. You will find that the dairyman takes up the farm which has been ruined by the production of grain. So it will be in California. Here we have such a climate that we can't apply fertilizers to our lands. Our climate won't admit of it, and our purses won't admit of it. We are dependent upon the barnyard manure to keep up the fertility of our soil, and that can't be had except in conjunction with the dairy. This makes this a question of broad interest to everybody who has any interest in the agriculture of the State of California.

Now, what I think should be done can be told in a few words. You notice that there is a work on the dairy interest of California, like there is on every other interest, a corporation. There is no single individual in the State who could undertake to destroy such a great and vital interest. It is done through the medium of an aggregation and accumulation of capital. Now, I think the first remedy to ask of the Legislature is the passage of a law prohibiting the formation of any corporation in the laws of this State for the manufacture or sale of any article which can be sold as the natural production of the dairy. If we do that, then we get rid of the

corporation which we now have to fight, and the principal obstruction to our success has been removed. We are called together to-day for the purpose of forming an accumulation of capital to fight this evil. I suppose the best course to pursue will be to appoint a committee on legislation to draft such legislation as will in the judgment of the committee be required, and to submit their opinions to this convention; that this should be followed by the appointment of a committee for the purpose of forming a permanent Dairymen's Association in the State of California. I suppose the first thing in order will be the nomination and election of a Secretary.

Mr. E. J. Wickson was elected Secretary. It was then moved and seconded that a committee of five on legislation be appointed by the Chair. Carried.

M. B. Mac: I suggest that a committee on resolutions be appointed.

W. B. Gaffey: I think the first thing is the order of business. There are several committees to appoint.

M. B. Mac: I think the Committee on Organization should conduct that part of the business. I think it should be left to them to report on order of business.

It was then moved and seconded that a committee on resolutions be appointed by the Chair. Carried.

The Committee on Resolutions is as follows: Wm. Johnston, M. B. Mac, W. V. Gaffey, Wm. Quinn, C. H. Smith.

A motion to appoint a committee on permanent organization was carried, and the following were appointed: E. J. Wickson, L. M. Warden, Horace Gushee, J. J. Green, E. A. Davison.

W. B. Gaffey: I move that all dairymen are entitled to seats in this convention and to participate in its deliberations. Carried.

M. B. Mac: I move that Judge Stanly be chairman of a committee of five on legislation. Carried.

It was then proposed that this committee be composed of one member from each county.

The convention then adjourned until 1 o'clock.

Afternoon Session.

Judge Stanly: In assuming the duties of the chair this morning I made an assertion that the manufacture of oleomargarine had been prohibited in a few States. A week or two since a gentleman interested in this question showed me a manuscript copy of a decision of the court of the State of Illinois prohibiting the manufacture of oleomargarine in Illinois, and yesterday a member of this convention handed to me a copy of what purported to be an enactment of the Legislature of Mississippi prohibiting the manufacture of oleomargarine in that State. After the adjournment this morning a gentleman, a partner in the oleomargarine factory in this city, said he was an owner in a factory in Chicago, and said it was a mistake, and that the Legislature had not prohibited it in that State.

The report of the Committee on Permanent Organization was then read. Following is the report:

Permanent Organization.

The President and members of the Convention: Your committee would respectfully report the following articles of association for the formation of a society of California Dairymen:

ARTICLE I. This Association shall be known as the "California State Dairymen's Association."

ART. II. The officers of this Association shall consist of a President, as many Vice Presidents as may be deemed advisable, a Secretary, a Treasurer, and an Executive Committee, of which the President, Secretary and Treasurer shall be members *ex officio*.

ART. III. These officers shall be elected at the annual meeting, and shall hold office until their successors are chosen.

ART. IV. There shall be held an annual meeting of this Association, beginning on the last Wednesday of the month of October, at such place as the Association by vote at a previous annual meeting shall designate. There may be held special meetings at such time and place as the Executive Committee shall designate.

ART. V. It shall be the duty of the President to preside at all meetings of the Association, and to serve as chairman of the Executive Committee. It shall devolve upon anyone of the Vice-Presidents, whom the meeting may select, to preside in the absence of the President. It shall be the duty of the Secretary to keep record of the transactions of the Association, to keep a roll of members, and to notify all members by mail of the times and places of meeting. It shall also be the duty of the Secretary to receive and preserve the correspondence of the Association. It shall be the duty of the Treasurer to keep the funds of the Association and to pay claims which shall be approved by vote of the Executive Committee. It shall be the duty of the Executive Committee to arrange the time and place of meetings, and to select speakers to address the Association upon subjects of dairy interest. The Executive Committee shall also serve as a Board of Audit upon all claims against the Association.

ART. VI. Those only shall be eligible to membership in this Association who are interested in the production and sale of genuine dairy products, and membership shall be gained by signing the articles of association and the payment of an annual fee of three dollars.

ART. VII. The membership of any individual may be revoked by a majority vote at any regular meeting.

Your committee would respectfully report farther as follows:

1. That the present temporary officers be made permanent.
2. That Robert Ashburner be elected Treasurer.
3. That a Vice-President from each dairy county be nominated by the representatives here present, and approved by the meeting.
4. That the Vice-Presidents, together with the President and Secretary, be the Executive Committee of the Association.
5. That the compensation of the Secretary shall be determined by the Executive Committee.

Your committee would report as order of business the following: 1. Reading minutes. 2. Reports of committees and officers. 3. Election of officers. 4. Correspondence. 5. Unfin-

ished business. 6. New business. 7. Stated discussion. 8. Adjournment.

E. J. Wickson, Horace Gushee, L. M. Warden, E. A. Davison, Committee.

Mr. Johnston: My idea in appointing this committee was simply for the permanent organization of this meeting.

Judge Stanly: The impression that the chair got from the motion was that the duty of this committee was to devise a plan for the formation of a permanent State Dairymen's Convention.

The report of the Committee on Resolutions was left until the executive session, to be held Wednesday morning at 9 o'clock.

The convention appointed the following Legislative Committee: Jno. A. Stanly, of Alameda Co.; J. Resapina, of Santa Cruz Co.; Rush Macomus, of Santa Clara Co.; B. F. McClure, of Mendocino Co.; B. Marks, of Fresno Co.; L. M. Warden, of San Luis Obispo Co.; J. F. Dixon, of Monterey Co.; F. C. De Long, of Marin Co.; Wm. Johnston, of Sacramento Co.; Robert Ashburner, of San Mateo Co.; Samuel Miller, of Stanislaus Co.; S. S. Hinsdill, of Yolo Co.; J. H. Hegler, of Del Norte Co.; Hollis Hitchcock, of Sonoma Co.; A. Loggazzini, of Santa Barbara Co.; Judge Bowers, of Marin Co.; D. Harvey, of Sacramento Co.

It was then moved and seconded that the convention elect Vice-Presidents. It was proposed that one Vice-President be elected from each county represented in the convention.

Mr. Johnston moved that Mr. J. B. Green, of Yolo and Sacramento counties, be added to the Legislative Committee. Adopted.

It was moved that the Legislative Committee as appointed and adopted by the convention consist of the Vice Presidents of the permanent convention.

The convention then nominated the following Vice-Presidents, who were elected by acclamation: Horace Gushee, of Santa Cruz Co.; Col. Younger, of Santa Clara Co.; B. F. McClure, Mendocino Co.; B. Marks, of Fresno Co.; M. B. Mac, of San Luis Obispo Co.; John Hitchcock, of Monterey Co.; Wm. H. Abbot, of Marin Co.; Wm. Johnston, of Sacramento Co.; J. B. Green, of Yolo Co.; Robt. Ashburner, of San Mateo Co.; Samuel Miller, of Stanislaus Co.; G. H. Kellogg, of Del Norte Co.; Hollis Hitchcock, of Sonoma Co.; A. Tognazzini, of Santa Barbara Co.; John W. Rogers, of Humboldt Co.

Mr. Gaffey offered the following resolution, which was adopted:

Resolved, That the Legislature shall enact a law that the true weight be stamped upon all rolled natural butter offered for sale for the public use.

Col. Younger: If it is not so understood by the convention, I would move that to-morrow is to be an executive session in the strictest sense, and that the press be excluded; that no one be entitled to admission except members. The executive session to-morrow will mean that we receive reports of committees and discuss the various matters, not only in reference to the resolutions, but the Act which we wish to present to the Legislature and to perfect everything.

The floor was then offered to oleomargarine-makers, and James Wilson was called for. He spoke as follows:

I rise to acknowledge the courtesy you have extended. I am a bull-dozer—I believe that is the term applied to us. It will be very difficult to give in a concise manner anything of the birth, growth and development of oleomargarine, but perhaps I can bring a few matters before the convention which will be of interest. I assert that the best known scientists on the face of the earth, taking in all civilized Europe and the Continent and also the United States, have placed themselves on record—all scientific men of standing, that oleomargarine is identical in chemistry with what is termed and known in commerce as butter namely, the pure essence of beef fat obtained by a different method than that from which you obtain it from the cow. Now, what is butter? Butter is the fat of the cow, obtained by the only means we have handed down by ages. By science we have found out that we can get the same substance identical with your cow fat. Now, because we have come to California and invested a hundred thousand dollars in machinery made in California, employ mechanics, buy your real estate and came here as law-abiding citizens, you propose to pass a law to stop our business. Now, sir, the fat of a cow when she is alive is held in solution, and the pressure of the hand draws the milk, and with it comes the same percentage of fat. Why don't we get our beef from your cows? Because they have been robbed of their fat. Oleomargarine is the bugbear that has called up this convention. This is the lion that has raised all this hubbub in California. What have we done in the United States since 1874? We have utilized 600,000,000 lbs. of beef fat, and shipped 450,000,000 lbs. of beef made into an article called butterine, sold in London, highly endorsed by the British Parliament as a great boon to civilization. We repudiate, in every shape and manner, retailer and wholesaler that pretends to put this butter before the world in any other form than oleomargarine. We have spent a quarter of a million of money to educate the people to what oleomargarine is. It means this: That butter is fat and fat is butter. Go to your San Francisco library and take your best authority and find out how it was recognized by the French government. It is recognized to-day in France as identical with butter. We are in San Francisco, and there is a law here that we

must brand it. We are branding it. Oleomargarine is not dead—it is flourishing.

Col. Younger: What we propose to do is to see that he sells it under his own name. We don't think it is butter. The learned gentleman thinks it is. Let the gentleman put his stamp on it. They don't do it everywhere. We propose to see that if he makes it he must call it by its right name. We propose to fortify ourselves against their selling it as butter. We don't believe it is identical. He can't make whey, and we don't call it butter if he can't make whey. We don't want to do them any harm or wrong.

Mr. Mac: Mr. Wilson inferred that all dairymen killed all calves to make butter. But calves are raised to be two and a half and three months old on milk. I would like to ask Mr. Wilson a question. He says you can make butter out of any kind of fat. Can we make butter out of dog fat and rat fat?

Mr. Blower: You say butter made from suet cannot be detected from real butter. I differ with you; I think it can.

Mr. Macomus: I would like to ask if, within the last three years, the French government has not prohibited its use in the French army.

Mr. Wilson: They have substituted it in the hospitals in France.

Judge Bowers: Mr. Wilson says he is willing to allow his bull butter to stand on its own merits. We don't want to prevent him from making bull butter, but want to prevent him from selling it without letting the people know what it is. We wish to be protected from the ordinary users of this article who purchase it and put it on their tables and feed it to the people as butter. We desire that the Legislature shall amend the law which is now in existence so that it shall prevent the restaurant man from feeding it to his boarders without telling them what it is. These gentlemen don't ask you anything that is unfair. They don't want you to sell it to the retailer and the restaurant man to be put on their tables as butter. It is all right if you are willing to put your article before the people on its own merits; but the dairymen don't want there to be any swindling. We don't want the restaurant man to set bull butter before us in the place of butter. We don't want him to get the best of us.

Mr. Pyle: I wish to urge upon all the members the importance of their attention at the executive session. There are other things to be considered beside the report of committees. There is the labor question, the finance question, the wages question.

The convention then adjourned until 9 o'clock Wednesday morning.

(CONTINUED ON PAGE 477.)

California Intelligence.

In conversation recently with one of the shrewdest and most successful newspaper publishers of this city, we learned that in San Francisco alone there are considerably over 100,000 copies of the daily papers issued. These figures have a meaning, and are a sure index of our intelligence. The population of this State is something like 900,000, showing that San Francisco alone furnishes a daily paper for about every eight inhabitants in the State. While this is a wonderful showing of intelligence and appreciation of the daily press of this great Western metropolis, the further facts are more remarkable still. Add to these the thousands of copies of the other dailies throughout the State, and we will find that each daily paper printed in the State would only have to be read by about three persons to reach every man, woman and child in California. The daily papers of Sacramento, Los Angeles, Oakland, San Jose, Santiago, and the various other cities, would augment the number printed at San Francisco to such an extent as to make the approximation of there being a daily paper for every three persons in the State none too high. Besides the dailies we have an innumerable number of weeklies, semi-monthlies and monthlies, as well as numerous *quasi* publications. But even these statements come far short of representing the true standing of the press and the consequent intelligence of the State, for there are thousands of copies of the Eastern press sent to this coast every week.

We believe that we can substantiate the claim that there is not another State in the Union that can make such a showing, and we do not exclude New York or the New England States. These States of the East publish thousands of more copies of the newspapers, perhaps, but there are many thousands more of population.

Looking into the matter, we have found that California issues a daily paper for every three of her population; Massachusetts, one for every six; Pennsylvania, one for every eight; Ohio, one for every fifteen; and New York, one for every five. The aggregate publication of all kinds of papers, in these States, shows California to rank among the highest. This State produces seven papers for every eight people; Massachusetts, eight for every ten people; Pennsylvania, four for every three of population; Ohio, two for every three; and New York, three for every two. From this it can be seen that California does not circulate as many of her publications, outside of the dailies, in proportion to population, as some of the other States, but many more than the majority. But the further statement must be made that a portion, perhaps a small portion, but considerable in the aggregate, of the publications of each of the States mentioned above is sent into this State, and should be still added to the aggregate made.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 463.)

Mr. Garrigus: I merely want to speak a word or two in reference to some of the remarks of Dr. Chapin. One thing was that the bands, as he used them around the tree, he would catch all that fell to the ground, but with my experience I desire to say that I have found the codlin moth attacking the fruit. I have handled a great deal of the fruit, and find them in the blossom end of the pear, snugly ensconced with every preparation for winter quarters. But my experience this year has been a little different from what it was last year. They commenced in my orchard some three years ago. I said here is the commencement, and immediately followed Mr. Cooke's suggestion, which I read in the RURAL PRESS, and wrote to him for a pamphlet so that I might get all the information that I could in my possession. I got a ship scraper and scraped the trunks of the trees thoroughly; the trees being some 22 years old, had become somewhat rough, and last year they took up about one-fourth of my fruit after the commencement in the orchard the year before. I have tried also Mr. Cooke's remedy this season of whale oil and sulphur. I tried it in June, I think it was, hoping that that might be the remedy to protect me from the ravages of the codlin moth. I must say from my observation, perhaps I didn't use it as successfully as I might, but I experimented with it, and washed three-fourths of my orchard as thoroughly as I could with my force pump with whale oil soap and sulphur, and a few trees I left as an experiment, just to see what the difference would be, and I must say those that I left untouched were just as free from the codlin moth, that is, that they had no more of the codlin moth than those I washed. Those I washed were just as badly infested; the fruit was as bad as those I didn't wash. It doesn't seem to protect the fruit in the least degree whatever from the codlin moth. I must say that this season it went almost universally into the side of the fruit, while before my experience was it went into the blossom end. This season we could see a little abrasion of the fruit, where they had punctured the fruit and went into the side. On some of the lower limbs I deposited sulphur over the fruit, and still they went into that fruit and destroyed it. About the band I want to say one thing: According to my experience, I wouldn't exactly agree with Dr. Chapin in his methods. I tie my bands in place of tacking them on; I cut my strings long enough, and put them a little nearer the ground; I make one end long enough to make one knot; it is easier to handle than it is if you tack them, because you are liable to lose your tacks, or liable to hurt your thumb in forcing them in; I just tie them, and I find that in almost every case that just where I make that knot right in that twist I find more codlin moth larvae than any other place in the sack.

Mr. Dwinelle: I am very much gratified at Mr. Chapin's experiment, and the results, and the clear statement of it to this meeting. I think it is invaluable. I think there are one or two things though which might be added; one is, that it has been found very profitable to throw a loose cloth into the fork of the tree, perhaps two or three of them in a large tree, the fork above the band, and when the codlin moth lets itself down from the fruit by its silk it does not always go to the ground; it may happen to strike on a limb, and follows the limb down and finds a hiding place there, and it is a very nice thing to hide under if it finds a piece of old sack, or any other old cloth in the fork, and in some of the older orchards of the State it has been found a very profitable method. Another point that strikes me is, that some gentlemen here that have spoken of their experience with the bands, at least one did so, whether he had a lot of returned boxes somewhere that were giving out codlin moths at the same rate that Mr. De Long's did; he didn't say whether he scalded them, or whether he put them up in a moth-proof house and then killed the moths when they come up. You have got to look for these fellows in every quarter; you must scald your returned boxes, use the band, use the cloth in the forks, and every other means you can. Now, in regard to the spraying to destroy the codlin moth larvae, it is a matter I have heard talked of for years, and I am happy to say there has been some progress made. One gentleman here reports wonderful success. There are other gentlemen in the State who I have seen and communicated with this year who have been in the orchard, and report that they have secured fine crops of merchantable Bartlett pears by that method, and it also destroyed or checked the fungi disease called the scab; where the sulphur and whale oil struck, it seemed that the fungus made no growth, and the fruit swelled out into a merchantable article. We have not yet, perhaps, our perfect method or perfect wash; in the East they used arsenical poison and Paris green, here we have not the summer rain to wash it away, and we cannot use it; but I am very hopeful that we will find something just as efficient. I find a new point in an Ohio report of this year, in which Mr. Dameron says in regard to the codlin moth, knowing its habits, he made use of two remedies that might be made effectual. This paper band applied to the trunk to be examined every eight or nine days; Dr. Chapin says every week to kill the worms from June 20th to August 25th, and again after the fruit is gathered. The other is to kill the larvae by applying arsenic poisons in water,

spread over the center of the blossom while open and the fruit still in an erect position, so that the poison will lodge there. Perhaps that is just the point we miss; in destroying this first crop we don't work early enough, just as it takes a long time for some grape raisers to learn that the time to sulphur grapes was not when they are mildeewing and spoiling, but a long time before that. I hope this next year you will do a great deal of experimenting right in this way, and very early, as soon as we know the moths are at work to lay their eggs in that little cup; and to spray with something which will be poisonous to the larvae, but will not effect the fruit.

Mr. Block, of Santa Clara: I would like to ask Prof. Dwinelle a question, and I hope he will be able to answer it. I have been making quite a number of experiments in regard to killing the codlin moth, and find that turpentine is one of the most effective modes of killing it. Now, I would like to know of Prof. Dwinelle whether he thinks it is injurious to the trees. I have been afraid to use it extensively, and would like to get his opinion, as he has made this matter a study as to what would be beneficial or injurious to the trees. I would like his opinion as to that turpentine will kill the codlin moth whenever it touches it or comes near it. That is my experience, and I can kill it better with turpentine than with anything else. What effect would that have upon the tree?

Mr. Dwinelle: As I have had no experience whatever in using it in the manner suggested, and as my experience with those things tends to make me very cautious in expressing my opinion, I couldn't say as to that. It is one of those things which should be tried, and I hope that the gentleman will try it this year.

Mr. O. B. Shaw, of Sonoma: I would like to inquire if any present have tried long boards or shingles under a tree. Some of my neighbors have used them, and they say that after they have laid there a week and tried to pull them apart they have to get something between them to pry them apart, the moths have filled them so full; and I accidentally found some apple-box covers laid by some of my trees one day, and I thought I would take them down and see whether the moths had gotten under them. There was probably a dozen pieces, and I counted 93 moths (larvae), while we only get five or six in a band around a tree.

Mr. Hatch: I would like to make one suggestion in this matter, relating to the codlin moth before it is dropped; in addition to the cloths suggested by Prof. Dwinelle up in the crotch of the tree to catch those that otherwise might be missed, I use potash or concentrated lye in those crotches once a week, and think it is quite beneficial.

Mr. De Long: I would like to ask Prof. Dwinelle a question. He speaks about poisoning the blossoms. Now, sir, as I understand it, when this moth gets loose it lays its eggs on the apple itself, and punctures the apple, and there it lays the egg. Immediately after the egg hatches and the moth commences to grow, I want to ask him if, in his opinion, when the moth leaves the egg, there is anything for the worm to commence to subsist on. He speaks about poisoning this blossom, and I understand that the little fellow has got to have something to eat. As soon as he is born he commences to eat, and he eats effectually if there is anything for him to get away with. Now, what I would like to get at is, if, by poisoning these blossoms, we can do anything. I would like to try that a little.

Mr. Johnston: In answer to the question of Mr. De Long, it seems to me that the discussion here has enlightened us somewhat upon that question as to the time that it requires for the codlin moth to mature. We find that in warm climates they mature much quicker than they do where it is colder, and the same rule will apply that in spring it requires a longer time for the eggs of the codlin moth to mature than it does in the summer time, when the nights are warm and when the days are hot. I suppose that the codlin moth—the first crop, as we call it—the eggs are laid in the bloom end of the fruit, and in my experience in the early crop of apples and peaches we find large numbers of them drop off when they are as large as the end of your thumb, every one of them affected by the same thing; and when that crop of codlin moths is hatched out, and before it gives the fruit time enough to grow, so that when the worm is hatched there is that prepared for it. It is there in the blossom, and there is where our greatest danger is. One codlin moth destroyed in the blossom is worth a thousand destroyed after the fruit is partly grown.

Mr. Dwinelle: I would like to answer Mr. DeLong to this effect: That the practice as stated here is to syringe soon after blossom, while the calyx is open and the fruit still in an erect position—that is, after the fruit is fairly formed. Probably the petals of the blossom drop and the calyx, which remains as long as the apple is still there, is the favorite time and place to make any injurious application.

On motion of Mr. Johnston, it was ordered that the paper of Dr. Chapin take the usual course taken with such papers.

Committees.

The President announced the committees, as follows:

Committee on Legislation—L. M. Holt, of San Bernardino; A. T. Hatch, of Solano; F. C. DeLong, of Marin; S. W. Grey, of Butte; Wm. Johnston, of Sacramento; W. J. Fisher, of San Francisco; J. E. Leitch, of Santa Clara.

Committee on Shipping—W. R. Strong, of Sacramento; E. T. Earl, of San Francisco; W. J. Wilson, of Placer; T. K. Stewart, of Fresno; John Britton, of Santa Clara.

Committee on Packages—A. D. Cutler, of San Francisco;

J. H. Carroll, of Sacramento; J. H. Morse, of San Francisco; J. H. Barbour, of Santa Clara; Mr. Groom, of Santa Clara.

Committee on Nurseries—W. H. Williams, of Fresno; E. B. Silva, of Placer; J. M. Asher, of San Diego; W. B. West, of San Joaquin; John Rock, of Santa Clara.

Committee on Commission Merchants—Robert Hall, of San Francisco; J. M. Hixon, of San Francisco; George R. Starr, of San Francisco; L. G. Sresovich, of San Francisco; M. T. Brewer, of Sacramento.

Mr. Hatch: I would like to propose the appointment of a committee for the purpose of collecting fruit statistics in the interests of the fruit growers. The canning fraternity takes measures to gain information which we have no access to, and we are equally if not more interested in that than they are, and I think the committee should be also a Committee of Ways and Means to devise plans for the disposal of fruit at fair prices. I move the appointment of a committee for that purpose.

Carried.

Here the convention took a recess until 1:30 P. M.

Afternoon Session.

The convention reassembled pursuant to adjournment, President Chapin in the chair. The reading of the minutes was dispensed with.

On motion, the subject for the morning was resumed, and the Secretary read the paper of W. H. Jessup, as follows:

Evils of Returned Packages and the Codlin Moth.

Mr. President and Gentlemen of the Convention: The above subject has a significance, in the matter of profit and loss, in the production of apples and pears, which, if computed in dollars and cents, would be truly alarming. The wonderful increase and spread of the codlin moth is still more alarming. In the short period of nine years, from their introduction at the State Fair at Sacramento, from a few of the larvae, and possibly not more than one or two pair of the accursed pests, the whole coast, from San Diego to British Columbia, has been populated. Yes, we can scarcely tell whether we have not sent them in the form of larvae and eggs, in boxes and fruit. It is impossible to estimate the damage done to the apple and pear crop in this State by this pest in the past three years. No doubt it amounts to hundreds of thousands.

We claim that we have the most favorable conditions of climate and soil to be found in the world for the production of fruits. Then we should not lose sight of the fact that those conditions are just as favorable to the increase of destructive insects. Our long, dry seasons, warm, dry soil, all favorable conditions, enable them to produce from one to ten broods a year.

It is said that the female codlin moth lays on an average 80 eggs at a laying, and that they produce three broods a year in our climate. Assuming that nothing occurs to interfere with their natural increase, we will start out to compute the increase from one pair, male and female. The first laying is 80, the product of which destroys 80 apples or pears. Let us assume that one-half of those are females—80 multiplied by 40 equals 3,200 apples destroyed; half of this 1,600 multiplied by 80 gives us the enormous number of 128,000 apples destroyed, leaving us a cheering crop of 64,000 females to start in business next year.

According to my calculations, there would be destroyed by this one pair of moths, in one season, the startling number of 131,280 apples. A fair average sized apple is termed five layers, allowing 200 apples to the box. This would represent a loss of 656 boxes of apples or pears by one pair of those pests.

Now, will anyone pretend to say that the spread and destruction of this pest cannot be checked by a united effort, when they are so easily destroyed, and a united action can never be had in a large and mixed community without the aid of the law and courts? In every community there is to be found a certain class of people, who, through lack of industry, knowledge or enterprise, or a desire to aid any good work, will scoff at and speak disparagingly of every effort of more industrious and better men in their endeavors to do good or remedy an evil. They throw every conceivable obstruction or stumbling block in the way of progression and protection. I can conceive of nothing so lamentable for the progress and protection of a great and valuable industry as the determined opposition of a certain element in a community, opposing through pure "cussedness" every organized measure for the general good, and that, too, when their every (apparent) interest is identical with every individual member of the community.

This lamentable condition of affairs is too plainly illustrated by the determined opposition (of a certain commission house in San Francisco) to the carrying out of the quarantine regulations of a law passed two years ago for the protection of the fruit interest of this State in the matter of disinfecting fruit packages. The motive that could have influenced such sharp business men as A. Lusk & Co. is one of the unexplained mysteries—a commission firm opposing a law for the protection of the industry they are wholly engaged in, for the improvement and establishment of a respectable standard of our fruit, forcing upon themselves and all dealers the disagreeable necessity of filling their stores with a worthless mass of unsightly and unsaleable excuse for fruit. Where is their gain? Is it in selling a box of apples to a dissatisfied customer for 25 cents to 30 cents, at 8% commission and at a loss to the producer, or is it better the same fruit, clean and perfect, selling readily at from 75 cents to \$1.25 per box with ready sale, with a profit to all and everybody pleased? As the matter now stands, we are all the losers, the producers, commission men, canners, traders

and consumers. There is but one explanation to the mystery of the course pursued by the firm named, and that was to increase their consignments.

I have been informed that they made an estimate of the cost of disinfecting the packages in San Francisco, and that the figures ran away up into the thousands—that, like Col. Sellers, there were millions in it for some interested party, they said—and advised shippers to refuse to comply with the law and so bring it into disrepute. It is reported that they promised (on condition of the shipments being made to them) to fight the case at their own expense, and procure a decree of unconstitutionality—which they succeeded in doing in the Police Court No. 1 for the city and county of San Francisco. After this the shippers were coolly called upon for their assessment, through their commission men, to meet the expenses of the litigation, and, from the best information I can get, it must have been a very expensive suit for so short a one. Let that be as it may, it looks to a disinterested spectator as though they had succeeded in building up their house at the cost of their brethren.

This may seem like too much censure and a resort to too many personalities. But the occasion calls for the severest criticism. The law must be sustained if we would save our fruit interests, and all attempts at forcing it into unpopularity should be frowned down. It is to be hoped that Judge Rix will not complain when he bites into a luscious apple or pear and comes on to some filthy, creeping thing, with a more vigorous constitution than he found in that law.

In regard to that big nigger in the fence, in reference to the big thing or job in the disinfecting of fruit packages, let me assure you that there is no corner in it. No one has an exclusive right, neither can they under the law, as I understand it. I was one of the committee appointed by the State Horticultural Society for the purpose of drafting a law for the protection of the fruit interest of this State. And the law referred to is the one emanating from that committee, and I will state this, that every gentleman on that committee used his utmost effort and ability, aided by good counsel, to guard against any and all abuses or oppression, and no more (if as many) can be perpetrated under this law than under any other good law on police or health regulation. It is folly to suppose that there is the amount of money to be made in the disinfecting of packages as stated. There are too many sucking after paying business to permit any man or set of men to have a monopoly of so rich a grazing thing without competition. There is no exclusive right in it. Encourage the disinfection system, and, my word for it, there will enough go into it to put the price at a reasonable figure, and all be the gainers. The influence of public opinion does and should influence courts in their decisions in all such cases. No judge can forfeit his self-respect by overruling mere technical objections to a law, when, by sustaining such a law, great good might be accomplished and no hardship wrought. If we would save and protect the future glory of our unparalleled fruit-growing industry, it must be by a unanimous expression of opinion in favor of the law now in force.

All good men and friends of the fruit industry are hereby urged to use all honorable influence to the end that the law be sustained. We must have the strong arm of the law to force that refractory element of our community to do their duty and share of the good work, or at least restrain them from obstructing the good work of better men.

Now, it is sheer folly to waste time and money in the vain effort to destroy or check the increase of this accursed pest while we follow the present system of returned packages without being disinfected. No use washing trees, setting traps or killing the larva while under the present system we are bringing to our orchards a hundred for every one we kill, for it makes no difference how many we have after we have enough to destroy the crop—as well a million as one, as in that case they might serve for bird feed. Not only the old boxes sent from the commission house is the larva to be found in, but new boxes shipped direct from the factory, in the same car with packages of old boxes, have been found to be alive with the larva, having been disturbed by the constant jar and shaking of the car and handling, have been driven out or dislodged and sought a more secure hiding place in the new boxes.

To satisfy yourselves as to the presence of the larva in your old boxes, examine the packages as they are taken from the cars, between the boxes, under the laths, in the corners, angles, crevices, and in the nail holes, the latter filled to the very bottom, packed one upon another, as compact as peas in a pod.

Nor is the codlin moth the only source of alarm to the fruit grower, nor is their wonderful capacity for increase the most alarming, nor their power of destruction so great. Varieties of insects that attack the plant on the root, trunk, branches or foliage, are far more to be dreaded, as they injure or destroy the plant. The red spider, green aphid or plant louse, vine hopper, phylloxera, scale insects and woolly aphid are all to be dreaded and guarded against. The almost incomprehensible increase of it almost taxes the capacity of an ordinary mind to compute the wonderful yearly increase of a single insect, according to Mr. Cooke, whose authority, I think, none will question. The woolly aphid, breeding without

the presence of a male, will produce in one season one quintillion. Now, let us assume that one in a hundred thousand lives to do the damage. What will be the extent of the damage? Ponder on it if you like; I have enough.

Now, the checking of the spread of those hordes of destructive insects is dependent upon the carrying out of the quarantine provisions of the existing law.

The question for us to decide is, shall we have a law or no law, orchards or no orchards?

On motion, this paper was ordered to take the usual course.

Horticulture and the Law.

The following address was next delivered by Wal. J. Tuska, of San Francisco:

Mr. President and Gentlemen of the Convention: So large an assemblage of men gathered from all portions of the State of California to participate in the proceedings of this convention, convinces me of the great and absorbing interest that is taking in the fruit growing industries of this rich and prolific State. Their importance cannot be overestimated, and it is meet that the legislative powers of the State should be called on to grant their aid and extend their protective arms over the proper, advantageous, and unstinted growth and cultivation of our farms and orchards. I use the word "protection" here not in its political sense for the establishment of a tariff, or the aggrandizement of the few. I use it in its popular sense, meaning that the law should throw such safeguards around these industries as will give them vitality, keep them in life and save them harmless from invasion and attack.

The juicy pear, the mellow peach, the apple and the plum, oranges and berries of many kinds, the great vegetable kingdom, and Flora's bountifulness are subjects refreshing in their nature, nourishing, aid in sustaining, if not in giving life, productive of supreme enjoyment and exhilarating. Such form the subjects of your discussions, and which you have come to hear about.

That the law, ancient and revered, with its dry rules, quaint proceedings and red tape, should be summoned before you in its threatening attitude, and by so humble a representative thereof as myself, needs no other apology than that it desires to use its unlimited power to make your undertakings and experimental ventures a success.

By the exertions of some persons to whom the culture of orchards was a matter of interest, aye, and pride, the Legislature of this State passed a law which took effect on the 4th day of March, 1881, by which it was intended to meet some of the wants of the orchardists of this State, to protect orchards from contamination, to save trees and fruit from the invasions and attacks of insect pests that have committed and are daily committing ravages irreparable and pecuniarily inestimable in our fruit-growing districts.

How the trees and fruit have suffered, how their growth and the proper cultivation of orchards have been impeded by reason of insect pests, it is not for me to tell you; your Chief Horticultural Officer, Mr. Cooke, Prof. Dwinelle, Dr. Chapin and others expert in those matters, have already clearly elucidated this, and will more fully hereafter enlighten you upon that subject.

The Act I have referred to aimed, as I have stated, at the evils hovering over our fruit mart. The propriety of the Act cannot be questioned; the necessity of it is manifest to all. Nearly in every State of the Union similar provisions have been enacted concerning agricultural and horticultural industries. They have stood the test of time, have been accepted by the people as a blessing, farms and orchards have prospered under them, and by reason of them the general health and prosperity of the people have been insured for the future—and why?

When the people see their main industries tottering, when wastes and depredations are committed, when their branch of earning a livelihood is cut off when the means of their subsistence are liable to be taken from them, or by reason of pests and contagious matter become subject to devastation and decay, feeling then that self-preservation is the first law of nature, they clamor for the interference of the supreme power of the State to aid them in the lawful enjoyment of their property without let or hindrance, and to insure to them for all times sustenance and continuing prosperity. They rally around laws and regulations promulgated for the preservation of farm or orchard with rejoicings, the sounding of trumpets, and singing hallojahs!

I ask, therefore, must we wait until the evil is done, until all the orchards in the State have become the prey of and abandoned to these insects before the necessity of laws in that behalf shall be conceded?

When we know of the threatened evil, when we know of the injury inevitably to result, when we are aware that the army of fruit-destroying insects is heading its march of invasion toward our orchard districts, increasing by conscripts and volunteers on the way, and the means lie within our power not only to attack and repel, but to completely rout and destroy it, it becomes our sacred duty to strengthen our out-works, blockade our ports, marshal our forces, and set upon the enemy before he can enter upon his work of destruction.

Jealousy, rivalry and competition in business, personal interest and present advantages, often make a portion or "select few" of a community lukewarm and deaf to the crying wants and

pressing needs of the people at large. Capital is often used, combinations formed to make commercial and police regulations of non-effect, because obedience to the same and their proper execution might, for a time, lessen prospective pecuniary profit.

But it is only the few (who have not the benefit of the community at heart), that will place any impediment in the way of the successful cultivation of our orchards. It is only the greedy, grasping, selfish capitalist of the hour, who knows not and cares not for his neighbors or their welfare; who will enter into a combination to defeat the laudable objects of the legislators of his State, who have, after mature deliberation, promulgated enactments seeking to establish upon a permanent basis the growing of fruits which have become the pride of California and the envy of the world.

Such a combination was, however, formed in this State, and the law in question has been attacked for unreasonableness and as being in conflict with the State and United States Constitutions.

As the law is shortly to receive the serious consideration of our Supreme Court, I do not deem this the proper place to discuss the objections raised or to give my views in reference thereto, but will refer such parties who may be sufficiently concerned to the brief I have prepared upon these questions to be submitted to the Supreme Court.

The great principle upon which laws and regulations concerning commerce and the use of property have been upheld, is that every holder or owner of property, however absolute and qualified may be his title, holds it under the implied liability that his use of it may be so regulated that it shall not be injurious to the equal enjoyment of others having an equal right to the enjoyment of their property, nor injurious to the rights of the community.

Individuals in the enjoyment of their own rights must be careful not to injure the rights of others. A citizen must so employ his ability and property as not to injure his neighbor or his neighbors property. All property is within and under the control of the State, and the State has the right to govern men and things within the limits of its dominion.

If, then, a law is passed coming within the doctrines just enunciated, it does not militate against the provisions of the organic law of the State, or the Constitution of the United States. The highest authorities agree upon this point.

So important an industry as horticulture in this State should have the aid of legislation to insure its success.

See how many branches of commerce and different callings are dependent upon it! In fact the very existence of the population over the vast tract of land comprising the State is dependent upon it!

A law should be passed embracing the subject in each and every of its details, a State Board of Horticulture should be created and established, who shall, in prescribed ways, promote the general interests of horticulture and perfect education therein, for the purpose of preventing the spread of contagion among fruit and fruit trees, and exterminating the codlin moth, scale bug, red spider, curculio, *aspidiotus perniciosus* and other kindred noxious insects; prohibit the importation into or transportation within the State of grafts, scions, debris, empty fruit boxes (theretofore used) or other material by which fruit pests may be introduced; to establish a quarantine, and make all investigations and regulations necessary for the prevention and extirpation of such pests; with power to appoint its officers to enforce the laws in behalf of horticulture and the compliance with the regulations of the Board in that behalf. The duties of the Chief Horticultural Officer should be enlarged, and adequate compensation made to him, that he may give his undivided attention to the matter, and the State to grant an annual appropriation to the Board to meet its expenses, and for the proper carrying out the objects for which the Board is created.

A Board of Horticulture is as of great importance to the people of the State as a Board of Health; the powers granted to the latter are conceded to be eminently proper and just because they aim at the protection of health and life.

The products of horticulture give nourishment and strength, life and subsistence. Life without the means to sustain it, without the material to keep body and limbs together and insure vitality, would be of little account, hence the sovereignty of the State and people must needs see the importance of the fruit-growing industries and come to their aid with such beneficial legislation as I have indicated, and when the State notes the importance of its industries, it must not be slow in affording them the relief and aid in its power, especially when the benefit to be derived by its protection is for all times and for the whole community. Because such laws may be new here and, therefore, experimental, they must not be cried down or be met by organized opposition.

In this age of progress in this country, where improvements are daily and hourly made and perfected, where everything that is good, useful and of benefit is seized upon, tried and put into practical operation, it should not be said that there is a community—and particularly in the young State of California—so narrow-minded, so short-sighted, as to permit present limited inconveniences that would arise from the enforcement of such laws to blind them to the ultimate inestimable benefits to the future,

continuing and lasting prosperity, which must be the inevitable results flowing therefrom.

In Michigan numerous Acts of a nature similar to that I am contending for have been passed concerning agriculture—concerning particular animals and particular weeds, to-wit: "An Act to prevent the importation and running at large of diseased sheep;" "An Act to prevent the spread of Canada thistles in the State of Michigan;" "An Act to prevent the introduction of contagious diseases in cattle;" "An Act to prevent the spread of yellows, a contagious disease among peach, nectarine and other trees, and to extirpate the same." All of which Acts prescribe more or less restriction in the enjoyment of one's property and the uses of the same for the purposes of trade or otherwise; for the enforcement of which acts commissioners or inspectors are appointed by the Executive, to whom powers are given such as I suggest, and whose regulations are implicitly obeyed, and violations of which are visited by stringent penalties. The industries there provided for have continued in a healthy condition by virtue of those enactments in that State.

In the State of Iowa there are numerous laws of the same kind. The following are therein declared misdemeanors: "Bringing diseased sheep into the State," "bringing diseased horses and mules into the State," with numerous provisions as to their inspection and disposition, and restrictions upon the sale of such found within the State; "bringing diseased hop roots or cuttings into the State." There is also "An Act for the prevention of the spread of Canada thistles." In Connecticut we find "An Act to effect the destruction of wild carrots and Canada thistles;" "An Act to create a State Board of Agriculture," and making the violation of its regulations a punishable offense, the fine for such violation being \$500. And to show you how solicitous the government of that State is of the welfare of its citizens and their industries—how it will exercise its sovereign power over things and persons within its dominion when the community at large is to derive a benefit from its interference, and the qualification of the use and management of property—I will refer you to an Act passed in that State but little over two years ago, making it a penal offense upon the part of the managers of a railroad company to employ upon its road any person who is not provided with a certificate from the Examining Board expressly appointed for the purpose of examining applicants for railroad positions in regard to color blindness. The Act is entitled "An Act directing the examination of railroad employees in regard to color blindness, approved March 25, 1880." The Texans have provided themselves with "An Act for the protection of wool-growing interests," wherein to the Inspector of Sheep are given such powers as are here provided for your Chief Horticultural Officer, only more extended. So in Washington Territory.

In the States of Illinois, Indiana, Kansas, Kentucky, Missouri, New Jersey, Ohio and Pennsylvania the Government has taken the agricultural and horticultural industries under its wing. Here, then, we have examples, which might be multiplied if time would permit, and there would exist any necessity for it, all going to show that the older and permanently well-populated States have deemed the industries pursued within their territory of such importance as to demand and receive the protection of their respective Governments. This wild cry of creating a monopoly, the Legislature assuming to control and restrain trade, a throttling of industries, is not raised on and carried over their peaceful fields. There the sweet melody of the shepherd's horn, the tuneful harmony of the farmer's song, are not broken in upon and marred by that discordant and grating sound, and blissful happiness reigns supreme. It is left to a dissatisfied few within this State to sound those well-worn notes.

Laws are enacted not so much to detect and punish crime as to prevent the commission of offenses. It is a greater satisfaction to a State that evil-doers are, by reason of its laws, deterred from executing nefarious deeds within its territory than to have its penitentiaries and reformatories filled with offenders whom the speedy arm of justice has overtaken. Because of the difficulty of reaching the mass of the people stretched over a vast domain of country, and consulting and conferring with them concerning their wants, representatives are chosen to meet in conclave and prescribe rules for the education and guidance of the people.

Laws are but rules of civil conduct, and are far-reaching, aiming to protect and to guarantee to each individual the unmolested enjoyment and use of his life, limb and property. Laws of protection, that is, such as form the subject of my address, find their mainspring in the heart. Humanity dictates them, and all-comprehending Nature, with her kindly disposition, seeks to make them possible, aye, and effectual.

It is not only by means of the edicts promulgated by deliberative assemblies that whole communities have owed their and their goods' preservation and enjoyed the products of a lifetime's cultivation, it is not alone the prolific mind that decrees and the muscular arm that enforces salutary measures for a people's benefit, but Providence has often chosen other agencies to bring about that desired end and open the eyes of a benighted people to the dangers threatening its fields, its farms and its household goods. Too well known is the story of the lad who one night, perceiving a breach in the Holland dykes (the walls which protect that country), sought, unbidden, to mend the aper-

ture, and by his efforts was enabled to stem the current till daylight brought armies of laborers to the scene of impending disaster.

The lad received his inspiration from above; humanity had stamped her mark indelibly in the bosom of the boy. That absorbing love for mankind which is born within everyone, but too often blotted out by imperfect rearing, caused him to sacrifice his comfort, his health, his life—the life of one—for the preservation of a whole community. The boy's act gave rise to protective laws, and the Holland dykes are no longer in danger.

"The tramp who looked back in vain to find Some deed he'd done to benefit mankind"

Was moved by the same spirit when he offered up his life to thwart the schemes of villains bent upon wrecking the lightning express train with its human freight. Gentlemen, we know, we see the danger ahead; let us put on our brakes and prevent the train laden with California's golden fruit from rushing into the jaws of destruction.

It was moved that the thanks of this convention be tendered to Mr. Tuska for his address; also to Mr. W. H. Jessup for his paper on the "Evils of the Return Package." Carried.

Report of Committee on Legislation.

Mr. Holt, of the above committee, presented the following report, which, on motion, was received and adopted:

To the State Horticultural Convention—GENTLEMEN: Your Committee on Legislation beg leave to report briefly as follows:

WHEREAS, The law for the protection of the horticultural interests of California has been but partially enforced during the past year because of some of the indefinite provisions contained therein; and

WHEREAS, The interests of the fruit growers of the State demand the continuance of the law, with such amendments as shall make it more effective; therefore be it

Resolved, That this Horticultural Convention asks of the next Legislature the enactment of such amendments to the present law as shall make it more easily enforced and more protective to the people in preventing the spread of insect pests.

Discussion on Horticultural Law.

Mr. Wheeler, of San Francisco: I listened very attentively to the remarks of our Chief Horticultural Officer yesterday, and I also listened patiently to the remarks of Mr. Jessup in regard to the distribution of these insects by the return boxes, and in reference to the disinfecting of them, listening patiently, I found but one man condemned among the many. I am not acquainted with Mr. Lusk. Mr. Lusk is a commission merchant and canner. Mr. Lusk makes his subsistence by the products of your farms, but Mr. Lusk's auxiliaries in this fight were the fruit men themselves. Had the fruit men declined to receive those boxes unless they were disinfected, there would to-day have been no decision by any court in this State that the law is unconstitutional. Had these fruit growers told Mr. Lusk this: "Mr. Lusk, we want our boxes disinfected; we want our trees freed from this vermin," then, gentlemen, you would not be complaining to-day and urging for more law. Now, I will say one thing to the fruit growers: I have had but one year's experience with you. I have not found your class full of philanthropy, and I will agree with Prof. Dwinelle, this morning, when he referred to the more civilized communities in the East. Gentlemen, we have got a broad field in this very State for the missionaries of civilization, and a wide one, and the fruit growers do not know it. Well, there is a great deal for them to learn.

Mr. Johnston: I rise to a point of order. The gentleman is not discussing the matter before the convention. The civilization of California is not a matter for discussion.

Mr. Wheeler: Now, in one of the papers that was read the man that is doing all this injury about infesting our orchards, about violating our law is referred to the greedy capitalist; not one word about the selfish fruit grower through the State, and there is no people I believe on the continent or in the world, and I have been among them for 25 years, that is more conceited or egotistical than the people of the Pacific coast, especially the old Forty-niners. Now, if we propose to have a law and to have it sustained, if we are seeking the enactment of laws, we have got to agree to support them, and therefore any man that is among us who, after agreeing to support them, will withdraw his support, then let us ostracize him—let us do as they did in the days of the ancient Greeks, when they didn't like a man they ostracized him.

Mr. Dwinelle: I rise to a question of privilege. Something has been said about my making derogatory remarks in referring to the more civilized States of the Union, and some things I did not hear. Now, I was talking about the States of the Union that had laws protecting the cattle industries, and I referred properly to them as the more civilized States of the Union, as compared with those who had no such laws, and whose representatives, when they went to Congress, refused to establish a national commission to prevent the spread of contagious diseases among cattle, and it would seem as though the germs of those diseases were just waiting until Congress adjourned and then broke out in two or three States. I say that my reference is right—the States that had those laws are the more civilized States of the Union.

Mr. Peck, of Placer: I have only lived 70 years, and 32 of those years in California, and egotistical, or self-conceited or otherwise, my humble judgment is that California stands at the head of civilization. (Applause.)

Mr. Hatch: Mr. President, in this connection I would like to say that I think in one respect Mr. Wheeler is essentially right. That

is, in the matter where Mr. Lusk has been censured here, and that those who prompted him in that are more worthy of censure than he, wherever they may have been.

Mr. Geiger: A few words in regard to the scale bugs, not discussing any points of law at all. The only thing that I want to see is to see every man that has one fruit tree, if he has no more, take care of it, especially if he lives in my community.

A voice—Or any other community.

Mr. Geiger: Or any other community. Now, I am as well satisfied as I am that I am talking to you, gentlemen, that if every orchardist or every gardener that owns a little patch of ground and has got a half a dozen trees, if he will take a proper care of them, the scale bug can be certainly destroyed. It is my experience, for in my orchard of 1,500 cherry trees, the scale bug is very scarce, and still, if I don't take care of what I have got, there is enough to curse the whole State, but I do not propose that they shall. I shall take care of mine; I wish my neighbors to do the same. I live in a good community and a good neighborhood, and every neighbor and every citizen takes care of all the insects they have on their own place and all the gophers and squirrels and scale bugs and everything of that kind are all properly cared for. I didn't need to go into my neighbor's orchard and see what he is doing, because they take the proper care of the pests. Now, so far as law goes, I am no lawyer, and don't know much about law and don't want to, but I want to do my duty. I don't want to keep a nuisance to any of my neighbors, and I want to have as good an orchard as grows in the State of California, and if I can't have that I want to sell out and quit.

Mr. Gammon, of Sacramento: In regard to the disinfecting of fruit packages, what the people of the Sacramento river object to is the disinfecting of fruit packages in San Francisco; they wish to do it in their own home. I would like to hear some objections to disinfecting packages at home.

Mr. Oliver, of Santa Clara: If there is such a thing as the codlin moth being carried from one portion of the State to another, it seems to me that that should be prevented if possible. I know that I received a package of boxes from San Francisco, and they laid two or three days at the depot, and when I put them on the wagon and took them home they were full of moths just ready to fly—full of them, sir. I didn't send the boxes to the city in that condition. They got so at the depot or in the city, or somewhere, and for us to receive the boxes home, unload them and disinfect them there, would be to receive all the codlin moths in the country and try to catch them after they get here. It seems to me that that would be an impossibility. You might as well go to work to catch them now. What we desire is to prevent the importation of those that have come from other parts of the country, and make it necessary that the agents in San Francisco should destroy those which they keep about their premises, and to prevent them being transported to our orchards, to our depot, and then it is our business, if possible, to prevent sending boxes to the city that are full of those moths. There is that which belongs to us as orchardists and as cultivators and as shippers, and there is that which belongs to the gentlemen in San Francisco, and I trust, sir, that we shall have intelligence enough—whether we have so much civilization or not I can scarcely say—I trust there will be intelligence enough, both at the big city and among the farmers, somehow to conquer the moths and conquer the bug. We mean to do it if we can in this part of the country, and I trust that we shall try to see to it that others that send their packages to us shall do it in their part of the country.

The Normal School.

Prof. J. H. Braly, of State Normal School, addressed the convention and extended an invitation to the members to visit that institution at the opening of the session there on Thursday morning, and on motion of Mr. Johnston, it was agreed to accept the invitation and to go in a body Thursday morning at half past 8 o'clock to the Normal School building.

The County Horticultural Law.

The Vice-President in the chair.

Mr. Britton: Listening to the discussion in relation to the laws for the protection of the fruit growers of the State of California, I have been struck with the fact that there has been only one law mentioned, and that is what they call the State law, the law appointing a State Horticultural Officer; that is a good law, probably it is all right, but at the outset we find out that these disinfecting rules only reach a very small part of the evil complained of. For instance they disinfect those boxes in San Francisco. That would be very well, but the argument that has been addressed to this convention shows very plainly that those insects get in the boxes after they have left San Francisco. I have no doubt that every steamboat, every railroad car and every platform where freight is piled up all over the State of California where they have the insect pests and the codlin moth, which seems to be the principal one we are striking at in this investigation, are thoroughly infested with them. I have no doubt that if, after the fruit shipping season, you were to go to a platform or railroad depot you will find codlin moths there. Our boxes come back from San Francisco and they are piled on that platform, and what is to hinder those moths from infesting them there?

There is no doubt they could destroy a good many moths, but the commission men, some of them, have argued to me that if we keep clean orchards they would have no moths, and that we are responsible for the codlin moth, and for that reason they think we ought to do this work. Now, our county law provides that the Commissioners can compel every man to keep a clean orchard. I am satisfied that half of our trouble comes from neglected trees, perhaps half a dozen in some places. I have known of acres of orchards lying worn out and given no attention, and left to remain for years breeding insects of all kinds. Then, again, you will find half a dozen trees, or in some places you will find only one tree, but that one tree can breed enough codlin moth or scale bug to infest several acres in one year. For that reason I would like to give a little prominence to our county law, which is also a State law, and see why we can't have that enforced; that will reach right down among the people. It don't reach only commission merchants; it reaches every orchard, and I would like that the convention would give it a little more attention, as there has been no attention paid to that law. While it may be argued that some counties are not trying to enforce that law, still the fruit growers of that county have the power in their own hands. I have not the law before me and would not be positive, but I have read it several times, and as I understand the law, five fruit growers can compel the Board of Supervisors to appoint a Board of Horticultural Commissioners, and I think that that county law will reach still further than the State law to-day if it was carried out.

Mr. Peck: I wish to ask if the law does give the County Commissioners power to compel men to clean their orchards. In our county our best lawyers have said that the Commissioners had no power unless a written complaint was filed, and we have found it impossible to persuade men, while they would growl all the time verbally, to file a written complaint, so that we have done nothing towards compelling men to clean their orchards, though we tried to coax them, tried to persuade them, and sometimes tried to scare them into doing so. Now, I wish to know if that law does give County Commissioners power to compel a man to clean his orchard.

Mr. Robinson: The law in itself does not give the Commissioners power to clean the orchard, as Mr. Peck says, unless that complaint has been made, and that complaint has been properly tried, just as a judgment of a court rendered declaring that that orchard is a nuisance, and ordering its abatement. You have to go through that whole process; in other words, you can't compel men to clean their orchards. More than that, the regulations under which we can make the complaint require the party to swear in this complaint that the orchard of that party endangers his fruit trees; and no one unless a fruit grower can make the complaint, unless he is the owner of trees. There are a great many defects in the law that ought to be remedied, and if you get a county law—don't know whether the county can legislate in matters of that kind in such a way as to compel them to clean the orchard; if it can, it is a thing I have been unable to find out in San Joaquin county. I have written several times in relation to defects in the law, and have found it is impossible to enforce that law other than in that particular way, and entering a complaint in the proper form that that orchard and those trees were endangering mine, and then to prosecute that to a conviction, and then, after conviction, the court orders it to be abated as a nuisance at the expense of that party himself, or compels him to do it himself; and if he refuses or neglects to do it, then it shall be done at his expense, and is a lien upon the property.

Mr. Pryal: Speaking about county Commissioners, I would state for the benefit of the gentlemen that are present in the convention, as one of the Commissioners for Alameda county, how in the northern part of Alameda county that every one of the lawyers of our county that I went to that had an orchard went to work immediately, and they didn't spare any expense to clean all their trees in the northern part of Alameda county. Every one of those lawyers went to work like true gentlemen; and there are a good many lawyers who do business in San Francisco that have their homesteads and orchards in Alameda county, and they have the cleanest orchards in the State of California; and one of them, who was formerly a Supreme Judge of the State of Nevada, told me it was one of the most just laws ever carried out in California, and he hoped every man would clean his orchard. I can assure the members that the lawyers do everything they can to obey the law in our part of the State.

Mr. Hatch: There is no doubt in my mind that the law is a good one, provided it was effective; but what Mr. Robinson says in regard to it I find to be the fact in our county, and of course it being the fact is the cause of nothing having been done in our county by the Fruit Commissioners. The law does provide that a complaint shall be made before anything else can be done, and no complaint has been made up to this time that I have ever heard of, and I have been one of those Fruit Commissioners for about one year.

Mr. Johnson: I will say in reply to Mr. Peck's question, that this law is something like the first locomotive that was built in the United States—it is very imperfect. After we work at it a little while with those who understand it it will be what we want. As it stands now, a

complaint has to be filed, as I understand it. One word more: that law was passed in about three days, nearing the close of the session. After we had given up all hopes of getting anything, we rallied again, and then with a second desperate struggle we got what we have, and it is imperfect, and can be improved greatly without interfering with it. It can be made more effective without injuring the law.

Who is to Make Complaint?

Mr. Britton: I want to ask Mr. Hatch a question, he being one of the Commissioners, if he ever took any occasion to perform his duty in that regard? As I understand that law, it is made the duty of one of the Commissioners if he has the knowledge of an orchard being infested, to go and file this complaint.

Mr. Hatch: I do not, Mr. President, so understand the law, although it may be my misunderstanding. I understand the law as Mr. Robinson stated it, that the Commissioners were as a body to consider complaints and to act upon them, therefore I have not done just what he supposed I should have done.

Mr. Johnston: I will state to Mr. Hatch that he is one of the fruit growers in his community, and it belongs to them to make the complaint; as a fruit grower he fails to do his duty.

Mr. Britton: I think it goes further than that. I think that the law says when he knows of his own knowledge or by complaint that his orchard is infested it is his duty to make the examination and take the steps the law permits him to take. There is another clause in that law which goes still further, that if a written complaint is filed with Mr. Hatch, for instance, and he refuses to act upon it, then it is the duty of that complainant to go before the Board of Supervisors and demand the removal of that Commissioner. That is the way that law is, and I believe that the people all over the State have not had the courage to carry out that law.

Mr. Block: I don't think we are making much progress in this matter. I think as we proceed we find out virtually that we are doing nothing, and I think the last resolution that was submitted by the Committee on Legislation and adopted will cover the whole subject, requesting that the law be perfected. I think that is the tenor of the resolution. Now, that they will have an opportunity of working at that law again, I desire to point out some other facts in connection with it that ought by all means to be omitted. It seems that the fruit growers have to make a complaint to begin with, and the Commissioners examine the complaint and decide upon it; and if the Commissioners do not pay any attention, you can have them removed. Further, you have got to submit it to a judge, and you have got to receive a judgment before you can have that orchard decided a nuisance. Now, Mr. President, we know how long it takes, and while I am most happy to learn of those lawyers who are so good as to assist us, it is a question whether those very same lawyers wouldn't be retained to defend a person that wants to fight the law; and I would venture to say that the very first thing they would do to fight the law would be to ask for further time, and again extend the time, and again ex-

tend it; and the probability is, we would have four crops of codlin moths before the case would be tried. Now, let us either get a law to stop the codlin moth from propagating during that time, or let us have a law to compel the persons to annihilate them, one or the other.

Mr. Peck: I simply desire the convention to understand the law. I have understood it for a long time, as stated by the chairman, and knew the circumstances under which it was passed. I am one of the Commissioners of Placer county. I have two colleagues, and we are fruit growers. We have visited all the orchards in Placer county. We have put Mr. Cooke's pamphlet in the hands of every fruit grower. We have recommended the remedies. We have taken care of our own orchards first. We shook the law at those who are opposed to cleaning and said it would not do any good, and scared some of them into taking care of the trees, but they soon found out that we could not enforce the law unless complaint was made and judgment obtained in court, and, as remarked, that would give time enough to fill the State with codlin moths. I think the law needs amending, and we wish to understand the defects of the present law to secure proper amendment. I assume that when a man is appointed to an office of so much importance as the Commissioner of Horticulture that he will do his duty, or that some one will have the courage and the philosophy and the patriotism to see that they are turned out of office.

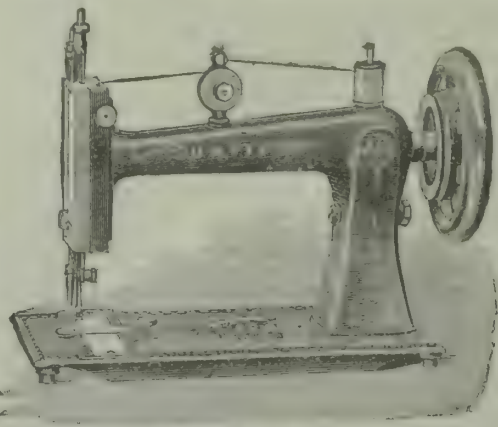
(TO BE CONTINUED.)

THE CAUSE OF LIFE.—We are getting down to it. Bioplasm, protoplasm, etc., show us the mechanical composition of certain ingredients which somehow are alive and contribute to the making up of our bodies. Up to within a few years physiology did not suspect that there was any chemical difference between dead and living protoplasm. But recent researches, beginning with an article of Pfluger's in 1875, point strongly in an opposite direction. One of the ablest essays in the affirmative was written last year by Drs. Oscar, Loew and Bokorny, and published in Munich. The result of their investigation goes to show that living protoplasm owes its property of life to the presence of aldehyde groups, which are characterized by intensely active atomic movement. When death takes place it is coeval with and caused by a transformation of these aldehyde groups into amide groups, with diminished molecular motion, thus leading to cessation of action. What causes the transformation, however, is still an unsolved problem.—*Phenological J'n'l.*

A NEW DYE.—The young growth of the poplar tree yields a dye which may be extracted as follows: The young twigs and branches are bruised and boiled for 20 minutes with a solution of alum, 10 pounds of wood requiring 1 pound of alum, in 3 gallons of water. The solution is filtered hot and allowed to cool, and, after standing some time, is again filtered from a resinous deposit. On exposure to air and light it develops a rich gold color, and may be used directly for dyeing orange and yellow shades upon all classes of goods.—*Deut. Farb. Zeitung.*

The Latest Sewing Machine—The New "High-Arm Davis."

Since the era of sewing machines began nothing has been produced which was as near perfect as a labor-saving invention as the machine presented in the engraving, which the company claim is the lightest running machine ever perfected, and positively does away with all basting for practical work. The fol-



MACHINE HEAD.

lowing item we clip from an Eastern journal:

"THE NEW 'DAVIS' SEWING MACHINE.—People who are acquainted with the machine heretofore manufactured by the Davis Sewing Machine Company would naturally suppose there was no occasion for attempting to produce a machine of greater excellence, inasmuch as it is a well-known fact that no other sewing machine possessed equal sewing qualities; but the experience of the manufacturers has enabled them to produce in the new high-arm machine one possessing even more fully the highest perfection attainable. In the new machine the superior vertical feed principle is retained, and the mechanical construction is perfect. The material

used is of the finest quality, the greatest strength and durability insured. At all places where wear is possible by long use, proper devices for adjusting are provided. The complete machine is very attractive in appearance, being of beautiful design and highest finish. It is exceedingly light running, and adapted to a greater range of work than any other machine. In fact its capacity, coupled with its latest improved accessories, enables the operator to produce easily everything known in the line of plain or ornamental needlework. No descrip-

tions we can give would convey fully a correct idea of this the latest triumph in sewing machine mechanism. The extensive facilities of the company have been used to their full extent to supply the demand for their machine; their constantly increasing popularity will be greatly quickened by the introduction of the new high-arm machine. Its advantages will make it the favorite. It was exhibited for the first time at our county fair, and received the first prize over all competitors.—*Watertown (New York) Daily Times.*"

For prices and description of various styles we refer our readers to the last page of this issue.

BAKER & HAMILTON,

Junction Market, Pine and Davis Streets, San Francisco.

Nos. 9 to 15 J Street, Sacramento.

MANUFACTORY: BENICIA AGRICULTURAL WORKS, BENICIA, CAL.

Eastern Office: 88 Wall Street, New York.

IOWA FOUR POINTED BARBED WIRE.

PRICE REDUCED.

It will neither
Rust nor
Decay.



Secure Against
FIRE,
WIND and
WATER

GALVANIZED OR PAINTED.

15 Feet to the Pound.

IS BARB WIRE DANGEROUS?

It is not, where wire—instead of metal or knife blade cutting points—is used for the barbs. We base our reply upon a large experience in supplying the trade with barbed wire, thereby occupying a position to learn of any damage caused, extending all through the United States. Our experience will justify us in stating, as an absolute fact, that no more injury is done to stock by the use of wire barb than by the use of any other common kind of fence. We have yet to learn of the loss of a single head of stock caused by the Iowa barb. We attribute this fact to these reasons:

1. It is a four-pointed wire barb, with barbs standing at right angles, and, therefore, always presents a point.
2. It is the only one locked between the two wires, and the barbs cannot work or slip together.
3. It is a wire barb, and pricks instead of cutting the flesh.

DURABILITY.

Barbed Wire has not been in use long enough to state from experience how many years it will last; but, as painted wire first put up shows no sign of deterioration, and lines of telegraph wire have been in use 30 years without the quality being impaired, it is probable that a well galvanized steel double-strand wire fence will last from twenty-five to fifty years.

WHICH IS THE BEST KIND OF BARB WIRE TO BUY.

It being conceded from these reasons that it is advisable to use wire, the question that follows is, which kind is the best? This is frequently asked by the farmer, and we will endeavor to answer it without prejudice, and honestly as we believe the facts to be. There are four kinds of wire on the market, which we will designate generally, as follows:

- A four-pointed double wire, with wire barbs.
- A four-pointed double wire, with wire barbs.
- A four-pointed double wire, with wire barbs.
- A four-pointed double wire, with wire barbs.

From this family of wires we must choose. As regards the difference between a two-pointed and four-pointed barb, we are satisfied that a four-pointed barb is more efficient to turn stock than a two-pointed—provided the kind of four-pointed barb is such as stand at right angles—simply because a four-pointed barb presents a point in any position, whereas, with a two-pointed barb several may be found in succession standing parallel to each other, and, therefore, presenting a point only in one direction. If any one doubts this, let him attempt, to run his hand along on a two-pointed barb wire and then on a four-pointed, and see which offers most resistance. We should, therefore, advise buying a four-pointed barb wire. Having determined upon this, the question still remains, which of the four-pointed wires is the best? The single strand wire, made of No. 8 or 9 wire, has the defect that it is quite impossible to place barbs upon a single wire so that they will not in time slip and work together. Again, if this were not so, there is no economy in its use, as the increased weight per rod is equal to, or more than the difference in price between that and twisted wire, not to mention the expense of a wind-jas to wind up and let out the single wire for winter and summer, to prevent breaking by contraction in cold weather. The twisted wire, you will observe, was sufficient spring to preserve an equal tension throughout the different temperatures of the weather, requiring no attention. We, therefore, could not advise buying the single wire.

The four-pointed metal plate barb is usually made by a tight twist, holding the barb only by a twist between the two wires. This tight twisting not only contracts the wire, making it heavy per rod, but is liable to injure the fiber of the metal by twisting so closely. Again, a metal plate barb presents a knife blade, or cutting point, rather than a thorn point, and cuts rather than pricks.

Of the various kinds of four-pointed wire barbs, the Iowa Barb is the only barb which is locked between the two wires, and also wound around both wires; the lock prevents it slipping on the wire, and winding around holds the two wires together.

We can, therefore, advise every one who wishes to purchase wire, and wants the best, to buy the Iowa barb, as it contains all the favorable features that are required, and none of the objectionable ones. It is made only from the best of annealed steel, fully warranted, either galvanized, japanned or painted; put up in spools of from 90 to 150 pounds each. Remember, it will not exceed 17 ounces per rod.

NUMBER OF WIRES.

Although fences are sometimes made of two wires, to fence against cattle only, we recommend not less than three, and as many more as desirable. Five wires make a good fence—such is used by nearly all the railroad companies.

Gem Belt Seed Sower.

ADVANTAGES OF THE GEM BELT.

The Gem Belt has two valves that supply the Distributor with grain—one for each side of the wagon; therefore, one may be closed when sowing by a fence, ditch or land that is not to be sown.

The Distributor of the Gem whirls around horizontally, and throws the seed with great force to the right or left, but does not throw it up or down.

The Gem does not throw the seed up into the air, to be blown about by the wind, but throws it sharply to the right or left.

THE REASONS WHY

The Distributor of the GEM BELT SOWER is run by a quarter turn belt instead of gearing:

The advantages gained on the chain are smoothness of movement, noiselessness while running, durability of the fast-running parts, and the evenness with which it sows the grain.

The GEM sows blue-stoned grain perfectly. The GEM sows about sixty feet wide.

PRICES:

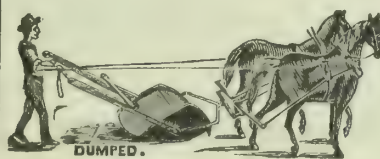
No. 1 Gem, to run with chain and bevel gear, weight 132 pounds.....	\$35 00
No. 2 Gem, to run with belt gear, weight 154 pounds.....	30 00
No. 3 Gem, to run with all gears, weight 165 pounds.....	35 00

The GEM SEED SOWER can only be obtained from us, as we are the sole manufacturers.

DOTY'S

Automatic Revolving Scraper.

The Doty's is used in making Roads, Excavating, Ditching, Leveling for Railroads, Canals and Levee Building.



Hundreds of Certificates from those who have used them prove it to be the

Best Scraper Made

SAVES

TIME,

MONEY and

LABOR.



DOTY'S REVOLVING SCRAPER.

TIME.

For it revolves, losing no time to reset for filling.

MONEY.

For it saves one man—the filler.

LABOR.

For it is 50 per cent. easier for both man and horse.

Our Revolving Scraper is now so well known throughout the country that we shall give no long description of it. It has been on trial for the last eight years, and has been steadily growing in favor from the first. It is simple in construction. There is nothing liable to get out of order. No Pull Rods, Spiral Springs, Triggers, or Swivels to clog and refuse to work just when most wanted. It is made to handle dirt, and dirt will not choke it up, or stop its working. The material used is of the best quality. The Handles, Sides and back boards are of selected and thoroughly seasoned oak; the Bottom Plates of Steel. Steel Laid Runners, Malleable Iron Grabs. The new, improved Side Bars and Grab Irons will be much liked.

In simplicity, strength, durability and ease of operation, these Scrapers are unequalled. We ask but a trial to prove their superiority, and we know those who once use them will have no other kind.

Although the universal favor with which it has been received for the past ten years would seem to be sufficient guaranty that it was good enough, yet the improvements we have made in the grab and side bar will commend themselves to everyone at first sight; while the main features of the Scraper have been preserved. These little changes add greatly to its durability and the ease with which it works.

A boy can handle it. One man drives the team and manages the Scraper. The load is taken up, carried to its destination, and dumped without stopping the team. The earth is not dragged along, but carried by the Scraper, which rides easily upon its steel-laid runners, thus greatly diminishing the draft. It dumps by simply RAISING THE HANDLES, which releases the bowl and causes it to revolve, depositing its load, and righting itself for another.

We guarantee the material and workmanship to be as good as herebefore, and believe our Revolving Scraper, as now made, is the BEST IN THE WORLD.

PRICES:

30 Inch Steel Bottom weight 130 pounds.....	\$19 00
33 " " " " " 145 "	20 00
36 " " " " " 160 "	21 00

EUREKA GANG PLOWS.

The Eureka Gang Plows are the Standard Gang Plows of the Pacific Coast, and are manufactured by the Benicia Agricultural Works, Benicia, Cal. They are simple, durable, pointed and finished in first-class style, and none but the most skilled mechanics are employed in their manufacture. There are thousands of them now in use on this Coast, and giving entire satisfaction.

THE GALES CHILLED PLOWS.

Farmers, Read This! Consider, be Wise, and Try a Gale.

The year 1881 was filled with great victories for the New GALE CHILLED PLOWS; time and space reverts mention of only a few: At the Union Fair of June last, held at Geneva, N. Y., the Gale Plow was awarded Three Premiums. The first Premium in the Plowing Match and Two in the Exhibition of Plows. Also, at the Sugar Grove Fair, near Jamestown, N. Y., in September, the First Prize was given to the Gale Plow in the Plowing Match (two of the committee owning Oliver Plows at the time). At the Seneca County Fair held at Ovid, N. Y., in October, the New Gale Plow, in very not competition, won all the Prizes—First, Second and Third—in the Plowing Match. Also, the same week, at Perry, N. Y., Wyoming Co., the Gale Plow won the First Prize in the Plowing Match.

Send for Circulars and Price Lists to

BAKER & HAMILTON, San Francisco, Cal.

Characteristics of a Lava Stream.

The surface of fluid and semi-fluid lavas is covered with vast quantities of froth or foam which has been generated by the action of the escaping steam. If the lava consists of a mass of crystals floating in a liquid magma, this froth cools into the rough, cindery-looking material which is called scoria. If the lava is glassy it becomes pumice, a mass of minute glass bubbles drawn out in one direction by the movement of the mass while it was still in a plastic state. Fragments of scoria and pumice are often thrown by a violent escape of steam to a height of hundreds or thousands of feet into the atmosphere. While going up and coming down they encounter each other and wear each other away by their frequent rubbing, with a noise which is one of the most noteworthy accompaniments of volcanic eruptions. Mr. Poulett Scrope, who watched the Vesuvian eruption of 1822 for nearly a month, remarks that at first fragments of enormous size were thrown out, but they were gradually reduced by constant rejections, till at last only the most impalpable dust issued from the vent—a dust that was so exclusively finely divided that it went everywhere, even into the most closely fastened boxes. Mr. Whympster estimates that no less than 2,000,000 tons of dust must have been ejected during a single slight outburst of Cotopaxi, which he witnessed, and Prof. Bonney calculates, from actual examination, that it would take from 4,000 to 25,000 particles of this same dust to make up a grain in weight. The temperature and consistency of lava streams vary greatly, and the variations give rise to differences in the appearance of the cooled mass. The surface of the stream cools rapidly in the air, so that it appears dull red at night and black by day—like a great mass of rough cinders—while all is of a white heat beneath, and may be so seen at night shining through the rough, cindery masses. Some streams are very liquid, resembling rivers, and filling every channel in their course, while others, cooler and stiffer, might be more fitly compared to glaciers, creeping along so slowly that the fact of their movement can be established only by the most careful observation. The stiff lavas leave a crust wrinkled and folded like coils of rope, and are then frequently called "ropy lavas." The very liquid, fast-flowing lavas leave a surface covered with rough, cindery masses, presenting jagged projections.—*Popular Science Monthly.*

The year's embezzlements and robberies in Russia, private and official, will amount to 26,000,000 roubles.

The North Side Rolling Mills at Chicago have shut down, throwing 1,800 to 2,000 men out of employment.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.
M. P. OWEN—Santa Cruz county.
J. W. A. WRIGHT—Merced, Tulare and Kern counties.
JAMES C. HOAG—California.
L. L. WOODMANSEY.
E. W. CROWE—Los Angeles county.
B. WALKER—Butte, Colusa and Sierra counties.
S. E. BAKER—Eastern States.
J. WILTSER, Amador county.
Geo. McDOWELL—Alameda county.
N. H. HAFKOOT—Plumas county.

Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the city of San Francisco, State of California, on Tuesday, the 9th day of January, 1883, at 1 o'clock P. M.

ALBERT MONTELLIER,
Cashier and Manager.

OUR attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Win. M. Rickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Apprentice Wanted.

Wanted, a well-recommended, able and steadfast boy, of fair education and good intellect, to thoroughly learn the printing business. None other need apply. Address this office.

If you want to become a telegraph operator send 25 cents to C. E. JONES & BROS., Cincinnati, Ohio, for the best illustrated instruction book.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDGOUT & CO., 10 Barclay St., New York.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and Bred by

M. W. DUNHAM,

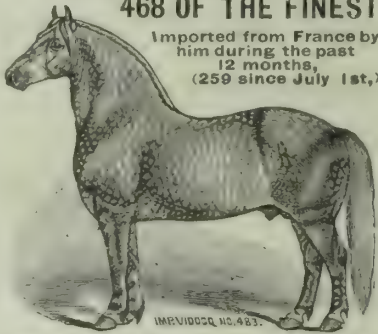
OAKLAWN FARM,

Wayne, Du Page County, Illinois.

35 miles west of Chicago, on C. & N. W. R. Y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves, the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.

Commission Merchants.

Grangers Business Association, SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

JAS. P. HULME,
Late Miller & Co.

JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,

SAN FRANCISCO.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F. Prompt Returns. Advance Liberally on Consignments.

PETER MEYER.

LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders.

P. O. Box 1940.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1938 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

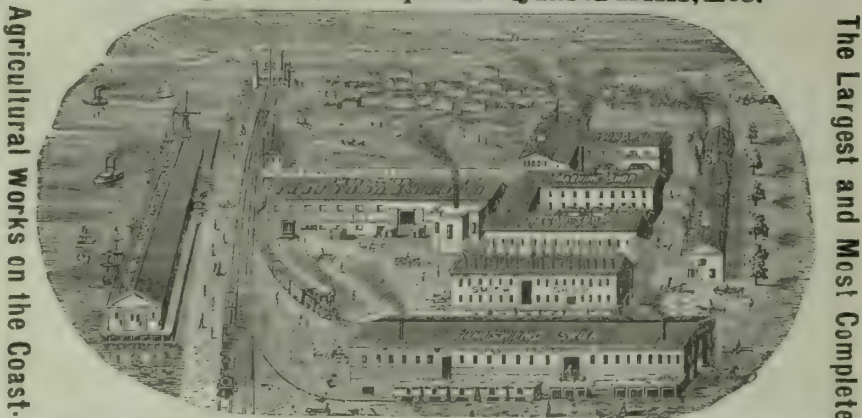
AGRICULTURAL IMPLEMENTS,

Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Backboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Fresno Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.



THE BUILDINGS are over 1,600 ft. in length, and have a floor surface of 105,402 square feet, or nearly 2 1/2 acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipment, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium.

WE MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Hill's Improved Horse Powers. Cultivators. Gem and Caboon Seed Sowers. Hill's Improved Headers. Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freight. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

(Members of the San Francisco Produce Exchange)

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

—THE—

MUSICAL SUCCESS

Of the Season.

MINSTREL SONGS,

Old and New.

Nearly 100 of those world-famous PLANTATION SONGS and POPULAR MELODIES that have made the fortunes of Minstrel Troupes, and of which Dixon & Co. hold the copyrights of a large number. More true, original, pleasing melodies may be found in this volume than in any other extant.

Of course Foster leads the van, and his

OLD FOLKS AT HOME

Cannot be excelled. This statement, however, will be questioned by many, who prefer:

Old Kentucky Home. Oh, Susannah! Old Dog Tray. Old Uncle Ned. Old Dan Tucker. Old Cabin Home. Farewell, Lilly Dear. Dixie Land.

Or the more modern nonsense songs of the Jubilee order, Gospel Raft or Cross Roads, In the Morning by the Bright Light,

Or the truly beautiful Lily Dale, Mocking Bird, or Twinkling Stars.

Price \$2, Boards. \$3 Cloth. \$3 Fine Gilt.

Mailed anywhere for above prices.

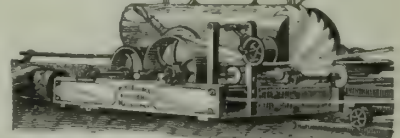
OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. [Name from Paper.]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO., Agents for the Pacific Coast.

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT HOUSEHOLD SEWING MACHINE, GEN'L AGENCY, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.

Guide to Silk Culture.

A Useful Manual for Beginners.

The "Silk Growers' Manual," by W. B. Ewer, contains, in a condensed and clear form, instructions for the sericulturist. We advise our lady friends to buy a copy.—*Fresno Examiner.*

Furnishes in a brief and explicit manner all necessary information in the matter of silk culture.—*San Jose Mercury.*

An interesting compilation to encourage home silk culture in California. Everybody should read it.—*Anderson Enterprise.*

Anyone interested in silk culture will find this full of valuable information.—*San Joaquin Valley Review.*

Furnishes all necessary information to begin the silk business.—*Merced Appeal.*

It is a very interesting little work, and well worth the price.—*Mendocino Beacon.*

It is worthy the perusal of all interested in silk culture.—*Concord Sun.*

Copies of "The California Silk Growers' Manual" mailed from this office for 25 cents each.

HOME PRODUCTION !!

VICTOR MOWING MACHINE.

Judson Manufacturing Company's

The First and Only Mower Made on this Coast.

Silver Medal Awarded at the Mechanics' Fair, San Francisco, 1882.

FIRST PREMIUM AWARDED AT THE SAN JOSE FAIR, 1882.

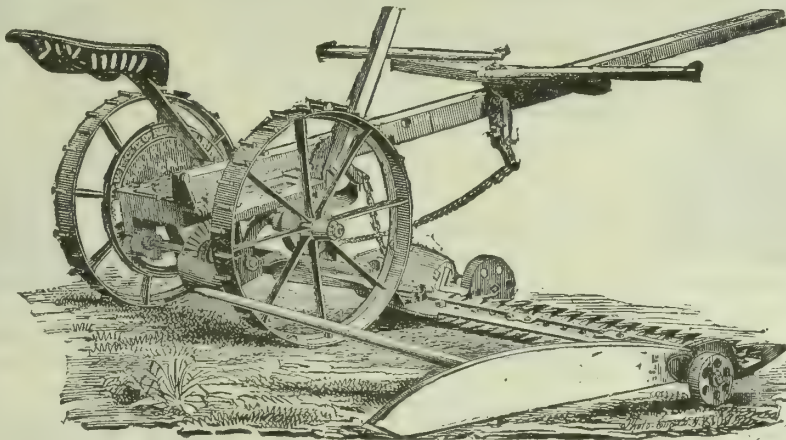
The following are a Few of the Testimonials Received from those who have Used the VICTOR MOWER the Past Season:

BOONVILLE, Mendocino Co., Aug. 3, 1882.
JUDSON MFG CO., San Francisco.

GENTS:

I am very well pleased with the Victor Mower purchased of you: 1st, Because there is no side draft, the horses pulling direct from the cutting apparatus. 2d, Because the pitman is shielded from any obstruction, and not liable to be broken. 3d, Because you can stop and start without backing, and turn without increase of speed. 4th, The wheels carrying the cutting bar remove much of the friction. 5th, The floating apparatus lets it run over very rough ground with ease and without breakage, (which is no small item in parts remote from the city). Also, the boxes are better than I ever saw before; in fact, the whole machine, for simplicity, strength, durability and light running, make it the best Mower of the day. Yours respectfully,

A. G. RUDDOCK.



BOONVILLE, Mendocino Co., Aug. 27, 1882.
JUDSON MFG CO.

GENTLEMEN:

I can truthfully testify to the excellent qualities of your Victor Mower. I purchased one last May, and have cut 120 acres over very rough ground. It is the lightest draft Mower I ever run. Wishing you success, I am your obedient servant,

WILLIAM PRATHER.

CENTERVILLE, Alameda Co., Aug. 30, 1882.
JUDSON MFG CO., San Francisco.

GENTS:

I have used one of your Victor Mowers during the past season, and consider it the best machine ever made. It is by one-third the lightest draft machine I ever used, and I have run mowing machines for the past 20 years. There is no side draft whatever, and it is a very easy machine to operate. My boy, who is only 10 years old, cut over 60 acres during this season, of Burr clover, wheat and wild oats, mixed, that cut over four tons to the acre. Success to the Victor.

JOSEPH ROSE.

WEST POINT, CALAVERAS Co., Aug. 4, 1882.

I purchased of you has given perfect satisfaction, both in heavy alfalfa and fox-tail; as I had the machine on trial, you may be sure that I gave it a good test. It is the lightest running and best adapted for all purposes of any machine I ever saw. One of my neighbors, Mr. Ham, has a Victor, and he thinks there is no machine like it.

FRED. GREIVE.

VANCOUVER, W. T., Aug. 10, 1882.

One of the Victor Mowers sold by us cut 170 acres and never stopped a minute for repairs.

GRIDLEY & WHITNEY.

We, the undersigned, having used the Victor Mower made by the Judson Manufacturing Co., of San Francisco, can testify to its superior qualities, and conscientiously recommend it to the farmer as an excellent machine, and the best adapted for use on this coast of any mower that has ever come under our observation.

HEALDSBURG, Aug. 28, 1882.

H. M. WILSON,
President Bank of Healdsburg.
WM. MATHORN, Healdsburg.
E. TEUAFFER,
A. H. BARTH, Windsor.

JUDSON MANUFACTURING CO.,

Factories at Oakland.

Office, 402 Front Street, SAN FRANCISCO.

Arrears of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1882.

Pensions for all soldiers disabled in line and discharged from any cause due their military service, are entitled to Pension.

Widows of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty. Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges. Honorable Discharges procured; also duplicates. Send for blanks.

Increase of Pension. Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps,

STODDART & CO.,
Washington, D. C.

Box 623

BOONE & MILLER,
Attorneys & Counsellors-at-Law,
Rooms 7, 8 and 9
No. 320 California Street, S. F.,
(Over Wells Fargo & Co.'s Bank)
Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches

YOUR NAME on 50 large size CARDS. Remember, brand, Sensitive, Hand Book, &c. No 2 all in, 10c, 14 pks. \$1. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine Gift Novel Edge Cards, turned corner, 10c.

Minnie B. Poser

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimonials from responsible persons. Address, DR. J. McLEISH, No. 215 West Fourth Street, Cincinnati, O.

LAND Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

PARKER SHOT GUN.
IMPROVED.

Shooting Qualities
UNSURPASSED!
Send Stamp for 50-Page Catalogue
If you want REVOLVERS, RIFLES, GUNS, IMPLEMENTS, or AMMUNITION.
Large Stock and Fine Assortment.
Send for Circular and Prices, and mention this paper.

E. T. ALLEN, Agent for the Pacific Coast.

NO. 416 MARKET STREET.

SAN FRANCISCO, CAL.

DEWEY & CO.'S

Scientific Press **Patent Agency.**

(ESTABLISHED 1860.)

Inventors on the Pacific Coast will find it greatly to their advantage to consult this old experienced, first-class Agency. We have able and trustworthy associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other Agencies. The information accumulated through long and careful practice before the Office, and the frequent examination of Patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not new. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, 252 Market St., S. F.

A. T. DEWEY.

W. B. EWER.

GEO. H. STRONG.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

AUTENRIETH'S CELEBRATED

Fig. 2

CLUB-FOOT SHOE.

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins. Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

'MALES' "PERFECTION" RIDING SAW.
Three Days' Trial Given.
Saws by weight of operator, runs lighter, has more power, longer and quicker stroke, making 120 strokes per minute. One man does 2 men's work with ease. A boy 15 does the work of 2 men. Agents wanted. Ask your dealer. Circulars free. The S. Males Agri. Co., Hamilton, O.

Mission Rock Dock and Grain Warehouse,
San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. Proprietors.

Office—318 California Street, Room 2.

TEACH YOUR GIRLS TO SEW!

Just Out. The Finest Toy of the Age.

A CHEAP, HANDSOME AND USEFUL PRESENT!

By Mail, Post-Paid, to any Address on Receipt of Price.

THE AUTOMATIC FAIRY SEWING MACHINE

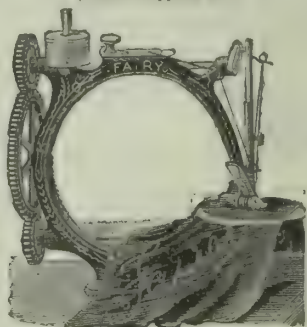
(Patents Applied for.)

Reduced to

\$6.00

FOR THE

HOLIDAYS.



Useful,

AMUSING,

Instructive

AND

SAFE.

"THE FINEST TOY OF THE SEASON,"—N. Y. SUN

It will do a variety of Family Sewing and is very useful for Embroidering Designs in Silk.

It is the Simplest Sewing Machine Ever Made.

NOT THE LEAST APPROACH TO COMPLICATION OF MACHINERY.

Any six-year-old child can comprehend and learn to use it. Every machine is finely ornamented and finished with Berlin Bronze and Nickel Plate. It makes the Celebrated "Elastic Twisted Loop Stitch" said to make the strongest seam. It sews from a single spool—No bobbing to wind. It makes the work automatically without extra machinery. It runs easily and silently. It uses Singer Family Needles, which cost the least, and can be found the world over. It cannot be turned the wrong way, and is not liable to be put out of order. It is very durable, and, with care, will last for the use of generations.

THE MACHINE FOR THE MILLION!

Nothing like this to take care from the Mother's mind. The machine will clamp on any ordinary table, and is furnished complete with full directions, and put up in a neat, strong box; weight, 2 1/2 lbs. Every machine is fully tested, and is threaded and furnished with a spool of silk, ready for instant use. Fully protected by several Patents. The "FAIRY" is unequalled for the Amusement and Instruction of Children. With it they can make Doll Clothing and learn to do Family Sewing. Go safely by mail. All orders for

"FAIRY MACHINES"

Must be addressed to

MARK SHELDON,

Largest Dealer in Sewing Machines and Supplies in the U. S.

9, 11 & 13 First St., San Francisco, Cal.

GENERAL AGENT FOR THE ENTIRE PACIFIC COAST REGION. AGENTS WANTED.

Good Land and Sure Crops.

There has been steady and tolerably rapid advancement made in the growth of a majority of the towns in Colusa, Butte, Tehama and Shasta counties. Especially is this so in the agricultural districts where the land produces at least fair crops in all seasons—wet or dry—as does the land on the Reading Ranch. Those looking for homes in California where diversified farming will pay every year; where wood and water are plenty and easy to be obtained, and other desirable advantages are to be had, should address the proprietor of the Reading Grant.

Some 14,000 out of 26,000 acres of the grant remain for sale at comparatively low rates, in quantities to suit purchasers, on easy terms. Prices range from \$5 to \$30 per acre. The tract is between two and three miles wide, with the Northern Division of the C. P. R. R. passing centrally through its entire length. Send postage stamp for free circulars containing information about Shasta County and these lands, to the proprietor of Reading Ranch.

EDWARD FRISBIE,

Anderson, Shasta County, Cal.

A NEW BOOK.

A Treatise on the Horse and his Diseases.

By B. J. KENDALL, M. D.



35 Fine Engravings showing the positions and actions of sick horses. Gives the causes, symptoms and best treatment of diseases. Has a table giving the doses effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year.

It is printed on fine paper and has nearly 100 pages, 7 1/2 x 5 inches. Price only 25 cents, or 5 for \$1, on receipt of which we will send by mail to any address.

DEWEY & CO.,
252 Market St., S. F.

Agents Wanted.

A Library in One Volume. New, authentic and exhaustive. The largest, handsomest, most comprehensive and best Illustrated Work on Live Stock ever issued in this country.

Endorsed by Veterinary Surgeons and the Agricultural Press everywhere. The "Object Teaching" Stock Book for every day use.

The "American Farmers' Pictorial Cyclopaedia of Live Stock," embracing Horses, Cattle, Swine, Sheep and Poultry, including Departments on Dogs and Bees; being also a Complete Stock Doctor, combining the effective method of Object Teaching with written instructions. For Terms and Circulars apply to J. DEWING & CO., 420 Bush St., San Francisco, Cal.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

MYER'S IMPROVED GANG PLOW.

The only Plow that ever Received the \$100 PREMIUM at the State Fair.

Simplest and Most Effective Plow in the World!

The Lifting Gear and Land Gauge need only be seen to be appreciated. The Adjustable Spindles and Boxes are a new feature, and when worn can be replaced without purchasing new wheels or arms.

We have these Plows with Cast-Steel Sapsare Bottoms, or with wrought extra heavy Steel Molds and Bolted Shares; also Extras for all Myer's Gang, Single, Sidehill, Gang, Subsoil, and Vineyard Gang Plows.

We will have, in time for summer following, Myer's Gangs with the Celebrated Collins Cast Cast-Steel and Bolted Shares, with extra high Mould-board for Deep Plowing. In ordering Extras be sure to give number of Plow.

AGENTS SOLICITED AND LIBERAL TERMS GIVEN.

Fifth Street Cars pass the Works every five minutes.



\$100 Premium.

RICE'S ENGINE, BOILER AND PLOW WORKS,

Manufacturer and Sole Agent, Nos. 52, 54, 56, 58 & 60 Bluxome St., Bet. Fifth & Sixth, near C. P. R. Depot.

J. A. BILZ'S CARRIAGE MANUFACTORY,

Machine and Blacksmith Shop,

PLEASANTON, - - California.



J. A. BILZ.
PLEASANTON CAL.
PAT'D AUG 8 1882

I present above an exact representation of my new Excelsior two-wheeled Phaeton, which is the result of long experiment, and with which I am willing to challenge competition by any other two-wheeled vehicle made. I guarantee that the chucking motion is entirely removed, and that for ease of riding, my Phaeton is equal to any Buggy. The shafts are hung loosely in a rubber box, by which means the jar is completely removed from the axle and the horse's back. The body is also hung loosely on a round axle, and is balanced in front by two coil springs with eccentricity, which prevents the "joggling motion" that would otherwise be imparted by the horse. It is, therefore, as easy for the horse as for the rider.

The Excelsior Phaeton

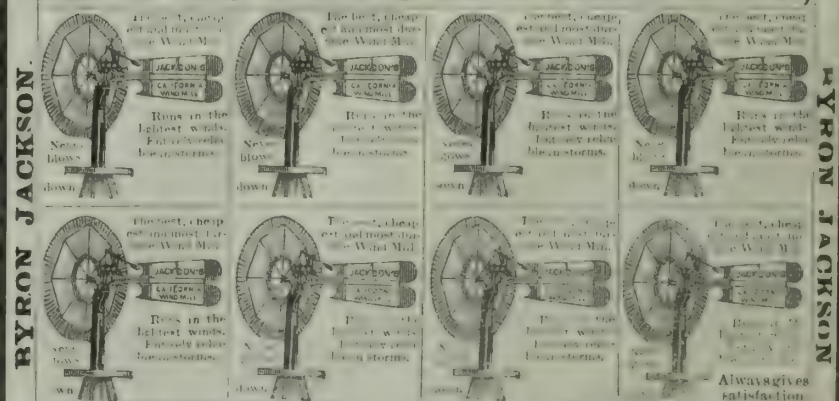
Is made in four different styles, ranging in price from \$90 to \$160. I also keep a large stock of Family Carriages, Open and Top Buggies, Spring Wagons and all kinds of Farming Implements, all of my own manufacture. I also manufacture my well-known VINEYARD and ORCHARD PLOW, which can be run close to trees without danger by the whiffletree. I am prepared to do all kinds of machine work.

N. B.—Parties from abroad who want to get the best article made, at reasonable prices, should address me for further information and reference.

Patent Right for Sale in Counties and States Abroad.

J. A. BILZ.

BYRON JACKSON,



BYRON JACKSON,
625 to 631 Sixth St., SAN FRANCISCO.

How to STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

The Dairymen's Convention.

(CONTINUED FROM PAGE 469)

Wednesday Morning.

Judge Stanly, in calling the meeting to order Wednesday morning, said:

It will be remembered by the convention that at its adjournment it was ordered that this should be an executive session, and that all should be excluded from its deliberations except dairymen. If there are any gentlemen present who are not dairymen they will be kind enough to retire from the room. In order to preserve the executive character of the meeting we must appoint a Sergeant-at-Arms to keep the door. If there is no objection the Chairman will make the appointment. I will appoint Mr. W. V. Gaffay.

The first matter in order will be the reports of committees appointed yesterday, and if it is the pleasure of the convention the report of the Legislative Committee will be received.

It was here suggested that the roll be called and all asked to pay the admission fee and sign the constitution. It was resolved that the admission fee be reduced from \$3 to \$1 in order to give every one in the State an opportunity to become a member.

Judge Stanly then gave the report of the Legislative Committee, including the proposed law to protect genuine butter, which we print on page 468.

[The Convention is still in progress on Wednesday as we go to press. Our report will be concluded next week.]

Christmas Cards.

No one should fail to look for Prang's Christmas cards, those beautiful gems of line and color which are such fitting gifts to friends and loved ones at Christmas time. In their variety, beauty, artistic grace and suggestive power, these Christmas cards are among the notable triumphs of the day. They are published by L. Prang & Co., of Boston, and can be found at the art and stationery stores.

REPRESENTATIVE PAGE has presented in Congress a memorial of the State Board of Regents of the University of California, asking Congress to modify the law so that they may invest the funds derived from sales of lands in securities, and find a lower rate of interest than 5%.

AN invaluable strengthener for the nerves, muscles and digestive organs, producing strength and appetite, is Brown's Iron Bitters.

Redlands Water Company.

On Tuesday last the annual meeting of stockholders of the Redlands Water Company was held in the parlors of Prospect House, Redlands, San Bernardino county, to elect officers for the ensuing year. Some 850 out of the 1025 shares of stock issued were represented at the meeting, either in person or by proxy, but mostly by person. There was a very large attendance of property owners, who took a deep interest in seeing that the company was satisfactorily managed.

When the land was placed on the market one year ago, it was sold on easy terms—one quarter down and balance in one, two and three years. Of course no water stock was issued to parties buying on time until the last payment was made, which called for a deed to the land and a transfer of the water stock. It was natural, therefore, to infer that at the first annual meeting of the company the proprietors of the tract would hold in their own name nearly all the stock of the water company; but such was not the case. The records showed that out of about 1,000 acres of land sold, the purchasers had paid up and obtained deeds and water stock for about 650 acres. This was surprising as it was gratifying, and showed that the settlement was on a sound financial basis, for about two-thirds of the purchasers were free from debts on their land when they could have bought, on time had they so desired.

The report of the secretary of the company showed that the contract with Messrs. Judson & Brown for construction of pipes, cemented and paved ditches, water rights and developments were all up in a satisfactory manner, and that the company had all the water for the land sold called for by the contract, and by the first of January the work on the cement and paved ditches would be completed.

The reservoir, against which no stock has yet been issued, was only partially completed, but on this work the contractors have further time and can get no further stock on contract until the work is finished.

The meeting voted unanimously to increase the capital stock of the company from 1,510 to 3,000 shares, and the new Board of Directors were instructed to make a contract with Messrs. Judson & Brown for more water rights, issuing the additional stock therefor on the basis of eight shares of stock for each additional inch of water.

Every one seemed well pleased with the condition of affairs, and after a thorough discussion of the situation, prices of real estate in Redlands materially stiffened. Judson & Brown will sell no more land for less than \$20 an acre, although it is possible that a few tracts might be picked up from second hands for a less figure.

The following Board of Directors was elected: F. P. Morrison, Mrs. E. B. Seymour and J. S. Edwards, of Redlands, and W. N. Mann and L. M. Holt, of Riverside.

THE large Riverside rolling mill, at Triton, and the Colton mill, at Newcastle, Del., closed on Saturday for an indefinite period. Four hundred hands are out of employment. The steel rail mill of the North Chicago rolling mill, at South Chicago, a very large concern, has shut down.

A California Success.

Happening to know personally the facts, it is but justice for us to state that the fine organ manufactured by Mr. John Bergstrom, of San Francisco, and exhibited in the Mechanics' Fair of 1876, has, by time and use, proved that the high meed of praise then bestowed upon it by some of the best musical critics in attendance was not over-stated. The organ has performed excellent service in Hamilton church, Oakland, since the spring of 1877, having constantly been much used for congregation and concert purposes from that day to this. Although the best makers in Massachusetts and England have sent samples of their highly reputed instruments for several elegant churches in Oakland, none of them have yet equaled the California production of Bergstrom in its fullness and sweetness of tone and easy and perfect action. None other has yet proved so popular with the best of performers or their delighted listeners. It is the more pleasant for us to make this statement at the present, from the fact that we learn that one of the leading churches of Oakland has lately furnished Mr. Bergstrom an order for a new organ, which may confidently be expected to far excel anything that has been received in that city from abroad, if it does not even decidedly eclipse Mr. Bergstrom's earlier efforts.

THE STUDEBAKER WAGON.—The Studebaker Wagon Company has an attractive advertisement in the RURAL this week which the reader who is in need of farm "rolling stock" should not overlook. These vehicles have been in use, giving satisfaction to their owners, for many years, and their introduction upon this coast is constantly increasing. The establishment of a branch house in this city is a fair recognition of the extent of the firm's interest on the Pacific coast.



Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted.

C. H. DANA, West Lebanon, N. H.

Dewey & Co. { 252 Market Street, Patent Apts }



For 1883 is an elegant book of 150 pages. 3 Colored Plates of Flowers and Vegetables, and more than 1,000 illustrations of the choicest flowers, plants and vegetables, and directions for growing. It is handsome enough for the Center Table or a Holiday Present. Send on your name and Post Office address, with 10 cents, and I will send you a copy, postage paid. This is not a quarter of its cost. It is printed in both English and German. If you afterwards order seeds deduct the 10 cents.

Vick's seeds are the Best in the World! The FLORAL GUIDE will tell how to get and grow them. VICK'S FLOWER AND VEGETABLE GARDEN, 175 PAGES, 6 Colored Plates, 500 Engravings. For 50 cents in paper covers; \$1.00 in elegant cloth. In German or English. VICK'S ILLUSTRATED MONTHLY MAGAZINE—32 pages, a Colored Plate in every number, and many fine engravings. Price, \$1.25 a year; Five Copies for \$5.00. Specimen numbers sent for 10 cents; 3 trial copies for 25 cents.

JAMES VICK, Rochester, N. Y.

FOR SALE!

A first-class, three-fourths Norman Friesian stallion.

Address,

L. H. WILLITS,

Watsonville, - - - California.

Apple, Pear, Plum and Cherry Seedlings FOR SALE,

At Low Rates for Nos. 2 and 3.

Also Pear, Plum and Cherry Grafts put up to order on short notice and in the best manner. Prices on application to,

E. P. CLARK,

Dansville, Lio County, - - - New York.



THIS NEW ELASTIC TRUSS

Has a Pad differing from all others, is cup-shaped, with Self-Adjusting Ball in center, adapted to all positions of the body, while the Ball in the cup presses back the Intestines just as a person would with the Finger. With light pressure the Hernia is held securely and cheap. Sent by mail. Circular free.

EGGLESTON TRUSS CO., Chicago, Ill.

Engraver.

A good Wood Engraver, with fair references, can obtain a steady and desirable situation by calling at this office. One who can draw from models or nature preferred.

Glidden's Patent Steel Barb Fencing.

More in Use than of all Others Combined! Lighter than any Other Made from Same Size Wires!

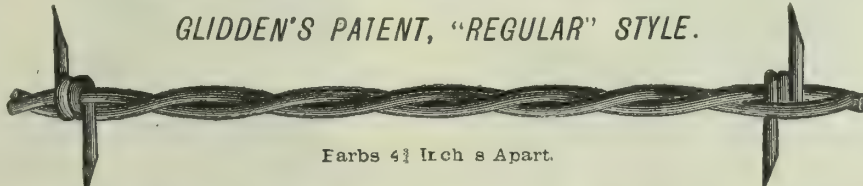
THE STANDARD OF THE WORLD!

The Best is the Cheapest, and the Glidden is Guaranteed Without an Equal.

This style of Barb Fencing is too well known to require an extensive notice. Wherever Barb Wire is known, the GLIDDEN is the familiar word. It has always held the position of being the best. Best as to style of Barb! Best as to material employed in the manufacture! Best as to manner of workmanship! It has six to sixteen more Barbs per rod than has that of any other manufacture.

By actual test on one of Riehl's Wire-Testing machines the GLIDDEN stood a strain of 33 per cent. greater than any one of eight different styles of Barb Wire experimented upon.

GLIDDEN'S PATENT, "REGULAR" STYLE.



Barbs 4 1/2 Inches Apart.

The GALVANIZING used in the Glidden is everywhere acknowledged the BEST in the market. The patent process employed is owned and used exclusively by the manufacturers of this wire. Instead of BURNING and WEAKENING the wires, as the acid processes do, as used by most other manufacturers, it INCREASES THE STRENGTH 11 1/2 per cent., or over 200 pounds breaking strain.

of EIGHT different styles of Barb Wire experi-

GLIDDEN'S PATENT THICK SET.

Thick-set Barbs are only 2 1/2 inches apart, giving 85 Barbs, or 168 Protecting Points, per rod.

The Barbs being separate and not bunched up, as in all four-point wires, EVERY POINT DOES ITS WHOLE DUTY. **THICK SET** has 45 to 80 more Barbs per rod than other wires—consequently it is 20 to 50 per cent. more



effective. Notwithstanding it has more Barbs, it has less wire in the Barbs, because the Barb is coiled around only one wire; hence it **Weights Less and Costs Less per Rod.**

Every 2 1/2 inches is protected by a Barb, instead of 8 to 12 inches, as on Barb Wires of other manufacturers.

GLIDDEN'S PATENT FOUR POINT.

The FOUR-POINT GLIDDEN is a new candidate for public favor, offered this season for the first time, and possesses distinctive features. As a **Four-Point Barb Wire**, it is superior to any other manufactured, and overcomes many of the serious objections to four-points in general.

First.—The Barb is attached to one only of

Barb Fencing has become a staple and leading article of merchandise. Every farmer and stock raiser who uses it is interested in securing the most effective and reliable brands in the market, for in this the true economy consists. The manufacturers of the GLIDDEN have ever aimed to make theirs SUPERIOR TO ALL OTHERS. In this they have been entirely successful. They are now as fully determined to keep it up to the standard of the **BEST BARB WIRE IN THE WORLD**. We are prepared to furnish the various styles above enumerated, either JAPANNED OR GALVANIZED, at lowest prices, and will deliver from

SAN FRANCISCO OR SACRAMENTO.

Address, JONES & GIVENS, Pacific Coast General Agents,

209 J Street, Sacramento, Cal.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.

Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Willard Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal. Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Held took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

SHEEP AND GOATS.

L. U. SEIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St. S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$6.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

FOUNTAIN GROVE POULTRY YARDS, Santa Rosa, Cal. High-class Poultry. Eggs for hatching. Langshans, \$3.50; Light Brahmas, \$2.50; Brown Leghorns, \$2 per setting.

IMPROVED EGG FOOD—Try it for Poultry: 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$6. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
50 Brown Leghorns, 100 Plymouth Rocks,
50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

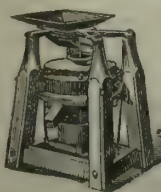
BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

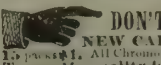
ROBERT ASHBURNER,

Baden Station - - San Mateo Co.



Queen OF THE South PORTABLE FARM MILLS

For Stock Feed or Meal for Family use.
10,000 IN USE.
Write for Pamphlet.
Simpson & Gault Mfg Co.
Successors to STRAUB MILL CO.
CINCINNATI, O.



DON'T FORGET Where to Send
NEW CARDS, just issued for 1883, for 10c.
To possess all the latest and finest designs ever seen.
To excel in quality is our aim. Name in new style type.
Sample Book of all styles, Bevel Edge Imported Holiday
and Birthday Cards, with 24 page illustrated Premium
List, 25c. Outside 10c. E. F. LAYTON & CO. Northford, Conn.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & HOMER P. SAXE. PETER SAXE & SON

Oakland Poultry Yards,

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls. Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys,

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES,

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.
Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these Incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

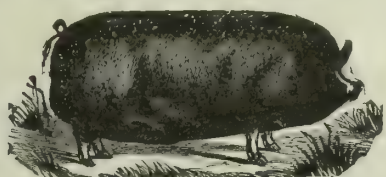
Worthless Stuff of No Value to Fowls,

Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food:—1 Pound Package, 50 Cents; 2 1/2 Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address
G. G. WICKSON, 319 Market St., S. F.



We have for sale at our farm at Mountain View thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pigs from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, I. J. Truman, S. F.

GEORGE TREFZER,

Breeder of High Class

Langshans, Black Cochins, White and Brown Leghorns, Pekin Ducks and Toulouse Geese.

My stock is all first-class, and are mated to secure the best results. Eggs and fowls for sale at very low prices. Send stamp for Circular.

GEO. TREFZER,
Napa City, Napa Co., Cal.



SMITH'S POULTRY YARD,

Blanding Avenue, bet. Everett and Broadway, ALAMEDA, CAL.

Importer and Breeder of Thoroughbred Fowls. Langshans (Cross Strain), American Sebrights, Plymouth Rocks, Brown and White Leghorns. Eggs for hatching. A. H. SMITH. CHAS. W. SMITH, Manager. Address: Brooklyn, Alameda Co., Cal.



J. M. HALSTED'S

Self-Regulating

INCUBATORS.

From \$20 up. Send for descriptive price list.

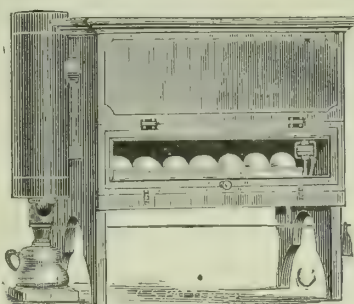
Thoroughbred Poultry and Eggs.

1011 Broadway,

Oakland, Cal.

SPLENDID! 50 Latest Style chromo cards, name, in case, 10c Premium with 3 packs. E. H. Pardee, New Haven, Ct.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity, \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium, Diploma and only Special awarded in the entire Fair, in competition with

NATIONAL (Axford's)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon ovens, heat entering center; 240 eggs, \$60; 400 eggs, \$75; 630 eggs, \$90; Circular free. Address,

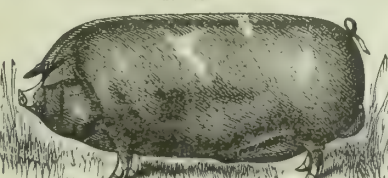
I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that meat of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal

Breeder of pure bred Poland China pigs of the Black Beauty, Black Bass, Bismarck, and other noted families. Imported boars, King of Bonny View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared by the Italian Government Co. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST remedy known. Reliable testimonials at our office. For particulars apply to CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento Street, San Francisco

LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

Twenty gallons of fluid mixed with cold water will make 1,200 gallons Dip.

Apply to FALKNER, BELL & CO., San Francisco

AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy, but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As Fanciers, Amateurs and others are ready to use a good, reliable, self-regulating incubator, that can be procured cheap, we now offer one that holds 150 eggs. The Baby Price, \$28. Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast, 630 Howard St. San Francisco.

CAUSTIC SODA,

Common and Powdered.

ALL OTHER SOAP-MAKING MATERIALS.

T. W. JACKSON & CO.,

304 California Street, - - San Francisco.

SOLE AGENTS FOR THE PACIFIC COAST.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDINER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
O. J. CRESSEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

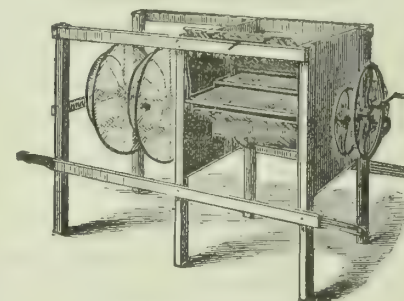
ALBERT MONTPELLIER

Cashier and Manager.

San Francisco, Jan. 15, 1882.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded

FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE best. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

MECHANICS' FAIR, 1882.

Best Truck.....Silver Medal.
Best Rose Cart.....Silver Medal.
4-Spring Wagon, With Top.....Silver Medal.
Best Milk Wagon.....Silver Medal.

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - SAN FRANCISCO.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip. Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12-Gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1874, in lots to suit. Address
J. A. POPPE, Sonoma, Cal.

YOUTH'S COMPANION.

ANNOUNCEMENT,
1883.



REFERENCE to the contributors announced below will show that nearly all of the most distinguished and popular authors of this country, and many of those of Great Britain, have been engaged as contributors to the COMPANION for the year 1883. The Announcement will be found in many respects, we think, an extraordinary one; but it includes only a part of the features of the volume for the coming year.

Illustrated Serial Stories.

A Serial Story of Boy Life in America, by	J. T. Trowbridge.
A Serial Story of Boy Life in Great Britain, by	William Black.
A Serial Story of New England Life, by	Harriet Beecher Stowe.
A Serial Story for Girls, by	Harriet Prescott Spofford.
A Serial Story of Southern Life, by	Marie B. Williams.
Amusing College Stories, by	Henry A. Gordon.
Stories of Old-Time Poor-Houses, by	J. D. Chaplin.
Old New England Peddlers' Tales, by	Wm. A. King.
Tales of the Old Dutch Farmers of New York, by	Eugene M. Prince.

Reminiscences and Anecdotes.

(Illustrated.)

Yankee Drolleries at Old-Time Fairs and Shows, by	James Parton.
Stories of Old-Time Quack Doctors and their Remedies, by	Edgar Knowles.
On the Stump. Humorous Anecdotes of Electioneering, Stump Speaking, etc., by	Hon. S. S. Cox.
Victor Hugo at Home. A chatty description of the home life of the great poet, by his Private Secretary.	Richard Lesclide.
Word Pictures of the House of Commons. As seen from the Reporters' Gallery, by	H. W. Lucy.
Brilliant Articles. Reminiscences of Dean Stanley and Picturesque Associations of Westminster Abbey, by	Canon F. W. Farrar.
The Royal Family of Denmark. Articles of personal anecdote, by the Danish Minister at Washington.	Hon. Carl Bille.
Great Southern Leaders. A series of articles containing personal reminiscences of Gen. Robert E. Lee, "Stonewall" Jackson, John C. Calhoun, etc., by	Hon. Alexander H. Stephens.

Illustrated Travel and Adventure.

A Serial Story of Adventure, by	C. A. Stephens.
Life in an Irish Fishing Village, by	Julian Hawthorne.
Tales of Old Ships and Sailors, by	Capt. F. Luce.
Old Times on the Missouri, by	A Missourian.
After the Mindanao Pirates in a Dutch Gun-Boat, by	Lieut. P. F. Grinnell.
Adventures in a Whaling Cruise in the North Pacific, by	Macomber Brett.
The Fiftieth Tiger. A narrative of Adventure by the Special Correspondent of the London Telegraph.	Phil Robinson.
Child Life and Home Life in Japan. Curious Pictures and Domestic Incidents, by a traveller in that country.	Prof. E. S. Morse.
Railway Heroes. Thrilling stories of railroad men. Among others will be "The Fireman's Story," "His Life or Theirs," "Skip Dustin, the Water Boy," and "Express Messenger Riley," by	Waiter A. Moore.

Special Articles.

Important articles will be given by two of the most distinguished Neurologists in the world, describing Nervous Diseases, showing the ordinary causes of these forms of human suffering, and giving general suggestions as to their treatment. These articles will not be merely technical treatises, but will be enlivened by curious and illustrative anecdotes.

Common Nervous Ailments. A Series of Papers, by Dr. Brown-Sequard.

The Short History of a Nervous Man. The Proper Use of the Mind, Hallucinations and Delusions, The Cause of Sleep and Sleeplessness, Somnambulism, etc., by Dr. William A. Hammond.

The Help Series.

The Profits of Literary Labor, by	James Parton.
Salesmen and Saleswomen in City Stores. Their wages and opportunities, by	Charles Vance Elliott.
A Medical Education. How to Choose a College. Advantages of European Study, by	Dr. William A. Hammond.
Girls Who Earn a Living in Art. By the Principal of the Woman's Art School, Cooper Union.	Susan N. Carter.
How to Start. Papers telling how to start in different kinds of business and in trades, with practical details, so that a boy reading these papers may act on them safely.	
What a Technical Education Costs. By the Professor of Engineering of the Institute of Technology, Hoboken.	Robert H. Thurston.

In The Household.

Parlor Experiments in Science. Simple and curious, by	Prof. W. C. Richards.
Entertainments for Charitable Purposes. Advice and suggestions, by	George B. Bartlett.
Tableaux with Authors. Directions for Charming Evening Entertainments, by	Kate Sanborn.
Concerning Floors, Doors, and Windows. Giving the latest ideas as to the decoration of these important features of a home, by	Janet E. Ruutz-Rees.
Inexpensive Art Furniture. A series of papers showing that a home may be furnished in the best taste without large expenditures, giving details as to cost, etc., by the Curator of the Liverpool Art Museum.	Charles Dyall.

The Editorials of the COMPANION will give clear and impartial views of current events at home and abroad.

The Children's Page sustains its reputation for charming pictures, poems and stories adapted to the little ones.

SPECIAL OFFER.—To any one who subscribes now, and sends us \$1.75, we will send the COMPANION free to January 1st, 1883, and a full year's subscription from that date. Subscription Price \$1.75. Specimen copies free.

Please mention in what paper you read this advertisement.

41 Temple Place.

Address, YOUTH'S COMPANION,

Boston, Mass.

If You Want the Best Wagon on Wheels, —BUY THE— STUDEBAKER WAGON.

The **STUDEBAKER WAGONS** are made especially for this Coast. Their great popularity is due to the extra care taken in selecting the material—the wood being the best selected INDIAN TIMBER, thoroughly seasoned and prepared for the hot, dry climate of California, every part subjected to a close inspection, and discarded if not up to the standard; thus insuring the best work, and producing a Wagon which for **STRENGTH, DURABILITY, and LIGHTNESS OF DRAFT**, is not equalled by any other. They are the best-proportioned and best-ironed Wagons in the market. Every Wagon has our Patent **ROUND EDGE PROJECTING TIRE**, which protects the felloes, keeping the paint from wearing off and consequently preventing them from swelling in wet weather. All our Thimble Skein Wagons have our Patent Skein and Truss Axle, which strengthen the axle and prevent the thimble from working loose. No other Wagon has this improvement.

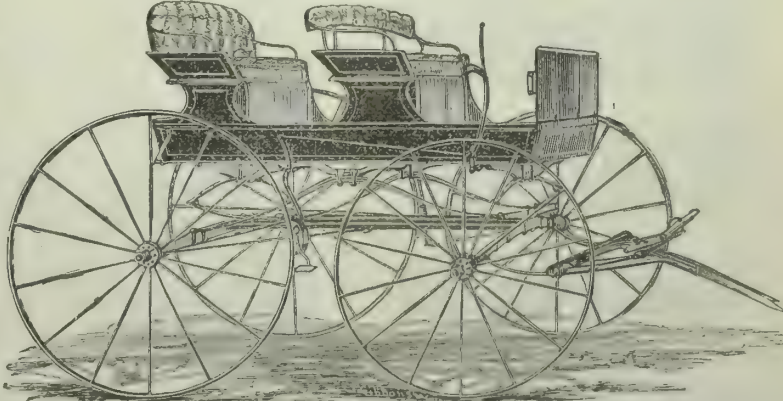


STUDEBAKER CALIFORNIA WAGON WITH RACK BED.

All our Iron Axle
Wagons have the

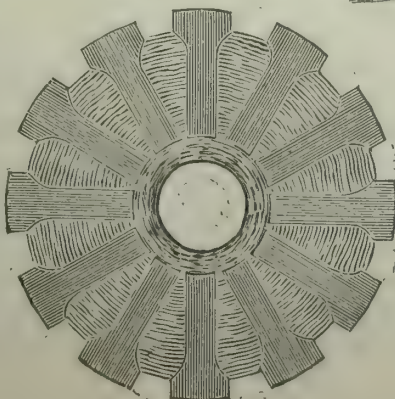
GENUINE
Concord Axles.
Making them the
STRONGEST

—AND—
Most Durable
WAGON IN THE
MARKET.



STUDEBAKER FOUR-SPRING WAGON.

The annexed cut represents a section of a Hub showing our **Slope-Shouldered Spoke**, which we use in our Wheels. This makes the most solid and substantial Wheel possible; saves refilling, and is strong where the square tenon is weak.



A large and complete line of **THREE-SPRING, FOUR-SPRING and PLATFORM SPRING WAGONS**, with and without Tops, Top and No Top Buggies and Carriages of all Descriptions.

Send for Illustrated Catalogue.

Studebaker Bros. Manufacturing Co.,

Repository, 201 and 203 Market St., Cor. Main, S. F.

Studebaker Bros. Manufacturing Co.,

Repository, 201 and 203 Market St., Cor. Main, S. F.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDS

Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
607 Sansome Street, S. F.**GOOD SEED**


Of best varieties, true to name, is the basis of Nice Vegetables, Beautiful Flowers, and BIG Farm Crops. All seed is tested for vitality and purity, and only the BEST offered. We are the largest farmers' seed growers and seed dealers anywhere. Spring Catalogue of over 2,000 varieties of Flower, Vegetable, Farm and Tree Seed, FREE. Catalogue of Flowering Bulbs and Plants for house and garden, FREE. Sibley's Farmers' Almanac, \$500 prize essays on special crops, Northern or Southern edition, 10 cts. Grain and Farm Seeds Manual—history, descriptions, culture of best Grains, Grasses, Potatoes, 10 cts. HIRAM SIBLEY & CO., Seedsmen, CHICAGO, Ill. or Rochester, N. Y.

TURNER'S NURSERIES,

San Bernardino, - - - Cal.

Box 275.

Fruit and Ornamental Trees

OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.**GUARD AGAINST****PHYLOXERA**

By Planting Resistant Vines.

I offer for sale all the leading varieties of Riparia, Rupestris and Astivalis, especially Lencir, Hertemont and Elvira.

Price List and Circular Sent on Application.

Stock guaranteed true to name and in good condition. Orders should be sent early, as the stock is limited. For particulars apply to

GEORGE HUSMANN,
Napa Cal.**PEPPER'S NURSERIES.**

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. B. PEPPER, Petaluma, Sonoma County, Cal.

JAMES HANNAY'S NURSERIES.

East San Jose, Cal.

For sale, a large and general assortment of healthy well grown Fruit Trees, comprising Apple, Pear, Peach, Plum, Prune, Apricot, Cherry, etc., of all the leading varieties now mostly in demand. Address,

JAMES HANNAY, San Jose, Cal.

CHOICE FRUIT ROOT GRAFTS!!

Complete assortment of Apples, Pears, Plums, Prunes, Cherries, Quinces, etc. Send for free Price List. Now is the time to order. Address,

PHOENIX BROS. & EMERSON,

Nurserymen,

BLOOMINGTON, - - - ILLINOIS.

PASADENA NURSERIES.

A General Assortment of Semi-Tropical and Northern Fruit Trees.

A fine assortment of Canning Varieties and those suited to this climate. Also Forest Trees, Hedge Plants and Ornamental Shrubbery. Address,

BYRON O. CLARK & CO.,
Pasadena, Los Angeles Co., Cal.**CEO. F. SILVESTER,**

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.**APRICOTS.**—Royal, Moorpark, etc.**NECTARINES.**—Hardwicke, New White, etc.**PEARS.**—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.**PLUMS.**—Yellow Egg, Washington, Jefferson, etc.**PRUNES.**—Petite, German, Hungarian, etc. Also,**TREES IN THE DORMANT BUD.**

—Of all the—

Standard Varieties of Fruits.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

W. R. STRONG & CO.,**WHOLESALE SEED MERCHANTS.**

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc., can be obtained at our establishment. Fresh, Pure and Genuine, at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Dealers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customers attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,
Sacramento, Cal.**ORANGE HILL NURSERIES,**
Penryn, Placer Co., Cal.**W. R. STRONG & CO., Proprietors,**
Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Priced catalogue on application. Address,

W. R. STRONG & CO., - - - - - Sacramento, Cal.**GARDEN SEEDS.****THOS. MEHERIN,**

Importer, Wholesale and Retail Dealer in

SEEDS, TREES AND PLANTS,

Alfalfa, Red and White Clover.

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass, Red Top, etc.

Also a large and choice collection of **FRUIT AND ORNAMENTAL TREES.**

BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES.

Budding and Pruning Knives, Greenhouse Syringes, Hedge and Pole Shears.

Price List Ready Jan 1st.

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for R. D. Fox's Nursery.**ALBERT DICKINSON,**

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, etc.

POP CORN.

WAREHOUSES:

115, 117 & 119 Kinzie St.

104, 106, 108 & 110 Michigan St.

Office, 115 Kinzie St.,

CHICAGO, ILL.**SEEDS****MUSCAT, GREY RIESSLING ZINFANDEL**
and **BLACK MALVASIA.**

Cuttings of the above varieties of Grapevines will be furnished in lots to suit purchasers, and delivered on the cars at Oakville, Napa Co., for Four Dollars (\$4) per 1,000. Apply to

F. A. BUCK, Oakville, Napa Co., Cal.Also a limited amount of Cuttings from
Imported Rooted Vines

From the Champagne District of France (Eperney and Marouil-sur-Ay). The Grapes from these vines sell at the place of their production at from 20 to 30 cents per pound. Price of Cuttings, \$20 per 1,000.

CORRESPONDENCE is cordially solicited from reliable sources upon all topics of interest and value to our readers.

PACIFIC COAST HEADQUARTERS

—FOR—

Hansell (Extra Early Red) Raspberry, Fay's Prolific Currant, James Vick and Manchester Strawberries.

All the best Small Fruits. New Illustrated Catalogue free. Address,

C. M. SILVA & SON,

Newcastle, Placer Co., - - - Cal.

W. M. Williams' Semi-Tropical and General Nurseries.**FIVE HUNDRED THOUSAND TREES** for sale of the following varieties: Apples, Peaches, Pears, Prunes, Plums, Apricots, Nectarines, Cherries, Figs, etc., of standard varieties; rose free from scale or other noxious insects. Also, Grape Roots and Cuttings of all leading Raisin and Wine varieties, Seedless Sultanina, Muscatella, etc. W. M. WILLIAMS, P. O. Box 175, Fresno City, Cal.**Dewey & Co.** { 252 Market Street, } Patent Agts**SANTA CLARA NURSERIES,**

San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurel.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Repluopsis orata.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Balsam Fir.....	2 to 3 "
Blue Gums (transplanted).....	2 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of

Miscellaneous Fruit Trees, Small Fruits, Ornamental Shade Trees, Evergreens, Roses, Bulbs, Greenhouse Plants, Etc., etc.

RICHARD D. FOX,

San Jose, Cal.

THOS. MEHERIN, Agent,

516 Battery Street, San Francisco.

ROCK'S NURSERIES.**TREES!****For Sale,**

A LARGE ASSORTMENT OF

Thrifty, Well-grown Fruit, Shade and Ornamental Trees.

NEW AND RARE EVERGREENS,

Palms, Bamboos, Shrubs, Roses, etc. Small Fruits, including a large variety of Grapevines, for table, for wine and for raisins.

STRAWBERRIES

Of newest and best varieties for market and for profit

Descriptive Catalogues will be sent as follows:

No. 1. Fruits, Grapevines, Berries, etc. 3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc. 3 cts.**JOHN ROCK,**

San Jose, - - - California

FRUIT TREES.**100,000 Fruit Trees**

IN DORMANT BUD,

For sale at Low Prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,**PEACH, PLUM and****NECTARINES.**

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties.

Send for Catalogues and Prices to

C. W. REED & CO.,

Sacramento, Cal.

THE O. W. CHILDS NURSERY.

FOR SALE.—A first-class, thrifty, healthy stock of Temperate Climate and Semi-Tropic Fruit Trees, Apricot, Peach, Pear, etc., one year old. Orange and Lemon one to four years from bud. Also Seedling Orange Trees.

Semi-Tropic Tree Culture a Specialty.
Price List Mailed Free. O. W. CHILDS, Proprietor.Address, **THOS. A. GAREY, Agent,**
P. O. Box 452, Los Angeles, Cal.**RIVER BANK NURSERIES.**

The undersigned offers for sale a fine assortment of Apples, Pears, Cherries, Peaches, Plums, Prunes, Apricots, Grapes, Small Fruits, Shade Trees, Evergreens, Roses, Shrubbery and Greenhouse Plants, etc.

NURSERY corner of Twelfth Street and Berryessa Road, and on Milpitas Road, adjoining John Rock's Nurseries.

L. F. SANDERSON, San Jose, Cal.**TREES AND SEEDS TRUE TO NAME**

APPLES—4 ft. 18 to 20; 5 ft. 20 to 25; 6 ft. 25 to 30; 7 ft. 30 to 35; 8 ft. 35 to 40; 9 ft. 40 to 45; 10 ft. 45 to 50; 11 ft. 50 to 55; 12 ft. 55 to 60; 13 ft. 60 to 65; 14 ft. 65 to 70; 15 ft. 70 to 75; 16 ft. 75 to 80; 17 ft. 80 to 85; 18 ft. 85 to 90; 19 ft. 90 to 95; 20 ft. 95 to 100; 21 ft. 100 to 105; 22 ft. 105 to 110; 23 ft. 110 to 115; 24 ft. 115 to 120; 25 ft. 120 to 125; 26 ft. 125 to 130; 27 ft. 130 to 135; 28 ft. 135 to 140; 29 ft. 140 to 145; 30 ft. 145 to 150; 31 ft. 150 to 155; 32 ft. 155 to 160; 33 ft. 160 to 165; 34 ft. 165 to 170; 35 ft. 170 to 175; 36 ft. 175 to 180; 37 ft. 180 to 185; 38 ft. 185 to 190; 39 ft. 190 to 195; 40 ft. 195 to 200; 41 ft. 200 to 205; 42 ft. 205 to 210; 43 ft. 210 to 215; 44 ft. 215 to 220; 45 ft. 220 to 225; 46 ft. 225 to 230; 47 ft. 230 to 235; 48 ft. 235 to 240; 49 ft. 240 to 245; 50 ft. 245 to 250; 51 ft. 250 to 255; 52 ft. 255 to 260; 53 ft. 260 to 265; 54 ft. 265 to 270; 55 ft. 270 to 275; 56 ft. 275 to 280; 57 ft. 280 to 285; 58 ft. 285 to 290; 59 ft. 290 to 295; 60 ft. 295 to 300; 61 ft. 300 to 305; 62 ft. 305 to 310; 63 ft. 310 to 315; 64 ft. 315 to 320; 65 ft. 320 to 325; 66 ft. 325 to 330; 67 ft. 330 to 335; 68 ft. 335 to 340; 69 ft. 340 to 345; 70 ft. 345 to 350; 71 ft. 350 to 355; 72 ft. 355 to 360; 73 ft. 360 to 365; 74 ft. 365 to 370; 75 ft. 370 to 375; 76 ft. 375 to 380; 77 ft. 380 to 385; 78 ft. 385 to 390; 79 ft. 390 to 395; 80 ft. 395 to 400; 81 ft. 400 to 405; 82 ft. 405 to 410; 83 ft. 410 to 415; 84 ft. 415 to 420; 85 ft. 420 to 425; 86 ft. 425 to 430; 87 ft. 430 to 435; 88 ft. 435 to 440; 89 ft. 440 to 445; 90 ft. 445 to 450; 91 ft. 450 to 455; 92 ft. 455 to 460; 93 ft. 460 to 465; 94 ft. 465 to 470; 95 ft. 470 to 475; 96 ft. 475 to 480; 97 ft. 480 to 485; 98 ft. 485 to 490; 99 ft. 490 to 495; 100 ft. 495 to 500; 101 ft. 500 to 505; 102 ft. 505 to 510; 103 ft. 510 to 515; 104 ft. 515 to 520; 105 ft. 520 to 525; 106 ft. 525 to 530; 107 ft. 530 to 535; 108 ft. 535 to 540; 109 ft. 540 to 545; 110 ft. 545 to 550; 111 ft. 550 to 555; 112 ft. 555 to 560; 113 ft. 560 to 565; 114 ft. 565 to 570; 115 ft. 570 to 575; 116 ft. 575 to 580; 117 ft. 580 to 585; 118 ft. 585 to 590; 119 ft. 590 to 595; 120 ft. 595 to 600; 121 ft. 600 to 605; 122 ft. 605 to 610; 123 ft. 610 to 615; 124 ft. 615 to 620; 125 ft. 620 to 625; 126 ft. 625 to 630; 127 ft. 630 to 635; 128 ft. 635 to 640; 129 ft. 640 to 645; 130 ft. 645 to 650; 131 ft. 650 to 655; 132 ft. 655 to 660; 133 ft. 660 to 665; 134 ft. 665 to 670; 135 ft. 670 to 675; 136 ft. 675 to 680; 137 ft. 680 to 685; 138 ft. 685 to 690; 139 ft. 690 to 695; 140 ft. 695 to 700; 141 ft. 700 to 705; 142 ft. 705 to 710; 143 ft. 710 to 715; 144 ft. 715 to 720; 145 ft. 720 to 725; 146 ft. 725 to 730; 147 ft. 730 to 735; 148 ft. 735 to 740; 149 ft. 740 to 745; 150 ft. 745 to 750; 151 ft. 750 to 755; 152 ft. 755 to 760; 153 ft. 760 to 765; 154 ft. 765 to 770; 155 ft. 770 to 775; 156 ft. 775 to 780; 157 ft. 780 to 785; 158 ft. 785 to 790; 159 ft. 790 to 795; 160 ft. 795 to 800; 161 ft. 800 to 805; 162 ft. 805 to 810; 163 ft. 810 to 815; 164 ft. 815 to 820; 165 ft. 820 to 825; 166 ft. 825 to 830; 167 ft. 830 to 835; 168 ft. 835 to 840; 169 ft. 840 to 845; 170 ft. 845 to 850; 171 ft. 850 to 855; 172 ft. 855 to 860; 173 ft. 860 to 865; 174 ft. 865 to 870; 175 ft. 870 to 875; 176 ft. 875 to 880; 177 ft. 880 to 885; 178 ft. 885 to 890; 179 ft. 890 to 895; 180 ft. 895 to 900; 181 ft. 900 to 905; 182 ft. 905 to 910; 183 ft. 910 to 915; 184 ft. 915 to 920; 185 ft. 920 to 925; 186 ft. 925 to 930; 187 ft. 930 to 935; 188 ft. 935 to 940; 189 ft. 940 to 945; 190 ft. 945 to 950; 191 ft. 950 to 955; 192 ft. 955 to 960; 193 ft. 960 to 965; 194 ft. 965 to 970; 195 ft. 970 to 975; 196 ft. 975 to 980; 197 ft. 980 to 985; 198 ft. 985 to 990; 199 ft. 990 to 995; 200 ft. 995 to 1000; 201 ft. 1000 to 1005; 202 ft. 1005 to 1010; 203 ft. 1010 to 1015; 204 ft. 1015 to 1020; 205 ft. 1020 to 1025; 206 ft. 1025 to 1030; 207 ft. 1030 to 1035; 208 ft. 1035 to 1040; 209 ft. 1040 to 1045; 210 ft. 1045 to 1050; 211 ft. 1050 to 1055; 212 ft. 1055 to 1060; 213 ft. 1060 to 1065; 214 ft. 1065 to 1070; 215 ft. 1070 to 1075; 216 ft. 1075 to 1080; 217 ft. 1080 to 1085; 218 ft. 1085 to 1090; 219 ft. 1090 to 1095; 220 ft. 1095 to 1100; 221 ft. 1100 to 1105; 222 ft. 1105 to 1110; 223 ft. 1110 to 1115; 224 ft. 1115 to 1120; 225 ft. 1120 to 1125; 226 ft. 1125 to 1130; 227 ft. 1130 to 1135; 228 ft. 1135 to 1140; 229 ft. 1140 to 1145; 230 ft. 1145 to 1150; 231 ft. 1150 to 1155; 232 ft. 1155 to 1160; 233 ft. 1160 to 1165; 234 ft. 1165 to 1170; 235 ft. 1170 to 1175; 236 ft. 1175 to 1180; 237 ft. 1180 to 1185; 238 ft. 1185 to 1190; 239 ft. 1190 to 1195; 240 ft. 1195 to 1200; 241 ft. 1200 to 1205; 242 ft. 1205 to 1210; 243 ft. 1210 to 1215; 244 ft. 1215 to 1220; 245 ft. 1220 to 1225; 246 ft. 1225 to 1230; 247 ft. 1230 to 1235; 248 ft. 1235 to 1240; 249 ft. 1240 to 1245; 250 ft. 1245 to 1250; 251 ft. 1250 to 1255; 252 ft. 1255 to 1260; 253 ft. 1260 to 1265; 254 ft. 1265 to 1270; 255 ft. 1270 to 1275; 256 ft. 1275 to 1280; 257 ft. 1280 to 1285; 258 ft. 1285 to 1290; 259 ft. 1290 to 1295; 260 ft. 1295 to 1300; 261 ft. 1300 to 1305; 262 ft. 1305 to 1310; 263 ft. 1310 to 1315; 264 ft. 1315 to 1320; 265 ft. 1320 to 1325; 266 ft. 1325 to 1330; 267 ft. 1330 to 1335; 268 ft. 1335 to 1340; 269 ft. 1340 to 1345; 270 ft. 1345 to 1350; 271 ft. 1350 to 1

AGES AHEAD OF ALL OTHERS!

Delivered, Freight Paid, Upon Receipt of Price, to any Railroad Station or Boat Landing on the Coast.

JUST OUT.

The New High Arm, Self Threading, Light Running

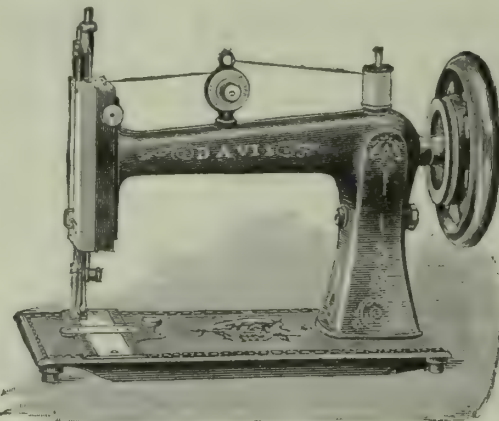
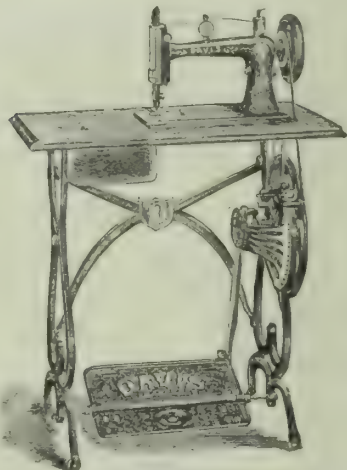
“DAVIS” SEWING MACHINE.

Does All Kinds of Work Without Basting.

No. 1.
FAMILY MACHINE,
\$40.

Plain Table, One
Drawer, no Cover.

No. 2.
Same as No. 1, with
Cover.
\$43.

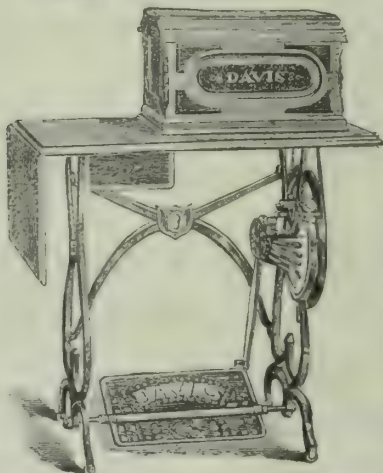


(MACHINE HEAD.)



No. 10.
FAMILY MACHINE,
As Represented
in this Cut,
\$60.

No. 3.
FAMILY MACHINE,
Drop leaf Table,
Cover and
Drawer,
\$47.50.



The Following Accessories are Furnished FREE
with Each Machine, viz:

REFLER, TUCKER, BINDER, TWO HEMMERS, BRAIDER,
QUILTER, GAUGE AND SELF-SEWER BRAIDER SCREW,
GAUGE SCREW, OIL CAN (filled), TWO SCREW-DRIVERS,
SIX BOBBINS, TWELVE NEEDLES and the most complete
and fully Illustrated Book of Directions ever
printed, by which the use of the machine in all varieties
of work can readily be understood and learned without
the aid of an instructor.

Every Machine Warranted to Give Entire Satisfaction.

THE LIGHTEST,
THE SIMPLEST,
THE LATEST,
THE BEST.

No Holes to Thread from the Spool to the
Eye of the Needle.

NO FREIGHT TO PAY.

Select the Style You Prefer and
Order Direct if I have no Agent in
Your Place.

MARK SHELDON,

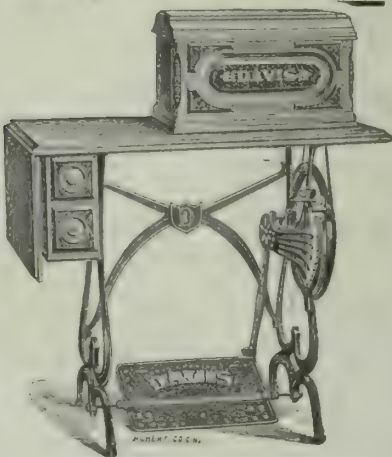
GENERAL AGENT,

9 11 & 13 First St.,
San Francisco, Cal.

GIVE SHIPPING DIRECTIONS PLAINLY.

DELIVERED, FREIGHT PAID, UPON RECEIPT OF PRICE.

No. 4.
FAMILY MACHINE,
Drop Leaf Table,
Cover and Nest of
Two Veneered
Drawers,
\$50.



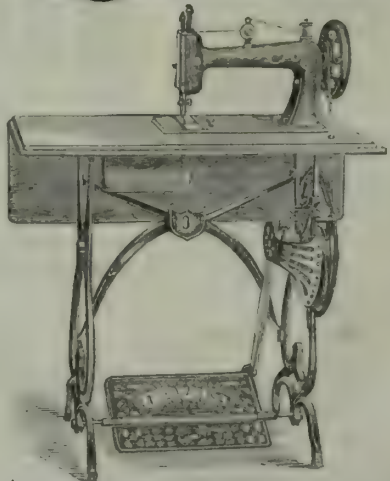
No. 8.
FAMILY MACHINE,
As Represented
in this Cut
\$55.



No 9
Open Cabinet
FAMILY MACHINE,
As Represented
in this Cut,
\$75.



No. 6.
FULL CABINET
FROM
\$90 to \$110.



Manufacturing
MACHINE
FOR
Tailors,
\$50.

PACIFIC RURAL PRESS

CHRISTMAS EDITION—TWENTY-FOUR PAGES.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, DECEMBER 23, 1882,

Number 26



GATHERING THE HOLLY.

CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

Oranges, Olives and Huasco Grapes.

EDITORS PRESS:—On a recent trip to Pasadena my attention was drawn to the successful management of Mr. Charles E. Brown, the superintendent in charge of C. T. Hopkins' fruit farm "Olivewood" (situated on the upper tract of the Lake Vineyard Land and Water Association, near Pasadena), in completely redeeming from smut and scale the 2,100 orange and lemon trees on that plantation.

In 1878 the Mutual Orchard Co. of Oakland planted by contract some 210 acres of land in that tract with orange and lemon trees. The work, as usual with such jobs, was very badly done, and in November, 1879, Mr. Brown was placed in charge of a portion of the orchard, with instruction to use his best endeavors to save what he could of it. After a year of successful cultivation, replanting, etc., the company divided the land among the members, and Mr. Brown remained in charge of the 30 acres of orange orchard belonging to Hopkins, and of 50 acres of irrigated land adjoining, which were afterwards set out with imported pickle (Picholine) olives and raisin grapes. But, though constant and thorough cultivation, irrigation, gopher and rabbit extermination and replanting had done much to save the orange trees, they continued black with smut and scale, and made in consequence but unsatisfactory growth. Receiving orders from the owner to find some means of ridding the trees of these pests, or to put the land to other uses, Mr. Brown resolved on heroic treatment. During the summer of 1881 heavy pruning was resorted to, many of the trees losing from half to three-fourths of their foliage. This work was carefully done, the limbs being cut off close to the trunk, shaved off smooth, and the wounds at once covered with red lead paint. The sun and air being thus admitted freely to all the tops that remained, the trunks and branches were thoroughly whitewashed with lime. The following winter was made memorable by several sandstorms of unusual violence. These trees, being comparatively unprotected by leaves, received on their bare branches the full force of the sand blast, which had the effect of completely killing and clearing off every particle of smut and scale on the sides of the stems and branches exposed to the wind—an effect likewise produced on other trees in the vicinity, but to an imperfect degree, because, having all their natural tops on them, their heavy foliage protected the insects and smut. But, though Mr. Hopkins' trees in the spring of 1882 looked as if the fire had passed over them—indeed, not worth any further effort—Mr. Brown proceeded to finish their cure by giving them a liberal dose of whale oil soap suds, which, applied with whitewash brushes in every crack and cranny where insects love to conceal themselves and their eggs, gave both the pests their *coup de grace*. This was done in July. During the season abundant irrigation and the continual use of the cultivator have done their part in producing a clean, healthy, vigorous growth, which has astonished all who have watched the fate of that plantation. Not a sign of smut now remains, and not a living scale can be found on any of the trees treated by Mr. Brown. The stems and branches are clean, smooth and free from bark-bird. The new growth is stout, the leaves large, and by another year the trees, which will then be ten years old from the seed, will doubtless begin to bear large, clean fruit, such as will command the highest price in the market.

To illustrate the vigor of the last six months' growth, Mr. Brown shows a shoot that made its appearance in June last on the stump of a seedling about two inches in diameter that had been broken off by the sand storm. That shoot had grown eight and one-half feet between June 15th and December 8th.

Mr. Brown has also achieved a success in grape planting worthy of the attention of vineyardists. By carefully leveling 30 acres of badly hog-wallowed land, subduing the soil by taking off two crops of hay, then plowing and subsoiling, and planting his cuttings with the spade, he has not lost over five per cent. the first year; and the loss will not be perceptible next season, because, by planting a few thousand cuttings in nursery at the time of setting the vineyard, he has rooted vines all ready to take the place of those that failed.

The 1,100 Picholine olives planted on the place constitute a feature that we expect to hear from in the near future. They constitute the only large orchard of imported pickle olives in the State, so far as we are aware. They are the product of two plants brought by the late lamented enterprising and public-spirited B. B. Redding from Rome, Italy, in 1872. Mr. Redding started thence with a dozen plants in the fall of 1871, intending to bring them through to California. With great care he brought them through France and England in the winter season, notwithstanding their sensibility to frost; but, being snow-bound in March on the Union Pacific, the ten plants left at the end of the car were frozen, by the carelessness of the porter in allowing the stove fire to go out. But Mr. Redding had taken two of them into

his berth, and these were saved by the heat of his body. He gave them to Peter Kunz, a German nurseryman in Sacramento, telling him to make what he could out of them. By cutting off little slips from the tops and propagating them in hot-beds Mr. Kunz succeeded in raising some 1,200 trees, all of which were bought by Mr. Hopkins in 1880 and set out at "Olive-wood" by Mr. Brown. These are now in their third year. They are perfectly free from smut and scale, are vigorous and thrifty, and though now undergoing severe pruning to change them from a thick bush to a tree, their owner places a higher value on them than on any other portion of his promising plantation.

Mr. Hopkins has also succeeded in acclimatizing the celebrated Huasco grape, from Peru. This is the grape from which the "Pisco" brandy and the finest raisins in the world are made. He has about 90 stands of this grape now hibernating with other grapes, after a steady growth of a year from November, 1881, when they arrived all in fresh leaf from Iquiqui, that month being a spring month south of the equator. The result of this experiment will be looked for with interest by all raisin culturists.

FLORICULTURE.

Dutch Bulbs.

At the last meeting of the State Horticultural Society an address on Dutch bulbs was delivered by David Tisch, of Oakland. He said: It gives me great pleasure to talk on Dutch bulbs. The reason I selected the subject was because we are now in the right season, and it is worth while to cultivate them for the purpose of beautifying our rooms. The firm of E. H. Krelage & Son, in Holland, exports \$100,000 worth of bulbs per annum, and there are other firms which bring the amount up to \$1,000,000 per year. I wrote to New York for the purpose of ascertaining the extent of exportation of the bulbs from Holland. Mr. Roax, the agent of Krelage & Son, informed me by letter that it amounts to \$3,000,000 per year. James Hutchison, of Alameda county, informed me that he has grown successfully for many years the following bulbs: gladiolus, hyacinths, Japanese lilies, cyclamers, ixias, sparaxis, tulips, narcissus, jonquilles, scillas, star of Bethlehem, ranunculus, anemones, amrylles, snow drops, crocus, tube roses, vellotas, oxalis, nerines, Watsonias. Also double paeonies, dahlias and other tuberous flowers. As soon as the bulbs are grown in Holland they are shipped to New York, and very seldom any firm sends direct to Holland for them. We get them from New York.

Ladies come to me in Oakland and say, "We can't get the bulbs to bloom." I contend that we cannot only get them to bloom here, but we can propagate them. We have the soil and the climate. Buy them in the right season and plant them in the right season, and they will bloom without doubt. People plant them in the wrong kind of soil, and they get too much water. They should be planted out in beds. Make a bed in the form of a circle, and if there is a lawn put a sack on the grass, throw up the ground on the sack, dig up the soil a foot deep, and if the ground is stiff mix with light sandy soil. Cow manure is the best for filling in, four inches deep. You can use horse manure or rich pit. Make a covering of three inches of heavy, sandy soil, set your bulbs, put a stick on each bulb as a mark, and cover them up with light soil.

I will now speak on bulb planting in pots. Get a pot five inches deep in which there is a hole in the bottom, place a piece of crockery on the hole and then fill in about two inches with well decayed manure; then fill in the soil, set your bulb on the surface, and sink the pot down in the ground about four inches deep. No bulb should be exposed to the light. When the bulb has sprouted three inches long, place it in a shady place for a day or two and then move it to a warm, sunny window. In about ten days or two weeks it will show its flower to perfection. If you have a dozen don't take them all out at once; take out three or four a week if you have a dozen. If you take them all out at once they will bloom at the same time. The cost of this will not exceed two dollars. F. Delger, of Oakland, has cultivated the Lily of the Valley, and he would not to-day take \$5,000 for them. He has grown from three to four pounds of seed from them. Through hybridizing in Germany they have succeeded in getting double flower Lily of the Valley, and Mr. Delger may succeed in raising some new variety of this beautiful plant. You can get in New York clumps at five dollars per dozen. Each plant successfully grown will produce one dollar's worth of flowers, if brought in bloom in the right season when flowers are scarce. I contend that we can grow Lily of the Valley in this State successfully, and we can grow bulbs in Alameda county successfully. A first-class bulb is worth from 50 cents to one dollar now; when they come here they are in third hands. I maintain that the first-class hyacinth bulb never reaches here. The lilies of Japan are far cheaper than we can get them in Holland or New York. A hyacinth bulb will produce from five to six new bulbs per year. In conclusion Mr. Tisch said that if a man of knowledge took the mat-

ter in hand he would make a success of the business. He must, however, be a lover of flowers. He paid a glowing tribute to the flower and criticised the action of some of our rich men who spend \$20,000 or more for a nice house or race horse, but neglect to beautify their grounds at a small expense.

R. J. Trumbull advised all to plant bulbs as early as possible. October is a favorable month in this State. If planted in ordinary soil and a heavy rain comes they may decay, but they can be planted here at any time, if proper attention is paid to preparing and draining the soil. In ordinary rich soil cover the hyacinth one-half inch, moistened moderately. In nine cases out of ten good flowers can be obtained. Take a common hyacinth and put it in a glass containing water with a piece of charcoal, put it in a dark place until the roots are well grown and then bring gradually into the light, and in a month or so you have a nice flower for the table. He did not believe in burying the pot four inches deep.

Mr. Tisch said that he was a practical man on the subject. A pot could be placed in a dark room, but a good flower could not be obtained.

Mr. Trumbull thought a more simple method of culture should be introduced.

W. J. Klee, of the University, said: The method recommended by Mr. Tisch is the one followed in the East successfully. There is no trouble to cover the pots. One hundred pots can be covered in five minutes. California should be a good growing country. The great object on to bulbs is the decaying, owing to a want of proper drainage and proper soil. It is a great wonder to me that some gardener does not cultivate them. I would like to know if bulbs are grown in the southern part of the State.

Mr. Trumbull said that he had seen fine specimens grown in this State, but there was no market for them in California. They could not be grown here to compete with Europe and the South. He thought that the bulb business was very risky. Less than 5,000 bulbs are consumed in California in a year. An acre of bulbs will supply the State for over six years.

The subject was continued for discussion at the next meeting, and Dr. A. Kellogg was invited to address the society on native flowering bulbs.

The Bulb Garden.

[Written for the RURAL PRESS by JEANNE C. CARR.]

The other day in passing the home of one of those old-fashioned angels, one of those low-roofed, deep-windowed houses which are giving way on every side to modern improvements, I saw along the garden walk a yard-wide border of blooming "What?" I asked a little maid swinging on the gate; "what do you call those pretty flowers?" "Why," she said, with wide open eyes, "don't you know Chinaman's lilies?" and at once, with the old-fashioned hospitality, she pulled a great handful of them. Since the Potter garden in Oakland was cut up and built over I had not seen such a spread of Narcissus; and until that moment I had not realized that the spring is here.

Some Californians long for a more marked change of the seasons, and one delightful way to obtain it is to plant a bulb garden. Just where one can look into it from the pleasantest window of the household room; there should be a large bed devoted to bulbs. This is not necessarily a costly luxury, though in Holland it is the fashion to make them so; and nowhere out of California can the beauty of such a garden be made to cover so many months of the year.

A bank against the south side of the house which is somewhat shaded by trees is a very suitable place for bulbs. The taller growing kinds should be planted next the wall, and the lowest at the outer edge. Suppose we begin with Ornithogalum, which has such pretty grassy leaves, for the outermost. Next to it plant pink oxalis; then snow drops or yellow crocus, or 'Daffydown dillies;' then the blue hyacinth, and so on, band after band of color, until the ground is full.

Another side of the house might be given up to California bulbs alone. Nothing that we can import or acclimate can surpass the delicacy and richness of our natives. There ought to be a representative collection on the University grounds. There was formerly a most interesting one at Nolan's gardens, on Telegraph avenue, Oakland, to which Mr. Bolander and Dr. Kellogg had generously contributed from their botanical treasures. The Californians are generally a little later than the imported bulbs, though I have picked yellow bells at Sisson's from the edge of the snow. I said our natives were equal to the foreign species. Compare *Brodiaea* in cultivation with *Agapanthus*, and *Brevortia coccinea* with the cultivated crown imperial, and our squill with the European, and you will agree with me. When Prof. Wood found *Brevortia* for the first time in Shasta county, he felt richer than if he had found a bonanza, and named her Ida Maia, for his daughter. This plant gives a fine effect planted with the *Brodiaea laza* and *grandiflora*. The wild fritillarias or crown imperials of this coast are a captivating family. We have ten species, of which *recurva* is the prettiest, wearing a scarlet coat with a yellow lining. This is prettily checked off with scarlet, the checks so regular as to seem almost artificial. The crown of stiff leaves makes it appropriate for rock work. Again we have an *Erythronium* that is as graceful as a fairy's wand growing abundantly in Yuba county, and thence northward. This

sister of the "dog-tooth violet" or adder tongue of the Eastern woods is more graceful and open, many flowered as are the tinier orange and purple kinds. And we have tulips in all our wild pastures, green, purple, yellow and blue, in all 25 well defined species. No one (hardly) thinks of cultivating, though every woman exclaims, "How beautiful!" when she finds them or hears them called by their Spanish name, "Mariposa." Mr. J. B. Hickman, of Monterey county, and Mr. Joseph Clark, of Castro, have collected quantities of their bulbs for Eastern and foreign florists, and could no doubt supply anyone desirous of growing them. The California lilies are peerless, unless we except the Japanese, and I prefer the Washington lily to that. I have written often of them, and this time pass them by to mention some of the bulbs which our dealers furnish at such prices as bring them within the reach of all. The Oxalis, already spoken of, is a general favorite. O. *Floridunda* later and many-flowered from a single stem. O. *Lasiandra* is very showy, bearing a head of 20 or more bright crimson blooms. While in Sacramento I bought at a sale of Mr. Hutchinson's the hoop petticoat narcissus, and esteemed it greatly—so did the red ants, the most persistent enemies of my bulbs. These pests seem to enjoy the sweet, juicy canes of almost all choice plants, and are hard to meet on their own ground. The large jonquille is among the loveliest of early spring bulbs; but my best beloved is the dear old narcissus porticus. It is the only waxen-white blossom which has a line of pure scarlet running along its inner edge; besides, the other narcissi and jonquills have a cloying fragrance; this is like that of gardenia or cape jasmine. The combination of sweetness produced when the post's narcissus is grown in a bed of blue grape hyacinth is not likely to be forgotten by anyone who has enjoyed it.

Another precious bulb, not often seen in California collections, is St. Bruno's lily, often called by its botanical name, "paradisaea." It grows from one to two feet high, and is crowned in the early summer with a large cluster of fragrant, delicate white flowers, each petal of them tipped with green. A small frame, in which Mesembryanthus or flowering Russians can be started is an almost necessary adjunct of the bulb garden, as they can be planted among the bulbs when these go to sleep without injury to them. A light dressing of earth and manure should precede this later planting.

A few pots of Aloma make a pretty covering for the nakedness of the dormant bulb garden.

Any of the plants which derive most of their support from the air answer this purpose, but verbenas and creeping myrtles are almost certain to destroy the bulbs by abstracting all the nourishment from the soil.

What prettier holiday present could be offered than a set of hyacinth glasses and a choice selection of the bulbs? A clear glass dish, half filled with Chinaman's lilies, is no mean gift. I often wonder why the florists are not patronized as well as the book and bric-a-brac sellers during the holiday season, and am certain that to a lady of refinement the basket or stand of living ferns would be more highly prized than Dresden China or fancy furniture.

Pasadena, Dec. 12, 1882.

METEOROLOGICAL.

Causes of Dry Zones.

"Professor Marsh, at the last Montreal meeting of the American Association for the Advancement of Science, presented a paper from Prof. Guyot on the subject of "Dry Zones," and offered an explanation of the causes of dry zones in both hemispheres which Prof. Loomis had described. The zones were found in the sub-tropical regions, where the rainfall is usually greatest.

The first of these zones appears very generally around the globe between the 28° and 30° of north latitude, beginning in Southern California and continuing in Sahara, Arabia, Afghanistan and across a portion of the Malay peninsula. The second zone he marked on the southern hemisphere, beginning in Peru, appearing again in the Argentine Republic, and again noticeable in South Africa to the north of the Hottentot country, and then in the northern section of Australia.

The cause of these dry zones Prof. Guyot finds in the fact that on the regions in question during the continued dry seasons there is a "descending wind." The counter currents from southwest and northeast cause an ascension of the air at the equator, and these waves, as they may be called, descending again, take up the heat lost in the altitude and are subjected to such a pressure that they give up none of the moisture they contain. This accounts for the fact that although these waves are frequently cloud-laden, there is no precipitation.

A discussion of the paper followed, in which Prof. Hunt, of Montreal, Prof. Brown and Prof. Newberry gave isolated facts within their personal experience which tended to strengthen the views advanced by Prof. Guyot.

THE SEAT OF ELECTRICITY.—M. Spring, of the Belgian Academy of Sciences, concludes that the seat of the electricity of storms is not, as generally admitted, in the moist region of the atmosphere, but in the cold and dry superstratum.

HORTICULTURE.

The Fruit Growers' Convention.*

Full Reports of Addresses and Discussions.

[By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS.—EDS. PRESS.]

[CONTINUED FROM LAST WEEK'S RURAL PRESS.]

Mr. Haines: In alluding to the defects of the law, I certainly consider that we have approached a subject that is indeed most interesting to this convention. I have noticed the operation of the law in this county, and I certainly have noticed defects in it. If the law is constitutional, the law provides that the Commissioners shall inspect the orchards of the county. Now, we all know, as sensible individuals, that it is useless to inspect one orchard and to omit another. Whenever the Commissioners attempt to inspect an orchard it should be inspected thoroughly. They should inspect it as thoroughly as though there was a devastating plague there. No little inspection would suffice in that matter; and then they should inspect those orchards in the same manner that the assessor will assess your property. They should go all through the county, and through every orchard, and to every isolated tree which has been abandoned, and inspect it. It should be their duty, and if they are gentlemen of dignity, and dislike to perform those laborious duties, then they are not the gentlemen for that purpose. In this county the inspection of orchards has been attempted, but many orchards, I do know, have been neglected.

Now, one thing is sure, that in the amendatory legislation which probably we will have enacted at Sacramento, or which we hope to have enacted at Sacramento, there is one further law which must not be neglected; if in that bill it is proposed to have an inspection of orchards, then it should be binding upon those Commissioners to start out and inspect every orchard thoroughly and completely and well—not only to look at it, but make an inspection (and we all know what that means), and various good results will follow. The basis of the present law is that a man must proceed and attempt to destroy these insects, or those trees must come out of the ground. As long as an individual is making an attempt in good faith to kill these insects the Commissioners generally leave him alone. They generally give him advice, and he generally follows that advice. Many mistakes are made, but before any great achievements are accomplished many mistakes are bound to be made. That one feature of the law is absolutely essential, that every tree in the district should be inspected, and thoroughly, and if that one thing is neglected, then the institution, Mr. Chairman, is a failure, because if in the Willows, which is our great fruit growing section, there happens to be one orchard or one isolated tree that the Commissioners fail to inspect, and that tree is loaded with insects and all other trees are clean, you will see what injury will result from that one tree. Therefore, to the law-makers I will say that there is a feature in the present bill which will perhaps be introduced at our next Legislature which is vital to the interests of the horticulturalists, and it should be made binding upon the Commissioners to perform these laborious duties, to see that this inspection is thorough and absolute.

Mr. Owen: I wish to make a remark upon the subject of amending the present law. I think that the appointing power of this Bug Commission, as it is generally termed, should not be in the hands of the Supervisors. I have discovered some instances where the Supervisors have not selected men that were orchardists or that had any knowledge of an orchard, and consequently those interests suffer. I think that the people, the orchardists, should select their men as they do their County Commissioners, and take it out of the hands of the Board of Supervisors. It is frequently the case that our Supervisors, even if they should exercise their best judgment in selecting men for this business, are not qualified to do it, but the orchardists are, and the Legislature should put it in the hands of the orchardists to appoint or elect their own Commissioners to attend to this matter. I think we would be much benefited by an amendment of that kind.

Mr. Cooke: Mr. President, I have not heard much of this discussion, being outside, but I think, to be generally understood by the fruit grower, he should know in what way we had to fight to get such a bill as we did get; probably there is no other person in this hall besides the presiding officer knows what trouble we had to get it; we had to take what would be given to us. The principal objection was to that clause that requires a complaint to be made. The whole argument made against the bill in the Legislature was, that you were going to hurt somebody, and two members in that committee on the Monday previous to the adjournment said they could not agree to that bill unless there was that provision put in. Now, let us see how it works. We have in Sacramento county three Commissioners, who have done their duty for not only 30

but for 90 days, Mr. Cox for 50, Mr. Gammon for 40, and for the smaller district 35, being 20, 10 and 5 days more than here. Take the case of Mr. Holland; he cleaned his orchard fairly; his next neighbor, Mr. Greenlaw, is on the other side of his fence; he came to me and said he would not do anything with his orchard. I told him to write his complaint and I would see to his case, but he says, "Am I going to make a lifelong enemy by doing so?" and declined to do it. We find in Sacramento county just the same trouble. I know that no horticultural Commissioner had a right to go into any man's orchard without there is a complaint made; he has no right to go on to any man's premises; but when there is a complaint made, he can do so. You can go out into Placer county, where my friend the Rev. Mr. Peck is one of the Commissioners, and as faithful a Commissioner as we have in this State, and I believe he told you there has never been a complaint made in his district, which is a very large one.

Mr. Wilson: There have been complaints made to him. I made a complaint about several orchards.

Mr. Peck: They are verbal. I rise to correct a misrepresentation. I distinctly affirm to this convention, and my name is L. R. Peck, that Mr. Wilson never made a legal complaint to me in his life, and he will say so. He met me on the street and said "So and so have not cleaned their orchards," and I immediately called on those men—everyone of them, and I argued with one of them nearly half a day, and he said he would clean his orchard, and said he did it to please me.

Mr. Cooke: That is the trouble; Horticultural Commissioners state there are some individual cases that are neglected. I say with Mr. Owens, that there are some counties where there were persons that were not horticulturalists; but in a majority of cases we had fair representative men, and it was not to be expected under the circumstances that every man that was appointed was a bug hunter, but I say to you, Mr. President, to-day, that there is not a county in the world, or a State in the Union, that has done one-half as much in the last 50 years as California has done in the last 18 months. It is true it is not general, but we have learned of matters that we didn't know anything about, for, I tell you, sir, that six years ago, when I commenced this investigation, I had to go and commences it for myself. I could not get a book in the State library, nor in Sacramento, to tell me anything about it. I had to investigate it for myself.

Mr. Britton: I will ask for information if Mr. Cooke could not find Charles Downing on "The Fruit Trees of America?"

Mr. Cooke: Yes, sir, with about 15 lines on the codlin moth.

Mr. Britton: I will ask if he didn't find some information where the red scale had destroyed the orange orchards of Florida 35 years ago?

Mr. Cooke: Yes, but didn't tell the cure for it.

Mr. Britton: I will ask again if it didn't recommend a potash wash?

Mr. Cooke: I didn't find it. The greatest power I have had in this State to assist me was the PRESS, the Sacramento Union and other papers in the community. Since I have been Horticultural Officer of the State I have never gone to any place but I have been warmly received by the press, and I believe they have done more than any other power to aid us in this work. And I will say to you, sir, that I wouldn't take \$5,000 and go through again the first six months I was in the position. I would go out and see a gentleman, and he would tell me I was nothing but an office-holder and to go and mind my own business. For all that, I will say this, that the work has been going on; there have been Horticultural Commissioners appointed in 21 counties, and if there has been a case where one has neglected to do his duty it has not been altogether on account of dislike for the work, but for fear of injuring his neighbors. But take Santa Clara county. I believe that in the last Fruit Grower's Convention I spoke of it as the most Godforsaken place in the world; but the work done in Santa Clara county to-day has well repaid the State ten times over for the efforts taken. You are curing the scale bug pest that has never been cured in any county before, and Los Angeles county the same way; and we know we can destroy the codlin moth. Now, in other counties we were refused commissioners on the ground that it was not needed, and a very learned Supervisor in one county told me that if we have a full crop of fruit we would get nothing for it, but if we got a third of a crop we would get a good price for it, and therefore wouldn't give us the commissioners. One person then pointed out the law, and he said: "Well, we will give you the commissioner, but we will give you five cents a day for that work." I will tell you why some commissioners don't do their duty. In general it has been well done, but there is one thing, gentlemen, you all know it is very easy to sit in this hall and find fault; it is another thing to go and do the duty. It is easy to find fault and to find people that will criticize the work, but very difficult to find people to do the work, for at best it is very disagreeable work. Now, I am in favor of Mr. Owen's idea of the fruit growers saying who the men shall be, but, unfortunately, the law-making power has to be acknowledged by the power above them, and I question whether you can get it outside of the County Commissioners. In preparing the original bill Mr. Hatch, of Solano, Dr. Chapin and myself sat up one night to 20

minutes past two in the morning, and when we got through if that bill had gone through there would have been none of this trouble; but when it went in before that august body, the Senate of the State of California, they tore it all to pieces, and finally we did get a law, and now we have the experience of two years, I think we can get a good law. We have a Committee on Legislation, and if that committee does its work there will not be a member from Del Norte to San Diego that will not be thoroughly posted on these questions before they get to the Legislature at all; and there should be no difficulty in getting a law passed.

Mr. Pryal: I will ask if reports have been received from the different Commissioners in the State?

Mr. Cooke: I think there is about 13 of the 21 already in. The 1st of December is the time allowed.

Mr. Britton: I would ask a question of Mr. Cooke, if there is any commissioner appointed in the State under the county bill that has tested the constitutionality of that bill or made any effort to do so?

Mr. Cooke: Not so far as I know, for this reason, that we were lacking in one very important element, and that was coin. You will remember that the Commission was not allowed anything but the Horticultural Officer's salary. When the case of Lusk & Co. came up in court the fruit growers of California—at least some of them—came to our relief; and I know of no case where the law was tested, because there was no money; and I know of one case where the District Attorney of the county refused to test it, and that was in Los Angeles county.

Mr. Dwinelle: I want to say for the benefit of the gentlemen who were not here yesterday, who may have misapprehended my reviews of the progress of California, I stated then that California had done more in two years in the matter of disinfecting and legislation on this question than any other State in the Union. Now, I am very glad of the discussion that has been had in regard to this law. Some defects have been pointed out, some misapprehensions, as I consider, have been stated, and some very good suggestions have been brought out. I am very glad indeed to have Mr. Peck state that there is such a thing as courage required in the execution of this law, and you may say in the execution of any other law, and I do not like to say that there is just the radical difference between the State Board and the county Boards. The State Board has done its duty, as it understood it, fearlessly. Its members have put their hands in their pockets and laid down money, obtained subscriptions from one or two places, and they have done all they could to put the machinery in operation to find out whether we had a law, as I understand it (I am not a good lawyer as many present probably) there is a law, the so called county law, which is a good law and can be enforced if any commissioner had the courage to do it, and as Mr. Pryal said, it was not the lawyers that found out the legal defects, but it was the fruit raisers who knew so much more than the lawyers; you are not likely to have any law made which will not require complaint of somebody; as I said yesterday, any fruit grower as well as anybody else can make a complaint, and he can complain of any place, and that place may be a township or two or three townships, and as I then said, he has a right to say that his fruit trees are threatened, and if it is the other end of the county or other end of the State, this all can be brought out in regard to the spread of pests; for if it comes from Austria and infests your orchard, what is the use of saying that the other end of the county does not threaten too. I want to see a better law; I want to see men that, when their vital interests are effected, have got courage enough to make a disturbance, if necessary. When the smallpox comes in or the yellow fever, I want to see them drive it out. It is disagreeable if a man has got the yellow fever or smallpox, but he has got to go to the hospital or be put in quarantine; he has got to do it. Now, as to the question raised by Mr. Gammon as to what objections there were to disinfecting at home, that matter was carefully considered before the State Board attempted to have disinfection done at San Francisco and at other central places. The Board, practical fruitmen, men who are shipping thousands and thousands of boxes, many of them said on the whole that it would be a great deal more expensive to the shipper to do that work at home than it would to have central establishments where it can be done wholesale in town between the commission house and the wharf, and I think that anybody that will figure up for an hour and get the facts and figures as to the proposed tanks and the whole paraphernalia required, will very soon conclude that it takes but a fraction of the cost as done there compared to doing it at home. In the next place, that there was much less certainty of it being done if the boxes were allowed to go home, for the reason that there are holidays to interfere. Boxes go to a station Sunday night or the day before Thanksgiving, or perhaps the day before Thanksgiving comes before Sunday, and then they lie there; men do not haul boxes on holidays or Sundays. They lie there two days, and they have had a long wait in the commission house, and I have heard a man here, a fruit grower, say that he has found those boxes ready to send out the full-fledged moths when they get home; or there may be sickness in the man's family or pressing business, or it runs on, and

for some reason those boxes are neglected. There are many contingencies under which the pest would escape beyond that it is a fact that the pests may be retailed out all the way from San Francisco to their ultimate destination. Now, we admit that there may be more or less, and probably are, in the steamers, but for all that we contend that if the large majority are killed in San Francisco it is a great thing towards disinfection. We will also say that with one exception the transportation companies of this State are with the Board of Horticultural Commissioners heart and hand. They are willing to do anything in their power to stop the pest, for they feel it is cutting into their legitimate business.

Mr. Peck: I want a little more light about this county law. I have been called a good many hard names in my life, but I was never called a coward or a lazy man before. The Professor says the law can be enforced; the best lawyers in Placer county assured me and my colleagues that the law could not be enforced without a written complaint. We have tried to get men to give us a written complaint—men who had been free to complain verbally every time we would meet them on the street. Now, I want to know if that county law can be enforced without a written complaint, and if it can be enforced, how. If it is a complaint to the court, and a trial some time in the course of a year, with a jury, there may be on that jury one man or more who is opposed to the law, and after the Commissioner has expended all the fruits of his orchard for one year, with no one responsible to help him, then the jury disagree or the case is dismissed. Now I consider the law lame. I have the courage to enforce that law if it can be enforced. I want to know how that law can be enforced.

Mr. Dwinelle: The law declares this infested spot to be a nuisance, to be proceeded against as such. Nuisances of all sorts are provided for in the law, and it is the duty of the District Attorney to abate them, and it is not necessary for Mr. Peck, so far as I understand.

Mr. DeLong: I would like to say a word in justification of these Commissioners. As I understand it, the county portion of this law has been decided unconstitutional, or a portion of it. Now, before the Commissioners can proceed they have got to get access to a man's property. Now, I know of a Commissioner that has tried to get access to a man's property and he has been defied. This man who defied him said: "You are a Commissioner. I respect you as a man; I do not respect you as a Commissioner, and you cannot come on my place." Where is he to get his authority? Has he got to go and make a complaint, as his neighbors won't do it? Now, I don't think it is right to blame a Commissioner for not doing his duty, for I think many of them have tried, and tried hard to do it. Speaking of return boxes, my idea is it would be a good idea to have the law so that a man could dip them in San Francisco; not only that, but compel him to dip them again when he got them home. I would be willing to consent to it if it cost me five cents a box, and 10 cents when I got them home—do it in both places. I am suffering, and we will all suffer until we get relief. Dipping in the city won't do; dipping at home won't do, till you see there are free boxes and no return.

Mr. Holt: This convention has appointed a Committee on Legislation, and I understand the duties of that committee to be to work after this convention adjourns, and, if I judge rightly, that committee is going to be a working committee. It is going to take hold of this subject and see what can be done to make a new law or amendments to the present law, so it will be effective. I would like, as a member of that committee, that each fruit grower here present, and whether he be here or not, that is interested in that matter, shall draw up such suggestions in writing that he may wish to make with regard to improvements of the present law, and send them to Mr. Cooke, or to Mr. Tuska, who is a member, and the legal adviser of the committee, so that we may gather all this information together out of which we can make a law or improve the present law so that it can be effective. I would make one more suggestion, and that is that the members of this convention and the fruit growers of this State shall make it a personal matter to see the representatives and Senators from their respective counties, and work with them to see that they get this legislation safely through the Legislature this winter.

Mr. Gish, of Santa Clara: I am a Forty-niner, and I do not know whether I am civilized or not. One thing I do know. I feel a great anxiety to have these pests exterminated; and so far as I am individually concerned, I will do the best I can to exterminate them, and I desire every gentleman who is engaged in cultivating fruit in California to do the same; but I also know that man is a good deal like a pig. Whenever you attempt to drive him he will turn head to. We have on our statute books already laws similar to the one which this convention seems to desire to have passed—one to exterminate squirrels, and that where a gentleman refuses to comply with the law and exterminate the squirrel, the Board of Supervisors employ men to exterminate them. This continued until they expended about \$800. When they undertook to make the gentlemen pay the expenses or vote it as a lien on their land, the best lawyers of four counties, including one of the now Superior Judges, told them they could not enforce the law. We have another law on our statute books in regard to artesian wells, declaring them to be a nuisance, and notifying us to close our wells,

(CONTINUED ON PAGE 494.)

* This report is now being prepared in pamphlet, and will make the fullest review of the present situation in fruit growing in the State, which has thus far been collected in book form. It will be sent to any address for 25c. a copy. It will be found valuable to keep and to send to horticultural friends abroad. Address DEWEY & CO., Publishers, 252 Market Street, S. F.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of associations of subordinate Granges are respectfully solicited for this department.

Co-operation.

An address read before Sacramento Grange by GEORGE E. NEALE, and furnished for publication in the RURAL PRESS.

A few words in the opening will allude to the rise of this powerful influence that has spread throughout the United Kingdom and various parts of the United States. I will allude in brief:

The first suggestion of the idea was made some 37 years ago in England, after a prolonged strike against the capitalist of a flannel manufactory and the utter defeat of the working class. A few of these men consulted together as to the future, both for themselves and their class. In their deliberation these words were used: "Is it not possible, instead of the constant strife with capital, which is too strong for us, that we can use the capital spent in this way by ourselves and do something to become our own employers?" What a grand thought, and out of it what fine results have grown from it!

It was E. V. Neale, Esq., who, after spending his vast fortune and the 20 best years of his life upon the subject, gives this definition of "True Co-operative Faith" after much thought, study and reflection:

"There is one way, and one way only, in which the mass of the people can permanently improve their material position, and that way has three stages:

- (1.) "They must unite to economize labor and increase production.
- (2.) "They must provide for the equitable distribution of the products of industry among all who are concerned in producing them, whether the contributors of present or past labor, whether producers or consumers; and
- (3.) "They must introduce well-concerted arrangements in their homes and the surroundings of their homes so as to derive from the results of human energy the full measure of advantages or enjoyments which human power and will could secure for all mankind, if it took for its guide the steady light of reason in place of the delusive flicker of self interest."

From the light drawn from these three stages the work of co-operation is gradually making its progress from year to year, gaining power and strength wherever concentrated, distributing its volume throughout the vast area of country around.

Having touched on the cause, we will note the stages of growth of this powerful influence. We find the rise began, in 1844, in Rochdale, near Manchester, among 28 members of the "Equitable Pioneer Society," with a cash capital of £28, or less than \$140. Thus, from the lowest roll of the ladder, it gradually rose higher and higher in the progress of events, stretching its mighty arm across the ocean and expanding its vast tributaries to the shore of the grand Pacific. Tracing down from that early period on English soil to the year 1880, there was reported at the Co-operative Congress in Newcastle, England, 973 societies enrolled in England, Scotland and Wales, with a membership of 525,958 and a capital of \$34,168,875. The business done in 1879 amounted to \$90,750,935. This is the result culminating out of a small beginning.

From its outgrowth sprung an educational fund for the benefit of the society, realizing more than \$5,000 annually—looking not only to remuneration of capital but wiser ends, in gaining knowledge, wisdom and strength.

This throws out a wise lesson for all to heed, especially in our subordinate affiliations with one another, proving ourselves adepts in the wise plan of building and sowing good seed as we add years to our progressive culture, for there will be no sure and practical intellectual progress without an understanding and observance of the principles of co-operation.

In Germany co-operative banks were established, and proved a great blessing to the laboring classes. In 1867 the aggregate business was then \$13,000,000, and proportion of losses was but one quarter of one per cent., which is credited to the just administrative ability of the officers, as well as the honesty and integrity of its members.

Our Grangers' Bank, of San Francisco, is a type of the same character, and other similar societies started on an honest plan would to-day be a bright and shining light in our Order had honest men been at the helm.

Our young Co-operative societies are strengthening throughout the State, and are on the road to prosperity and financial success, gaining influence and strength from year to year.

Statistics show that it took 20 years for Co-operative societies to accumulate the first \$5,000,000, and only five years to gain the next \$5,000,000. The entire capital of England exceeds \$40,000,000,000, and the profits \$30,000,000 to \$40,000,000, while the profits of Co-operative societies are upwards of \$14,000,000.

The experience of English Co-operators brings its teachings of cementing truth and doctrine to their American brothers, the leaders and organizers of our beautiful Order. English Co-operators and American Granges are natural allies, and their friendship should be fostered and encouraged to the greatest extent possible. Hence came the importance of sending a Grange Commissioner to Europe to gain all the information needed to carry the work onward throughout the length and breadth of this country. Turn your eye now to the work on our American shore. The subject of co-operation became

a special movement in 1875, during the ninth session of the National Grange, when the Executive Committee received a communication from the English Co-operative Union, offering to meet the P. of H. in a fraternal spirit, and to co-operate with them in all laudable efforts to advance the interests of both sides. The idea met the favor of both committees and all who were interested in the Order, and it extended throughout every section of the Union. Appeals came back for the Executive Committee to adopt a systematic and uniform plan for such an organization. The committee examined the plan of the Co-operative Societies of Great Britain, known as the Rochdale plan, and recommended it to all State and subordinate Granges to operate in similar ways. From this action sprang various co-operative stores. Those keeping within the rules governing that society prospered, while others carried too much burden, and went without the limits prescribed, and failed in the enterprise. From those doing good business reports have shown that over 2,000,000 of members and their families were being supplied with goods, many direct from the manufacturer's hands.

Here are some axioms for members to follow:

- (1.) Expose dishonesty and diminish fraud.
- (2.) Buy as far as practicable from the producer and manufacturer, and sell to the consumer if possible.
- (3.) Never depart from the principle of buying and selling for cash.
- (4.) Neither fear nor court competition.

If these were lived up to, no society would ever fail in the attempt.

Practical co-operation, what is it? Sift it down to general terms or ideas; come to the gist of it, and what is it in its true sense? A co-operation or mutual system of trade or manufacture in its broad sense implies helping each other. It adds to our physical comfort, develops, educates and elevates us, morally, socially and intellectually. To give a further definition to the word, we quote from an experienced English Co-operator, Mr. Holyoke, that co-operation is an industrial scheme for delivering the public from the conspiracy of capitalists, traders and manufacturers, to make the laborer work for the least, and the consumer pay the utmost for whatever he needs of money, machine or merchandise.

This successful co-operation is based upon the policy of investing the profits of trade for the benefit of the consumer. The profit of per cent. gained is added to the principal, and re-layed out the next quarter. An additional per cent. is gained; so continuing from quarter to quarter to the end of the year. You thus find your cash capital has increased a handsome sum to relay out for the new year. Thus we have quick sales and marginal profits.

What is required to make co-operation a success is for all to become identified personally and work for the "good of the Order" and the whole number.

Co-operation, then, is the grand motive power of central organizations to secure great results, which can be used to a good or evil source. We see it in our social nature, unalloyed in our fraternal sympathy and good will. It adds to our intellectual as well as physical strength. We trace it in our business relations, our moral reforms, political affinities, church organizations and school methods, temperance circles, courts of justice, gigantic monopolies, legislative bodies, and in our representative halls at Washington.

If we wish to enlarge our farm or grange work we need co-laborers. Collect the farmers and their families, lay before their minds the usefulness of co-operation in all the points and bearings, that their presence may promote the interest we need. Thus the impressions are more deeply laid, the foundations strong and binding, and our Order will remain perpetual in the hearts and minds of all matrons and husbandmen. Take all promises rising from our organization in good faith, or reforms which we desire to see in successful operation. All can be secured by the true method of co-operation, but let it be understood there should be no sectionalism or strife existing in this laudable undertaking. Let all work willingly through sunshine or storm, then this petty feeling of distrust and fear that often cools the ardor of a brother would disappear and we advance heart and hand in this glorious enterprise.

Co-operation, I might say, is one arm of the great lever of our Order, lifting the weight and incubus that has galled so many of our worthy farmers in days of yore, and had it not been for our blessed Order, the fetters would be binding still. The other arm I might mention is education. The two are twin sisters. Both are essential. The two combined bring the farmer in close relation, and increase a practical knowledge of business in all branches of trade. Farmers and those identified to the cause should not stand aloof, but should come within the Order and enjoy the social as well as the intellectual feast for their good. Those within are daily receiving and appreciating the real value of co-operative teachings in their business relations of life. How well, then, should each make a strong appeal to fellow brothers to improve the hour, enter the circle, thus adding strength to the grand co-operative movement. Thus, by united effort gradually growing stronger and adding force by bringing the masses together, an opportunity will present itself to bind the entire circle of the agricultural family with a co-operative clasp firmly together.

ALHAMBRA INSTALLATION.—Mrs. M. B. Lander, Secretary, writes that Alhambra Grange, Martinez, will install the new officers on the first Saturday in January, when all Patrons will be welcomed.

Grange Elections.

[We respectfully request all secretaries of subordinate Granges to send us lists of the newly elected officers for publication in the RURAL PRESS.]

PLACERVILLE GRANGE, No. 242. Election Dec. 9.—C. G. Carpenter, M.; L. Giguac, O.; Mrs. C. Allen, L.; Isaac Tribby, S.; W. Carpenter, A. S.; J. Brym, C.; Jacob Lyon, T.; A. L. Kramp, Sec'y; F. Goyan, G. K.; Mrs. M. J. Cook, Ceres; Miss L. Carpenter, Pomona; Miss Josie Hofmeister, Flora; Miss Minnie Brym, L. A. S.; Philip Kramp, Trustee for three years.

ENTERPRISE GRANGE, No. 129. Election Dec. 2.—M. Toomey, M.; A. A. Krull, O.; Maria W. Parker, L.; E. J. Lynch, S.; Everett Ames, A. S.; A. M. Plummer, C.; Maria Krull, T.; Minnie L. Plummer, Sec'y; R. W. Tooker, G. K.; Sarah C. Coy, Pomona; Estella Bell, Ceres; E. Bell Plummer, Flora; Leticia A. Hanlon, L. A. S.

FRANKLIN GRANGE, No. 147. Election Dec. 2.—J. B. Bradford, M.; P. R. Beckley, O.; Mrs. E. S. Johnston, L.; Lake Freeman, S.; L. R. Beckley, A. S.; Wm. Johnston, C.; J. F. Freeman, T.; Mrs. S. G. Bradford, Sec.; H. I. Huggins, G. K.; Miss E. H. Kilbourne, Pomona; Miss Matie Johnston, Flora; Miss Cora Utter, Ceres; Miss Belle Johnston, L. A. S.

SACRAMENTO GRANGE.—Fay Raymond, M.; O. C. Flint, O.; Geo. E. Duden, S.; C. A. Hull, A. S.; M. Smith, C.; M. Sprague, T.; Rosa Hull, Sec.; Edith Duden, P.; Carrie Rich, F.; Ida Flint, L. A. S.; D. Tibbitt, Organist.

TEMESCAL GRANGE, Oakland, Dec. 16.—W. Renwick, M.; C. Bagge, O.; Mrs. J. V. Webster, L.; E. Wolleb, S.; W. G. Kleas, A. S.; Mrs. A. T. Dawey, C.; Mrs. N. G. Babcock, Sec.; L. Frink, T.; J. V. Webster, G. K.; Mrs. E. Brooks, P.; Miss Ida Bagge, F.; Mrs. E. Bagge, C.; Mrs. W. Renwick, L. A. S. Trustee, C. Bagge.

TEMESCAL GRANGE.—Dec. 16th, Bro. A. D. Nelson made a good speech on anti-mining debris and co-operation. He urged patrons to interest themselves in assisting their fellow farmers striving for their just rights in this controversy, and to lend their presence in the Court on the side of the farmers while the trial is progressing in San Francisco. Worthy Master Bagge responded, expressing the sincere feelings of the Grange in support of Bro. Nelson's appeal. Bro. Amos Adams was present, but deferred speaking on account of the time needed for conferring degrees and the election of officers. Bro. Stewart, of Fresno county, was also present. The installation of the excellent list of officers reported in another column will take place on the third Saturday in January. The Secretary was requested to correspond with Elen Grange, of Haywards, in regard to joint installation services on that day. The attendance was good, and the financial condition of Temescal Grange was never better.

The Debris Question.

An Interesting Review of the Situation.

We were fortunate on Tuesday in meeting Mr. G. Ohleyer, of Yuba City, a leader in the anti-debris movement, who is now in San Francisco attending the trial of a debris case before the United States Court. We had a long conversation with Mr. Ohleyer and secured many points on the important question of debris destruction which will be of value to our readers.

The first serious trouble or menace to the valley farmers was during the winter of 1861-2, that being a year of great freshets, which brought down large amounts of debris that lodged in the lower channels, and in some instances on the farms. As the mines were supposed to be about worked out, no great fears of further injury were entertained. Soon after that the hydraulic process of mining, that is, the undermining of the hills and blowing up with powder and washing down into the streams, was inaugurated by the miners incorporating extensive companies. The individual miners could not do that, but they organized into large companies, and in about the year 1865 they began to throw the dirt into the rivers, and the evil results began to manifest themselves very seriously. This was on the Yuba and Bear rivers, and to some extent on the American and Cosumnes. It ran along that way until the large bodies of bottom lands lying along the streams were submerged with sand and "slickens," and many were compelled to leave their homes and seek land elsewhere. Finally there began to be considerable uneasiness as to the effect if it continued, and

Litigation Began

With the Keyes suit on Bear river. When that suit was commenced the extent of the evil on the Yuba and Bear rivers was the loss on the Yuba of 18,000 acres and on the Bear I think about 20,000 acres. They have been nearly ruined by the overflow of the debris.

The Keyes case was commenced by an association of farmers on Bear river, and in the name of Mr. Keyes. A trial was held in Sutter county for an injunction to enjoin the mines on

Bear river from dumping into the streams. The suit was against several miners. The District Court issued an injunction against the miners, and subsequently the Supreme Court held that it was a misjoinder of parties defendant.

The next suit was the Marysville case against a number of mines dumping into the Yuba. An injunction was also granted, but the miners disregarded the order of the court.

The next case was the suit in the name of the State against the Miocene Company, at Oroville, on the Feather river. That injunction has been enforced.

Legislation.

The farmers applied to the Legislature for relief, and, on investigation of the subject, that body granted an appropriation and created the State Engineers' department. The subject was thoroughly investigated, and the report of the officers as to the damage fully corroborated the farmers' statements. The Legislature was induced to pass what is known as the Drainage Act. This was done more in the interest of the hydraulic miners than the farmers, and was intended to restrain the downfall of debris.

The State constructed what is known as "brush dams" in the Yuba and Feather rivers. The farmers had no faith in their efficiency, but they were forced to have the experiment tried, as nothing better could be secured at the time. In the winter of 1880-1881 the first rise in the river washed away the dams in several places, and their utter uselessness was demonstrated.

The Courts Again.

Nothing now remained but to seek redress in the courts. The farmers became convinced of the fact that they had law and equity on their side, and resented their case upon the principle that every man shall so use his property as not to injure that of another, and they were fully determined to invoke the courts and popular sentiment to have this principle recognized. They organized associations and held meetings throughout the Sacramento valley, and the question now was a question for the whole valley, and was recognized as such, and ceased to be the local affair that it had been regarded as before.

In 1881 the Gold Run suit was instituted in the name of the State. This mine was located on the American river, and was running its tailings into that stream. The case was before the Sacramento Superior Court, Judge Jackson Temple, of Sonoma, presiding. The trial lasted nearly two months, and the whole merits of the question were brought out. On the 12th of June, 1882, Judge Temple rendered a decision enjoining permanently the Gold Run mine, and held that no vested rights had been secured or could be secured to the river channel; that the national Government itself could not grant such rights.

That decision is now before the Supreme Court of the State, no decision having been rendered yet; but no doubt is felt but that the Court will sustain Judge Temple's decision. That decision has given new courage to the valley people, and they are now more than ever determined to compel the hydraulic miners to respect the rights of others.

Public Sentiment With the Farmers

During the present year the valley press have spoken out upon the subject as they have never done before; thus the sentiment spread all over the State. Letters of sympathy were sent by public men throughout the State to the people affected, and resolutions of sympathy and support were passed by public bodies, such as the Grange and political conventions, which have rendered this, as it should have been from the start, a State question.

The people of the valley have now no fears of the ultimate result; they feel that the Sacramento valley, its rivers and harbors must and will be protected against this avalanche of mud. The State Engineer in his report to the Legislature in 1879 said there had been 44,000 acres of land on the Yuba, Feather, American and other rivers covered by this deposit. All of this section is now a white, sandy desert, where once were comfortable homes, the land being the most productive to be found in the State. The channels of the Yuba, Bear, American and Cosumnes rivers are entirely obliterated. The bottom lands have been so filled up as to be higher than the adjacent redlands. Their waters are only held from overflowing these higher lands by levees, as the debris within the levees is continually rising from the pouring of the mountains into the streams. The levees have to be raised every year to keep pace with such filling. The tax upon the inhabitants runs as high as from six to seven per cent. on the taxable property of the districts for levee purposes alone. If this nuisance should be allowed to continue much longer it is evident the power of the people to resist the evil would soon be exhausted.

The Case Now on Trial.

The present case in court was brought by Edwards Woodruff, a resident of the State of New York, who has large landed interests in the vicinity of and property in the city of Marysville. This suit was commenced in the Circuit Court of the United States, city of San Francisco, for preliminary injunction enjoining the North Bloomfield and some 8 or 10 other hydraulic mines in Nevada county which are dumping their tailings into the Yuba. The Court granted an order directed to the defendants to show cause why an injunction should not be granted. The United States Marshal undertook to serve the papers. The papers were served upon a few defendants, and the balance resigned their official positions, and others evaded the vigilance

of the officers. When the day arrived for the answer to be given the defendants' attorneys appeared and stated that they had not been served, and were not properly before the court. The Court held that as the Marshal had found the mines, and they were operating, if there were no officers to be enjoined he should enjoin the mine until such officers appeared. Seeing their dilemma, they at once accepted service unconditionally. The 11th of December was set for the case to be heard.

Many affidavits were offered on both sides, and the case is now being argued before Judge Sawyer. Much interest has been manifested in this case, as it is regarded as involving all the issues between the hydraulic and the farming interests. Large numbers of prominent farmers from San Joaquin, Sacramento, Yolo, Colusa, Yuba and Sutter counties are present at the trial. As the future navigation of the Sacramento and other rivers is involved, and even the bay of San Francisco is threatened, the case has an unusual interest for this city and the bay counties, and all feeling an interest in the future of our State should attend the trial and lend their countenance in favor of the agricultural and commercial interests of the State.

There should not be, there cannot be, any doubt as to the ultimate solution of this question in favor of the protection of the farming interest. To think otherwise would be to believe that the State would permit her permanent interests to be destroyed by an industry which is ephemeral in its very nature.

An Incident of the Trial.

An interesting incident concerning the present trial is described in the correspondence of the Sutter Farmer as follows:

Something has transpired in the mountains which is as yet a secret, but which will be well known before this meets the public eye, and which I "dropped on" on the way down yesterday. You know that much stress has been laid on dams generally, and on the North Bloomfield dam in particular, as capable of holding the debris for ages, etc., etc. Well, this dam was constructed across Humboldt creek at its mouth and was made of logs and brush placed lengthwise and crosswise of the stream, and was said to hold slickens "beautifully." A profile of it has been before this Court, accompanied by "scientific" affidavits, and to clinch the mind of the Court, a few days since another affidavit was filed. From all this our counsel thought they smelled a rat, and made arrangements to catch him. They sent men up there accompanied by a photographer to look at the beast, when lo, and behold! "the blasted thing is busted." They at once leveled their instruments upon it, and now we have "the staunch, immovable, indestructible dam" in court with an enormous hole in it, and curiously enough, all this happened without a freshet, without a flood, without a drop of rain. These things are tendered as a solution of this vexed question.

A Grafting Machine.

EDITORS PRESS:—In the last half century most wonderful and valuable improvements have been made in almost all sorts of machinery, which enable one man to accomplish in a given time what it used to take from two to 20 men to do. In the art of grafting and budding trees but very little advance has been made in the past 100 years, and nurserymen and orchardists have often felt the want of a machine for expediting that branch of their industry. Until very recently no machine has been invented that was of any value (as a machine), but Mr. C. W. Hoyt, of Sacramento, Cal., has invented, through Dawey & Co.'s Patent Agency, a very ingeniously constructed machine for top grafting which I regard as a complete success. With that machine one man will do more grafting in one day than three or four could in the ordinary way, and a much larger per cent. of the grafts will grow than could be made to grow by the most skillful grafter by the old method, and not half the danger of injury to the tree as by the old splitting process.

The machine referred to cuts a tapering slot in the side of the tree or branch to be grafted, and instantly throws the chip out, leaving a nice uniform shaped slot. The same machine cuts the scion so that a complete and exact fit is secured the whole length of the slot. The rapidity with which work can be accomplished with this machine is simply surprising, and the certainty of grafts growing when set out by this process is no less surprising. Besides the saving in labor and time there is a great saving of wax—it does not require half the wax needed by the old sawing and splitting process. The tree is not half so badly mutilated. By the old method the tree or branch must be split and, if large, must be wedged open to prevent mashing and shivering up the graft, and this splitting must of necessity cause more or less decay of the parts and often very seriously affects the vitality of the tree. The machine is small, simple and quite easy to manage. One has only to see it work to be convinced that it is a very valuable invention, and destined to come into general use.

ROBT. WILLIAMSON.

Penryn, Cal., Dec. 12, 1882.

A FIRE in Newport, Ark., has entailed a loss of a quarter of a million.

AGRICULTURAL NOTES.

CALIFORNIA.

COLUSA.

GEES.—Sun: Wild geese are a great nuisance to the farmers of California, and killing and scaring them away forms one of the greatest items of expense to wheat growers. We understand that Dr. Glenn purchased 25 guns at one time a few days ago for the purpose of killing or frightening the geese from his grain fields. He had, of course, a number of guns before this, so that it is fair to presume that he will have in the neighborhood of 50 men at this work. Several hundred men are required in this county for the work of "herding geese." When the wheat first comes up is the worst time.

MENDOCINO.

ALFALFA SEEDING.—We often hear the question, "When is the proper time to sow alfalfa?" So many erroneous impressions prevail upon this subject that we are moved to give our readers instruction on this grass and its treatment. Frost does not hurt the leaf of alfalfa any more, if as much, as it does our native grasses, or even wheat. Freezing of the ground, at the early stages of its growth, will kill it. An alfalfa seed will lie on a hard trail, exposed to frost at night and the warm sun in the day, germinate, and endeavor to force a root into the ground as persistently as a grain of wild oats. Seeds will germinate in the seed pod hanging on the still upright stems, with the mercury below freezing each night, and send sprouts into the cold night air half an inch long. These facts, which we know and assert to be indisputable, prove conclusively that frost does not injure alfalfa, therefore it should be sown soon after the freezing weather is over, for the freezing of the ground causes it to "spew," and is what kills fall sown alfalfa. The seed has great vitality, and sends down a long, strong, but exceedingly tender tap root, which penetrates the ground to the depth of six inches before it sends out side roots. Of course cold weather retards its growth, and when sown in the fall it does not reach the side root period of its existence before the hard freezing weather of December and January comes on. Six or eight degrees below freezing is sufficient to cause moist land to "spew," or raise up, bringing with it the alfalfa's slender root, which has no side shoots to hold it. The warm sun of the daytime thaws and settles the ground away from the fresh root surface thus drawn up and exposed, and the succeeding night's freeze bites the tender root at the surface and kills it—girdles it as it were—leaving the root in the ground perfectly white and fresh, and the three or four leaves looking green and thrifty; but between the two there is a dead shriveled spot. In favorable seasons, such as this, alfalfa sown with the first rains would have attained sufficient roots to hold it firm, and one acre would be worth two of spring sowing. But take it all in all, February, or as early thereafter as ground can be put in condition, is the time to sow it. The soil should be put in garden order, deep plowed and thoroughly pulverized; harrow and roll it; sow from 20 to 25 pounds per acre and harrow it in lightly. It should not be pastured the first year, but should not be allowed to grow over a foot high. If you must pasture it, put on sheep enough to wear it down in a night, and take them off again. If allowed to grow up or go to seed the top exhausts the root and half of it will die; but if cut down close, the sap accumulates in the roots while new buds are forming at the crown, and this carries it through the hot weather successfully.

THE GRAIN PROSPECTS.—Ukiah Press, Dec. 15: The seasonable light rains and warm weather through the whole of this season have been unusually propitious, and a large acreage and heavy yield can hardly be other than the result. Many farmers are already done, while the majority are over the bulk of their seeding. Just now the market is stiff at one and one-fourth for wheat and one and three-fourths for barley and oats, with a prospect of an advance still higher. The new crop will come in on a bare market, and the outside demand is increasing to such an extent as to preclude the idea of low-priced grain in the future. The warm, seasonable growing weather is having the effect to cheapen hay by supplementing short stocks by good pasture, so that many farms can spare more than they expected to.

NAPA.

THE WINE YIELD.—St. Helena Star: Mr. Gardener, of the Star, in accordance with his annual custom, has since the vintage closed visited all the wine cellars of Napa county and obtained an accurate statement as to the production of each. The total (61 cellars) is 2,643,800 gallons. This compares with other years as follows:

1881-54 cellars.....	2,016,000
1880-49 ".....	2,910,750
1879-39 ".....	1,683,000
1878-39 ".....	2,125,000

So it will be seen that although the year is a good one, it lacks 266,950 gallons of coming up to 1880, and is 518,800 gallons better than the next best year—1878.

SIERRA.

SIERRA VALLEY.—Virginia City Enterprise: This fine valley is situated in the eastern part of Sierra county, California, and from it we of the Comstock receive the greater part of our supply of butter, much of our beef and large

supplies of vegetables. The altitude of the valley is about 5,000 feet, and it contains some 45,000 acres of good farming land. The valley is watered by a number of small streams. Stock raising is one of the chief industries of the valley. The production of butter for the last year amounted to 87,050 pounds. There are in the county 1,242 head of horses and mules, 533 sheep and 410 Angora goats.

SOLANO.

A MAMMOTH OAK.—Republican, Dec. 15: We all know, as a matter of fact, that the oak grows to an enormous size on this coast. It does not tower up like the giant redwood, but grows to a reasonable height, when its branches out in all directions, and many of its arms or limbs are nearly half the size of the body that supports them. To look at one of these trees casually while passing through a grove there isn't one person in a thousand that has any idea of the amount of stovewood that one of these gnarled, bushy-topped trees contains. For the benefit of those who scarcely ever give it a thought, we will mention an instance where one of these mammoth trees was cut a few days ago. L. B. Abernathie's word for this: He felled on his ranch an oak that, when worked into stovewood, made 131 tiers, or 65½ cords, which, delivered in Suisun, is worth \$6 per cord. If any of the farmers living in Suisun valley or elsewhere can beat this, let them now speak, or ever after hold their peace.

FRUIT GROWERS MEETING.—Shall the best fruit county in California have a county horticultural society? So many as say aye will please meet in Union hall, Suisun, Saturday, Dec. 23, 1882, at 1 P. M. for the purpose of considering the matter and deciding as to the best plans for the formation and success of such a society.

VENTURA.

EDITORS PRESS:—The prospect of our county was never more prosperous than at present. There is already a large acreage sown, and farmers are pushing along rapidly, and expect a bountiful yield in the harvest for their labor. Farmers are in good spirits, although there has been no rain to do much good. We had a light rain on Nov. 8th, which started vegetation and nothing more, and no prospects of more rain. Some croakers are crying dry year, which is liable to come; but if such should be the case, Ventura county was never better prepared to meet it, as there is an abundance of straw put up, and the great Santa Clara Water Company, of which Mr. T. R. Bard and his associates are owners, is building a canal from Santa Clara river to Hueneme, and said canal is to be 12 ft. wide at top, 10 ft. at bottom and two feet deep, sufficient to carry water to irrigate all land lying below it. This we believe will double the value of the land. Mr. J. C. Hartman is building a canal from Los Posas creek to Springville, and beyond to supply the county with water for irrigating purposes. This is an enterprise which has long been needed and which increases the value of land through which it passes at least 50%. Mr. Hartman went into this enterprise alone at considerable expense. He will have it complete in about two weeks. He had a large amount of flume to build, or the water would long ago have been running through the beautiful country, and should a dry year come, this ditch will be a good thing, and will anyway. In places grain is looking a little green from the little rain; unless more comes very soon it will die. Farmers are confident nevertheless.—SETTLE, Springville.

NEVADA.

THE HEREFORDS HAVE COME.—Reno Gazette, Dec. 11: The reward of a visit to the ranch of Russell & Bradley, the well known stock men, says the Elko Independent, was a view of some of the finest young blooded stock that can be found in the State, or out of it, for that matter. Mr. Russell made a trip to Illinois this fall for the express purpose of procuring fine breeds with which to improve the stock on the various ranches of the firm, and the animals referred to above are those purchased and brought here by rail a few days ago. The lot consists of ten thoroughbred Hereford bulls, one cow in calf and two grade heifers, all from the celebrated Hereford stock ranch of C. M. Culbertson, of Chicago, the well known importer of thoroughbred stock. Anxiety, a two-year-old, whose sire took first prize at the royal fairs of England in 1867-8-9, also first prizes at the Illinois State fair over all ages of Hereford bulls in the latter year, is beyond all doubt one of the finest animals ever brought to this country. With short, heavy legs, immense length and depth of body, heavy coat of curly, silken, liver-colored hair, and faultless in form, he is a perfect pastoral picture. A couple of yearlings, lighter in color, shorter in body, but of great breadth of beam, next claimed attention. They are from imported Sir Garnett, now at the head of Mr. Culbertson's herd, and judging from his offspring, the sire is second to none that ever crossed the water. Attention was next directed to seven yearlings with long, low bodies and heavy white bristlets, sons of the fine imported bull Landlord, now the property of Messrs. Scott & Hane, Halleck. This animal was imported from England at the age of two years, after taking the first prize of his age at the Royal cattle show. He was pronounced in Chicago to be one of the very best bloods ever brought to America, and his progeny fully verify that decision. Two bull calves and three two-year-old heifers in calf comprise a lot purchased from Scott & Hane last fall, for which Russell & Bradley paid the snug sum of \$2,000. These are as fine as careful and intelligent breeding can secure.

In the lot brought out by Mr. Russell were also a thoroughbred Hereford cow in calf—a magnificent animal—and a couple of graded heifers, the difference in blood being only distinguished by expert stock men.

News in Brief.

A LONGFELLOW Memorial Association has been organized in San Francisco.

Gov. STANFORD denies that he ever thought of selling his Nob Hill residence.

THE New York Sun says Edison's electric light is a failure because it is too dear.

EPIZOOTIC has broken out in the stable of the Camden Transfer Co., at Philadelphia.

The famous Mrs. Langtry, the English "professional beauty," is coming to California.

THE rains have ceased in Oregon, the floods are subsiding, and travel is being resumed.

FIVE hundred seats were sold in the new National Petroleum Exchange, which opened at New York the other day.

MARTIN BULGER and Nelson Pierce have been appointed inspectors of foreign steam vessels for the port of San Francisco.

THERE are probably more gunners abroad in California (on Sundays) than in any State of the Union during the hunting season.

THE Archbishop of Quebec has warned the faithful not to accept invitations for the Masonic ball in honor of the Grand Lodge.

EVERY dealer in Pendleton, Oregon, was indicted for violating the Sunday law, pleaded guilty, and was fined \$10 each and costs.

SONOMA has a find in the shape of a petrified forest. It is upon the ranch of N. T. Hudson, and was found by the nephew of Mr. Hudson while hunting.

AN elopement from Santa Ana and marriage on the high seas took place last Friday. The couple were too young to obtain a license under the laws, and sought to evade them in this way.

At a meeting of the rubber manufacturers at New York it was decided to close all rubber boot and shoe factories in the country on December 23d for one week, after which only half the goods formerly made will be manufactured.

THE range of country lying between the western limits of Manitoba and the eastern boundary of British Columbia has been divided into four territorial divisions, named Assiniboin, Saskatchewan, Alberta and Athabaska. New post-offices have been established.

A DISPATCH from Provincetown, Mass., says: The whaling fleet of 12 vessels have brought in and sent home 2,400 barrels of sperm and 700 barrels of whale oil during the past year. It is a small average catch, and because of the extreme low price, the business does not pay expenses.

At Truckee, Saturday, while a man by the name of Millard Smith was in the act of unhitching a horse, the halter rope became entangled around his right hand, and while trying to extricate it the horse gave a spring, tightening the rope so suddenly that a portion of the hand instantly dropped to the floor, being completely severed.

THE Porte, in a circular to the foreign representatives, announces the creation of a special bureau for supplying correct information to correspondents of foreign papers. Should a correspondent write anything hostile to the Government or spread false news, he will receive a warning. If he repeats the offense his name will be published, and if he commits it a third time he will be expelled from the country.

Legislative Committee of Fruit Growers

Dr. S. F. Chapin, Chairman of the Legislative Committee appointed by the recent convention of fruit growers, has called a meeting of his committee to be held at the office of S. F. Lieb, in San Jose, on Wednesday, Dec. 27th, at 11 A. M. Members of the committee are earnestly requested to be present, as matters of great importance to the fruit growing industry of the State are to be considered. Suggestions from any one interested in the subjects to come before the committee will be gladly presented to the committee if sent to the Chairman, Dr. F. S. Chapin, San Jose, Cal.

Please Remit.

We trust that as many of our subscribers as possible will send in their renewed subscriptions between this and the first of 1883. Also, that fresh names from among new comers, young and rising farmers, and members of all branches of husbandry, from far and near, will come promptly forward and co-operate in utilizing and improving our medium of farm and household advancement. There can be no better season for making new and renewing old subscriptions to an upright farmers' journal.

SEED DRILL.—Those who need a small hand drill for garden use would do well to examine the Matthews Garden Seed Drill, manufactured by Everett & Small, 43 South Market street, Boston. They have also a hand cultivator and a hand drill and cultivator combined—all excellent things for garden work, as testified to by a host of letters printed in their circular which we have before us.

SAN LEANDRO PLOWS.—The San Leandro Plow Co. have an advertisement in the RURAL which shows that they are abreast of the season, and prepared to furnish good implements whenever desired.



Christmas Carol.

Listen, all ye Christian people,
Let no fears your souls dismay;
God's own Son, the Lord, the Savior,
He was born on Christmas day.
All the earth was bound in sadness,
Darkness lay upon the land,
And the silence of the midnight,
When the moment was at hand,
When through all the midnight darkness,
Through the world's sad heart forlorn,
Passed a thrill of life ecstatic—
And the Christ! the Christ was born!

Nature owned the glad emotion;
And the simple shepherd folk,
As if day shone out above them,
With the joyful impulse woke;
Woke, and lo! a glorious vision
Filled their souls with wondering awe,
And ten thousand holy angels
Thronging all the heavens saw.
And they heard them sing, as never
Sylk sang above the corn—
"Peace on earth, and endless blessing!
For the Christ! the Christ is born!"

"Sons and daughters of affliction,
Join great Nature's choral voice;
Thou, the captive; thou, the stranger;
Thou, the poor, rejoice! rejoice!
Weep no more, cease thy anguish,
For thy first-born gone astray;
Christ is born, the dear Redeemer,
Who will save the castaway!
Little toiling orphan children,
Heirs of destiny's storm,
Weep not, for the true consoler—
Christ, the mourner's Friend—is born!"

"Sinner, conscious of transgression,
Scorned of men, outcast and vile,
Christ is born whose blood shall cleanse thee,
And to God shall reconcile!
Noble spirit, patriot, poet,
Thirsting to be great and free,
Christ is born, thy true example,
Lying on the cross for thee!
Thus they sang, those holy angels,
Mid the pallid stars of morn,
"Peace on earth, and endless blessing!
For the Christ! the Christ is born!"

Mary Howitt.

Poor Old Aunt Crowne.

The Christmas She did not Mean to Keep.

The old Crowne place on the hill was a slim, gaunt, gray house. Mrs. Crowne, who lived in it much of the time alone, was slim, gaunt and gray too. She was looking very severe and sitting very straight in her slippery, horsehair chair one December afternoon. The minister and his wife had been asking help in getting up the Christmas festivities at the church.

"Nephew," said Mrs. Crowne, for the minister's wife was her grandniece, "Christmas is nonsense. I don't believe in it. But if you want money, here's a dollar; take it and throw it away, for all I care. Only don't come near me with your carryings-on, and don't ask me to your tree. As I said before, I don't believe in Christmas, I shan't keep Christmas; I don't want to hear anything about it."

There was no use in attempting to gainsay Mrs. Crowne when the fluted ruffles of her stiff cap border took on the emphatic shiver they did now. She refused curtly her grandniece's invitation to spend Christmas day at the rectory, overcrowded all the minister's genial remonstrances. The pair were fain to bid her good-bye and go down the hill homeward, having gained nothing warmer than Mrs. Crowne's dollar.

That night they sat talking together when they supposed all the children asleep. So they were, all but part of the trundle bed, which was Ruthie. Ruthie was simply too comfortable to go to sleep yet, though she lay very still. Her pillow, soft and warm, fitted her just right; she liked to hear Lucy's even breathing, and feel her cuddled so close. The door was open into the sitting room, and a broad belt of light shone through it, beyond the shadow in which the trundle bed stood. Ruthie played that the shadow part was land and the shining part smooth river. Dreamily soothed by the sound of voices, she lay not listening, but catching now and then a word. It was something about Great-aunt Crowne and Christmas. The word Christmas suggested to her all sorts of pleasant thoughts of her own. She followed them.

Hum, hum, hum—that was Mother Norton's voice; drum, drum, drum—that was her father talking. After awhile she lost track of it altogether; then suddenly she became conscious that her father was saying:

"Poor Aunt Crowne!" "Yes, poor Aunt Crowne!" echoed her mother. "No wonder she don't know how to keep Christmas alone there! What she needs is a child in the house to help her. That would bring Christmas to her, I believe. Poor, lonely, old lady, who will have no Christmas!"

Her mother's voice was so gentle and compassionate that Ruthie began to pity Aunt Crowne too.

Sure enough, she did have nobody to stay with her; it must be lonesome. And sure enough, Ruthie's posited there couldn't be a Christmas in any house if there were no children in it to bring Santa Claus. Probably that

was why last Christmas Great-aunt Crowne had come and staid with them. But for her not to have any Christmas this year—dear! dear! dear!

Ruthie's heart swelled with a sudden generous purpose.

"I'll go myself and help her have a Christmas. I believe mamma could spare me, we've got so many children in our house. Rebecca said this very afternoon there were too many."

Ruthie sat up in bed and called, "Mamma," "What's the matter, dear? Bad dreams?" asked mamma, hurrying in.

"Mamma, I'll go and stay with poor Great-aunt Crowne, and help her have a Christmas."

"What's my little girl thinking about? Dreaming still, I guess," said mamma.

"No, only I heard you say that Great-aunt Crowne needed a child in her house to bring Christmas. I'll go, and then, of course, Santa Claus will come there." The child really believed in Santa Claus.

The mother wisely did not argue with the eager Ruthie, who ought to have been asleep long ago. She only said: "Well, my daughter, we'll see in the morning. Shut up your eyes, now, so it will come quicker."

"What queer fancies Ruthie has!" she said, going back, both amused and touched.

"But sometimes," rejoined her husband

know. But I think it was because love and pity shone so in the lifted, wistful eyes. Mrs. Crowne had had nobody for years to look at her as if for simple love. Still she thought, "It's some play she's got in her mind. She'll stay till dark maybe, and then they'll come for her."

They did not come for Ruth at dark, however. She staid to supper; all the evening she sat planning for Christmas beside Mrs. Crowne. "You'll hang up your stocking by mine Christmas eve. Is this the best place for them? Shall you have turkey for dinner Christmas day? We'll go to the Christmas tree in the evening—and oh! don't you want to learn my carol?" Her blithe voice lifted up the merry tune, and then another and another to see which her aunt would like best to learn.

Ruthie slept beside the lonely old woman all night. Mrs. Crowne did not sleep as soundly. After all, it was strangely comforting, this warm, clinging presence beside her. After all, this glad young voice in the dreary house was very pleasant. After all, to be loved and cared for was sweet. She had thought herself independent of such things, past caring for them. Now she knew that the hunger for love had only been drugged. Ruthie's kiss and laugh woke her at morning, and the table was set for two.



PLANTATION CHRISTMAS SCENES.

thoughtfully, "I think we should be more careful how we repress these fancies of children. They seem to us unreasonable. Probably the thoughts of the angels would often seem unreasonable. Let us follow this fancy of Ruthie's carefully, and not scare it away till we see where it leads."

It led to this: That in perfect single mindedness and undoubting confidence little Ruthie tapped at Mrs. Crowne's side door one afternoon in Christmas week.

"I have come, Great-aunt," she said, quietly, when the door opened.

"All alone?" Mrs. Crowne asked. She never petted children, but she was never cross to them.

"And I've brought my nightgown; I've come to stay; I've come to help you keep Christmas," continued Ruthie. She pushed back her fluffy hair that the wind had blown into her eyes, laid down her bundle, took off her red mittens, untied her blue hood.

"Why, Ruth, I never keep Christmas!" began Mrs. Crowne, not seeming to know what to say.

"I know—you couldn't," said Ruthie, "cause not 'tist you had some child here to bring Santa Claus. And I was so sorry you shouldn't have a Christmas I came myself. And now you'll have one. Ain't you glad?"

The tall woman looked down at the tiny girl, and she could not say she was not glad, somehow. What she saw in the fair little face to check repellant words on her tongue she did not

"Now let me help you get ready for Christmas," she begged, when the breakfast dishes were set away. "Shan't we trim the house to-day? May I, please?"

What would her mother have said to see Aunt Crowne that day? Ruthie brought in sprays of laurel and hemlock that grew in sight of the windows. She might arrange them as she would, and where she could not reach Mrs. Crowne placed them obediently where she preferred, even standing on a chair to deck the antique mirror. Ruthie became more and more confidential. She told all her Christmas secrets, and one or two of her mamma's, for she knew about the shawl her mother had robbed herself of to cut up for a Christmas gift to the poor Reilly children. "And made a dress for the baby with some pieces I wanted drefully to make my dolly a dress for her Christmas," went on Ruthie.

At this Mrs. Crowne opened a closet door and brought out a deep box full of pieces. "You may have any of these for your dolly," she said.

Ruthie flew and hugged her. "I love you," she cried impulsively. And tears came to the tall woman's faded eyes, an actual flush to her gray cheek. How long it was since she had made anybody so enthusiastically and altogether happy! How long since anybody had said to her, "I love you."

"I'd rather have this than any," Ruth decided, pulling out a piece of blue merino, "because Allie Brown has that kind, and a white

muff and tippet she wears to Sunday school, aunt—just as cunnin'! I should think she'd be perfectly happy; I know my Joanna'll be. I shall have to go home and get Joanna; but I won't stay, I'll come right back."

True enough, the child was not long. She only stayed to tell her mother all about it and submit one problem:

"Aunt says that Santa Claus don't know her and won't put anything in her stocking. May I have some things and drop 'em in myself, s'posin' he shouldn't?"

Did the two stockings really hang up together? Indeed they did. Ruthie fastened the long gray one beside the short, striped stocking on Christmas eve. Its owner pretended to be quite deaf and blind to certain sly rustlings about this stocking when her back was obligingly turned. Ruthie had chosen from her own best treasures for Mrs. Crowne's stocking—the story book she liked most, her freshest ribbon, her blue mug, and, choicest of all, a tiny gold heart.

But when, in spite of the joyful excitement that kept her long awake, Ruthie slept unmistakably, up rose Aunt Crowne, and if Santa Claus could do any better by a stocking than she did by Ruth's I am yet to be convinced of it. Mrs. Crowne had never seen such raptures as Ruth's next morning. She had seldom herself felt sensations so delicious.

Happy Ruthie! Her stocking was stuffed with goodies, "enough," she said, "for me and all the children at home, and the Reilly children, too."

Outside the stocking lay the yards of blue merino, the very white muff, and the tippet that had been her secret heart's desire. A new dolly sat smiling in the friendliest way at faithful old Joanna; a tea set with pink roses on it was pranked forth at her feet. "It must be you," cried the child in bewildered ecstasy; "I know Santa Claus wouldn't have brought me so much; he never did, aunt." She almost sobbed with pleasure, as she showered impulsive caresses on the kind face that leaned to her.

"I wish I could give you such things," she sighed.

"You have given me enough," Mrs. Crowne said, with a double meaning, as she fingered tenderly the little gold charm she had tied on to please Ruthie; "you have given me your heart."

When Ruthie went home, burning to share her sweets with the household, her aunt said, "Here is something to take to your father and mother," and gave her carefully a yellow envelope. At first Ruth wondered that it was only a yellow envelope. Afterward she wondered that so much help and comfort could have been contained in so small a space as a yellow envelope. Blessed in her giving, and rich in the love of a warm, young heart that never forgot its debt of gratitude, Mrs. Crowne found that she had never in her long life spent such a real Christmas as this which she did not mean to keep.

A Worthy Charity.

In all large cities there are to be found numberless homeless, uncared for and destitute children, who are thrown helpless upon the charity of humanity. To care for them, provide for their temporal, spiritual and mental wants constitutes one of the grandest of works. Fortunately in our cities such institutions are to be found giving attention to these little ones. The Boys' and Girls' Aid Society of this city has just issued a circular showing the practical results of 32 weeks' work of this society. During this time the society has furnished 2,640 lodgings and 6,811 meals to friendless boys and girls; has distributed to these children 1,345 pieces of clothing; has found employment for 175 boys and girls in this city, and placed in good homes or otherwise started on more hopeful careers 186 children, of whom upwards 100 were taken directly from the courts or prisons. It is unnecessary to comment on this work. It speaks for itself. It is a volume of commendation to those who have so nobly established, fostered and conducted this society. One thing needed by the society is money, and now that Christmas is drawing near, aid is asked to help them in making these poor children happy.

Christmas in the South.

We have had many Northern Christmas scenes, with flying snowflakes and speeding sleighs, to remind our readers who came hence from the North of the Christmas scenes in the old home. This year we choose other scenes, which will call up pleasant recollections in the minds of our friends who hail from the "sunny South." Christmas was a joyous day on the old plantations. Sports delighted the young, and the elders took quiet joy in dispensing the proverbial generous hospitality of their Southern homes. None were allowed to lack Christmas cheer, and the cabins rang with the joy of their inmates at the wealth of gifts from the planter's home. Our engraving shows a scene in which the youngest of the family goes on a Christmas errand to the cabins and the joy her visit occasions.

IRON SHIP BUILDING.—There have been 250 iron vessels built in the United States since 1868. Last year 42 were built—the largest number in any one year. They were built of American iron, too, which is far better than English iron.

Young Folks' Column.

Christmas Holiday.

[Written for RURAL PRESS by LAURA J. DAKIN.]

Christmas trees, faster grow!
In your woody sedges;
Grow so green, grow so strong,
We shall come for you ere long.

Christmas reindeer, faster go!
With your gayest sledges;
Bring old Santa Claus again,
He's the very best of men.

Basketmaker, make them stout!
All the basket handles;
For you know not the treasure
They'll soon bear for our pleasure.

Chandler, chandler, count them out!
All the waxen candles;
For you know they must shine
Where the Christmas garlands twine.

Christmas day, now 'tis dawning
All the wile word d over!
Christmas day, children's day,
Who shall claim it if not they?

Merry, merry Christmas morning!
Come home, every rover;
Be joyous-hearted while you may,
For we call it holiday.

How Nellie Did a Christmas Gift for Mamma.

[Written for the RURAL PRESS by I. H.]

It was the week before Christmas, and the children were all as busy as they could be, for now they were old enough to give presents as well as to receive them, and for a month past they had been planning the wonderful things which were to be bought or made for papa, mamma, Aunt Ellen and each other. There was Tom, who had such a charming talent for working in wood. With his turning lathe and bracket saw he could make almost anything, and now he was shut up in his little workshop early and late, and woe be to anyone who should dare to open the door! Then there was Harry, whose hands had never been of much use to himself or anyone else. No one expected him to make anything worth giving away, but Harry had a talent, too, which proved very serviceable at Christmas times, on birthdays and all such occasions. He knew how to keep his money till he found a good use for it. So his purse was never empty, and now there was not a day when he did not come home with some mysterious parcel which he smuggled up stairs and hid away where no one could ever find it. Next came Mary, who was 12 years old, and already as neat and skillful in using her needle as many a woman twice her age. Mary was one of those wise people, too, who begin early and are not in a hurry at the last. So safely laid away in her drawer she had a comforter for papa, two pretty neckties she had embroidered for the boys, a toilet pin cushion for Aunt Ellen, and now she had only a silk iron-holder to quilt on the sewing machine for mamma and something to make for Nellie.

I have said that all the children were busy with their preparations for Christmas; but I ought to have said all except the little six-year-old Nellie. It had never come into her head before that she was to do anything more than open her little plump hands to take whatever should be given her. She was looking forward to Christmas as eagerly as any one but, as yet she had only thought of what she was to get from the Christmas tree which had been promised them.

Now, however, as she stood beside Mary and watched her putting the last stitches in the pretty iron-holder, it suddenly flashed upon her that it must be pleasant to give as well as to receive.

"O, Mamie," she said, "I wish I could make something nice for mamma; I didn't never give her a present in all my life."

"You!" said her sister, laughing, "why, you're too little to give anything but kisses."

"No, I'm not. I'm going to ask Aunt Ellie if I am."

And just then the door opened, and in came Aunt Ellen herself, mamma's young sister who lived with them, and who was the children's dearest friend and confidant.

"Auntie," said her little namesake, climbing up into her lap as soon as she was seated by the fire, "am I too little to give mamma a Christmas gift?"

"Why, no, indeed!" said Aunt Ellen. "A great big girl like you too little to give a present? Who ever heard of such a thing?"

"There, now, Mamie," said Nellie, triumphantly, "I told you so."

"But what in the world can she give?" asked Mamie. "She spends every five cents she gets for candy, and she can't make anything."

"Let me see," said Aunt Ellen. "Tom and Mamie make their Christmas presents; careful Harry saves all his pocket-money to buy his. Suppose my little Nell should try to do hers for mamma."

Nellie opened her blue eyes very wide indeed.

"Do a Christmas present, auntie?—how can anyone do a Christmas present?"

"Well, I will tell you. Once upon a time—"



THE CHILDREN'S CHRISTMAS EVE AND MORNING.

[Written for the RURAL PRESS by ADA E. TAYLOR.]

Four little stockings, all hung in a row,
Pretty and dainty and white as the snow;
The children's small fingers that placed each one there
Had been clasped long ago in their evening prayer.
Their blue eyes had danced with a clear sparkling light,
As they thought of to-morrow, so full of delight;
They talked of their stockings—the theme of their joys—
So full of nice candies and beautiful toys;
Their small childish prattle was heard everywhere,
Their laughter rang out on the calm evening air;
Blue eyes soon grew sleepy—no longer now bright—
They all kissed each other and whispered good night;
On soft, downy pillows their curly heads rest,
An innocent heart beats in each tiny breast.

there was anything in the world she liked, it was a story. "Once upon a time there was a little boy who wanted to give his mother a Christmas gift. He was very poor—so poor that he never had a cent he could spend as he liked—and, like you, he was too little to make anything; but he loved his mother so dearly that he could not bear to have Christmas come without his doing something for her. So what do you think he did? The poor mother was so busy trying to earn money to feed and clothe her children that she had no time to keep things looking nice and orderly about their poor little house; and yet her little boy knew that she liked to see everything neat and tidy as well as anybody else. Well, the day before Christmas he set to work and swept up all the dead leaves from the yard, and gathered together all the stones and sticks that were scattered about, and fastened up the straggling rose bushes and mended the broken step, so that the whole place looked quite different; and when his mother looked out and saw his work, and smiled and said how nice it was, he ran and put his arms around her neck, and said: 'That is your Christmas gift, dear mother; it is all I have to give you.'"

"Is that all?" said Nellie when her aunt had finished.

"Yes, dear, that is all; and now you know what it is to do a Christmas gift."

"But our yard is always nice," said Nellie; "I can't do that."

"No, you can't do that; but think a little and see if there is not something you can do; it is much nicer to think ourselves what we will give than to have any one else tell us."

Nellie set herself resolutely to think; she looked straight into the fire for five whole minutes without moving, which was something wonderful for her. The clock ticked and pussy purred, and there was no other sound. But at last she gave a jump, clapped her hands, and exclaimed, "Oh, I know, I know I can do something Mamie will like ever so much, and I'm not going to tell anybody."

At that both Aunt Ellen and Mary laughed, for the idea of little Nell having a secret all to herself seemed very funny.

However, she really kept this one so well that no one in the house found it out until Christmas morning, although all the family knew from her conduct that there was something in her little head. For when evening came Nellie was in a great hurry to go to bed, a very unusual thing, as she generally liked to sit up till the last minute mamma would allow.

"What is it, Nell?" said papa, "do you think Christmas will come faster if you go to bed early?"

"It's very secret, papa," said the little girl, gravely.

"Oh! dear; that is it, is it? Well, I hope we have all too good manners to pry into other people's secrets. So good night, little lady." Up stairs went Nellie.

"I can go to bed myself, mamma, if you will unfasten my buttons," she said; and mamma, who liked to see children help themselves, and who had to put the baby to sleep, let her have her own way.

Now, I must tell you that Nellie had a very careless fashion of throwing down her clothes anywhere that she happened to be standing when she took them off. Very often some one going into the children's room in the dark would tumble over a shoe lying in the middle of the floor, or even step upon a white apron or a little dress, and many and many a time had there been a search in the morning for a missing stocking or a lost gaiter which could not be

The morning dawned brightly with the clear, cloudless skies.
The sun kissed the sleepers and opened their eyes.
A scamper for stockings, a shout full of glee!
Oh, what a surprise was the great Christmas tree!
A shimmering mass, in the bright morning sun.
"Hurrah!" cried the children, for Christmas has come.
Be happy, young hearts, while ever you may,
For every short year takes you farther away
From that one youthful time, that so lightly has flown.
Enjoy it, dear ones, while you call it thine own;
Clouds may overshadow the bright beaming sky,
The Christmas may come when you'll look back and sigh,
"Backward, turn backward, O! time, in your flight,
Make me a child again just for to-night."

found till the whole room had been ransacked and the bed clothes taken off the bed and shaken.

I wonder if you can guess Nellie's secret and find out what she intended to do for mamma's Christmas present when I tell you what she did on the night of which I am writing. She brought a chair and placed it at the foot of the bed; then she took off her apron, folded it neatly and laid it down; her dress followed, then the little skirts and drawers, and finally she hung her stockings over the back of the chair, put her shoes under it, and, having said her prayers, she laid her head on the pillow with a sigh of satisfaction and went to sleep. It was certainly very pleasant next morning to find everything ready to her hand without the least trouble of searching, so pleasant that the second night it seemed no work at all to put them where they should be, and so Nellie persevered in her good resolution for six nights, and the last of these was Christmas eve.

Bright and early on Christmas morning the children were awake, eager to be up and dressed and to see the Christmas tree, which was to be lighted in the darkened parlor before breakfast. But Nellie would not get up till mamma should come to her. This she insisted upon so strongly that Mary was obliged to go and call her mother.

"What is the matter?" said mamma in alarm; "is she not well?"

"Oh, yes, I am sure she is, for she is laughing and jumping about the bed, but she says she can't get up without spoiling your present."

Of course mamma went at once to see the meaning of all this mystery.

"What is it, Nellie?" she asked.

"Oh, mamma, it is my Christmas gift for you," said Nellie, with her eyes shining. "I thought you would like it. There it is on the chair. Don't you see? I have put my clothes there just as well every night for a whole week!"

"Why, you little darling!" said her mamma, catching her up and kissing her, "indeed I do like it better than anything you could have given me. But what made you think of such a thing?"

"Aunt Ellie did," said Nellie honestly. "She told me a story, and then told me to think, and I thought of that."

The little thinker got another kiss, and then papa was brought to see the present she had given mamma, and after that she was willing to get up and dress.

It would take quite too long to tell you about the Christmas tree which Aunt Ellen had lighted up while all this was going on. There were pretty things and useful things for every member of the family, and Nellie was in ecstasies over a beautiful little bedstead which Tom had made for her doll, and Aunt Ellen and Mary had fitted up with sheets and blankets a lovely patch-work quilt and ruffled pillow cases, and there beside it stood a little chair already for dollie's clothes when she should take them off at night.

Mamma had a handsome shawl from papa, a pair of brackets carved by Tom, a bottle of eau-de-cologne from Harry, a lovely book from Aunt Ellen and Mary's pretty iron-holder, and yet after she had seen and admired them all she said that the very nicest present she had received was the one Nellie had given her.

"I hope you don't mean to take it back again, Nellie, do you?" asked papa.

"No, indeed," said Nellie, "you can keep it always, mamma. I'm going to do my Christmas present over every night forever and ever."

Walnut Creek.

Domestic Economy

A Christmas Dinner.

At the Boston Cooking School Mrs. Lincoln gave "a dinner" for the lesson. The bill of fare included roast goose with potato stuffing, apple sauce, stewed celery and English plum pudding with sauce. "In this lesson," said Mrs. Lincoln, "it is necessary to begin with the last thing, so I will first give you the rule for the

Plum Pudding.

Then we will make it. Four eggs, one half pound of coffee sugar, which is, in measurement, a coffee-cup packed hard and full, one-half pound of suet chopped very fine and free from strings, two cups of stoned raisins, one-half pound of currants, two ounces of citron sliced thin, one-half cup of molasses, one half-cup of brandy, two even teaspoonsful of salt, two of grated nutmeg, one of cloves, five butter crackers soaked over night in a pint of milk, and the grated rind of half a lemon. This is only one-half the rule; when you make it for yourselves double the quantity, as the pudding will keep a long time. The fruit should be prepared and the suet chopped the night before. Previous to mixing the pudding, slightly flour the fruit as for a cake. Rub the soaked crackers through a colander, add the chopped suet, the spices and grated lemon rind; stir well together; add the sugar, molasses and brandy; beat the whites and yolks of the eggs separately, and add to the pudding, and, last of all, the fruit. Wring the pudding cloth out of water as hot as you can bear it, flour it well, pour the pudding into it, tie tightly with strong piece of twine, leaving room for the pudding to swell. Open the ends of the bag, and flour all above the opening, so that the bag will be sealed, and the water will be unable to penetrate the pudding. Have a kettle of boiling water, also a teakettle, so that the water in the pudding boiler may be replenished. Have a tin plate in the bottom of the kettle, so that the pudding will not come too close to the fire, and during the first half hour turn the pudding every five minutes to prevent the fruit from settling to one place. While the pudding is boiling replenish the fire often with a few pieces of coal at a time, so as not to cool it even momentarily, as the success of the pudding depends upon the boiling. It should boil at least four hours, and it is better to give it two hours more. For the sauce, take one-half a pound each of butter and brown sugar; cream them, then set over a boiling teakettle until it becomes liquid, add the well-beaten yolk of one egg, stir until it thickens, flavor with nutmeg and add a gill of brandy or wine. When you send the pudding to the table decorate it with bleached almonds and a sprig of holly set atop.

Roast Goose.

Now for the goose. When this comes to the market it is adorned with head, legs and wings, and is not drawn. Singe it well, pick out the pin-feathers, cut off the head, legs and wings; wash thoroughly in strong soap-suds; if the water is hard, add soda; this is done in order to open the pores and render the oil more easy to be extracted; draw it, taking care not to break the gall bladder. Wash and rinse the inside in clear water and wipe dry. Prepare the dressing by mashing potatoes and mixing with a chopped onion, a little sage, pepper and salt; the seasoning should always be governed by the taste. Stuff the goose with this dressing, sew together, using a carpet needle and No. 16 or 20 thread, instead of a darning needle and twine, as it is as strong and does not make such large holes in the skin; skewer the legs and wings closely to the sides, put on a rack in the dripping-pan, lay two thin slices of salt pork across the back, and set into the oven for three-quarters of an hour, or until the oil is well extracted; it may seem strange to you that the pork should be used on a fowl so oily, but the hot pork helps to draw the fat out and facilitates matters.

When the oil is extracted from the oven, pour off the oil, salt and dredge the goose with flour, shake a good quantity of flour over the pan, then set in the oven again. When the flour is well browned pour a little boiling water into the pan and baste well. Allow about ten minutes to the pound in roasting. When nearly done baste with melted butter and dredge with flour, that gives the peculiar frothy appearance that every well-conditioned roasted goose should have. While the goose is roasting boil giblets until tender, chop them fine and set them away until you are ready to make the gravy. After you have taken the goose from the oven, stir the pan, and if it is not thick enough mix a little flour and water and add it to the gravy in the pan, let it boil for a moment, then pour in the minced giblets. In preparing celery, select from a bunch of celery the whitest, finest parts, cut into pieces an inch long, boil in salted water until tender; this will take from half to three-quarters of an hour, depending on the freshness of the celery; for the sauce, strain into one pint of cream the broken yolks of two eggs, set in a furnace boiler over hot water until the cream thickens, salt to taste and pour over the celery when it is done.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 12 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the above sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any quarterly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.50	\$2.20	\$5.00
Half inch (1 square).....	\$.15	\$.30	1.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.
DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STRONG

SAN FRANCISCO:

Saturday, December 23, 1882

TABLE OF CONTENTS.

ILLUSTRATIONS.—Gathering the Holly, 485. Plantation Christmas Scenes, 490. The Children's Christmas Eve and Morning, 491. Design for Stable for Village or Suburban Situation, 493. Fashions, 501.

EDITORIALS.—The Week; The Rural for 1883; Butter in New Orleans; County Dairymen's Societies; State Dairymen's Association, 492. The Dairymen's Convention; A Neat Stable, 493.

CORRESPONDENCE.—Oranges, Olives and Huasco Grapes, 486.

FLORICULTURE.—Dutch Bulbs; The Bulb Garden, 486.

METEOROLOGICAL.—Causes of Dry Zones, 486.

HORTICULTURE.—The Fruit Growers' Convention, 487-94.

PATRONS OF HUSBANDRY.—Co-operation; Grange Elections; Temescal Grange; The Debris Question, 483.

AGRICULTURAL NOTES.—From the various counties of California and Nevada, 489.

NEWS IN BRIEF.—on page 439 and other pages.

HOME CIRCLE.—Christmas Carol (Poetry); Poor Old Aunt Crows; A Worthy Charity; Christmas in the South, 490.

YOUNG FOLKS' COLUMN.—Christmas Holiday (Poetry); How Nellie Did a Christmas Gift for Mamma; The Children's Christmas Eve and Morning (Poetry), 491.

DOMESTIC ECONOMY.—A Christmas Dinner, 491.

QUERIES AND REPLIES.—An Insecticide; A Point for Road Makers; Evergreen Millet and Johnson Grass; Vines on Dry Hills; Experience with Incubators; Durocs Again, Essex Swine, 492.

MISCELLANEOUS.—Christmas (Poetry); Mrs. Perry's Lodgers, 496-97. Relative Longevity in Various Occupations; Holiday Fashions in San Francisco; Curious Patents, 497. Christmas Song (Poetry); Christmas, 500. Incoming Fashions, 501.

Business Announcements.

Merchant Tailor—Joe Pohelm, S. F.
Musical Gifts—Oliver Ditson & Co., Boston.
Catahr Remedy—D. Langell, Apple Creek, Ohio.
Diamonds—E. G. Rideout & Co., N. Y.
Artificial Limbs—Chas. M. Evans, Cincinnati, O.
Agents Wanted—E. G. Rideout & Co., N. Y.
Seeds—D. M. Ferry & Co., Detroit, Mich.
Restorative—Ewin Ferris & Co., Cincinnati, O.
Trees—Thos. Meehan, Germantown, Pa.
Situation Wanted—D. Mattison, Spiritwood, D. T.
Seed Drill—Everett & Small, Boston, Mass.
Removal—Batchelor and Wylie, S. F.

The Week.

Again come the grand old holidays, bringing joy to the young, new youth to the old and good cheer to all. It is the season which most of all lifts us out of the worn channels of our lives, and bids us look out upon the world around us. It is the time when the walls of our selfishness crack, and let something of the light of our better natures to gleam through. It is at Christmas, if at any time, we lose ourselves and forget our own gratification in the impulse to make other hearts glad and other lives brighter. What a wealth of precious treasures are the little hearts which glow with the joys of Christmas time. Who can compute the value of the great stream of pure joy which is poured upon humanity by the holiday season?

Let all enjoy the days. A "merry Christmas" in every home to which our journal comes! We have given our pages this week something of a Christmas quality, and our readers will find thoughts in full harmony with the season, and fitted to increase the enjoyment and appreciation of the significance of the happy day. Let it be a happy day indeed to all!

The Rural for 1883.

The many tributes to the value of the RURAL PRESS which we have received from readers, assure us that our promises of a year ago have been fulfilled. This induces us to continue and extend our efforts, for there is nothing so inspiring and encouraging as the approval of those whom we labor to please. The RURAL PRESS for 1882 has contained more pages than any previous year; it has presented important subjects more fully and carefully; it has secured the aid and co-operation of a much greater number of able and practical contributors—and in short, so our readers say, has been a credit to the State and an invaluable aid in the advancement of our agricultural industry, and an influence in the improvement of our homes and the elevation of our people.

Now we propose to make the RURAL PRESS for 1883 much better than the volume which is now closing, and in this effort we bespeak the aid and support of all in whose interest we work. By the aid of special contributors, who are experts in the matters on which they write, we propose to present by far the best collection of farm and home literature which has ever been furnished to Pacific coast readers.

Instead of the regular sized sixteen page sheet of our weekly issues, we shall repeatedly print enlarged editions of

From 24 to 32 Pages,

On special themes which are most timely. They will be in the main as follows, with such changes as may be necessary:

January 13—Agricultural Review.

Statistics of production of 1882, etc., and a forecast of prospects for 1883, so far as discernible.

February 3—Dairy Edition.

The extent of the dairy interests, their practices and materials, the progress of the effort against bogus butter, etc.

February 24—Patriotic Edition.

Washington's birthday, with reviews and illustrations appropriate to the occasion; also references to arboriculture, floriculture, etc., which will be seasonable.

March 10—Southern California Edition.

Semi-tropical illustrations and matters of historical, climatic interest concerning southern California, its natural wealth and resources, and its wonderful recent advancement.

April 7—Spring Work.

Agricultural machinery, haying and harvesting, home seeking, labor statistics, review of manufactures, markets, etc.

May 5—Live Stock Edition.

Reviews of all kinds of haired and feathered farm stock, with notes on breeding, feeding, treatment of diseases, etc.

May 26—Tourist's Edition.

Fine illustrations of Pacific coast scenery, camping sketches and information, watering places at home and abroad, etc.

June 16—Harvest Edition.

Thrashing machinery, grain cleaners, etc., the outlook for grain values and the records of former years.

The foregoing is an outline of the work, but we shall reserve the right to do much better, if we can. Readers may expect a vigorous and wide-awake journal, and may recommend it as such to their friends and neighbors.

AMERICAN AGRICULTURAL ASSOCIATION.—A dispatch from Chicago Tuesday says: The annual convention of the American Agricultural Association began a three days' session here this morning. Mayor Harrison welcomed the delegates, who are from all parts of the country, and after an address by the President, Colonel N. S. Sprague, of Vermont, the business of the convention began. The Secretary read a communication from Amos Stoffer, of Waynesboro, Pa., on the superiority of evaporated fruit over dried fruit. M. Kulshoff, of Russia, who is studying the American system of agriculture, was introduced to the convention. A letter from T. Corwin Anderson, shorthorn breeder of Kentucky, was read by the Secretary, urging the convention to bring the attention of Congress to the necessity of legislation against the lung plague in cattle. Letters of regret from General U. S. Grant and Hon. S. J. Tilden were read. Papers were read by General W. W. Burns, U. S. A., on the preservation of moisture for seasonable rainfall; by George Greig, of Scotland, Superintendent of Agriculture to the Duke of Sutherland, on the subject of reclamation of hill waste land; by S. Nugent Townsend, of the London Field, on the immense agricultural facilities of this country, and by Wesley Morehead, of Des Moines, Iowa, on hay. All the papers were discussed.

NEW MINT REGULATION.—The regulations governing the Mints and assay offices have been amended, so that on and after the 1st of January no charge at the assay office will be collected from depositors of gold for the transportation of their bullion to the Mint, for the coinage cost of which, under the provisions of the existing law, as construed by the Director of the Mint and the Secretary of the Treasury, is required to be paid from the appropriation for freight on bullion and coin between the Mints and assay offices.

Butter in New Orleans.

We have alluded several times to the possibility of a market for our surplus butter in New Orleans and points to be reached from there by rail and water. At present most of all the butter used that city comes from the Western States. In former years New York had almost complete control of the New Orleans market, and that was the case especially with fine goods. In the last few years this order of things has been changed, and almost every pound of fine butter consumed there comes from the West. Its flavor is preserved by being transported rapidly in refrigerator cars, and it reaches here in four or five days after coming from the churn. This enables dealers to secure fresh stock, and places them on the same footing with dealers throughout the East and West.

We learn from a recent article on the subject in the New Orleans Times-Democrat: "Dairy butter always has good sale, and there is never any accumulation of it if quality is anywhere passable. The butter business is constantly increasing, and in the past few years the export trade has improved wonderfully. This trade could be extended with very little exertion on the part of the New Orleans merchants, as several lines of steamships are established and afford every facility to shippers. Refrigerator lines from the West, together with cold storage facilities here, should certainly stimulate some of our enterprising ship owners to place refrigerators on their vessels, which would undoubtedly be a paying investment on their part, as butter could then be transported safely to any of the tropical countries, and New Orleans could then be placed on a footing with New York, and, with time and distance greatly favoring New Orleans, the latter should enjoy a large trade in dairy products.

These points about refrigerator cars, cold storage, etc., have more application to butter sent from the upper Mississippi valley than that which might be sent from this State, because we should ship in the winter or early in the spring before the flow of milk starts in the Eastern States. We do not see why a trade of this kind should not be built up.

The following is a collection of figures concerning the New Orleans butter trade for the present year. The receipts of butter this year comprise 50,902 packages, against 58,452 packages last year. The course of prices during the year has been as follows: Western creamery, fancy, per pound, 26@55c; Western creamery, choice, 24@40c; Western dairy choice, 22@33c; Western dairy, prime, 20@28c. The prices for last year were: Western creamery, fancy, 22@40c; do, choice, 30@35c; Western dairy, choice, 18@28c; do, prime, 15@25c.

County Dairymen's Societies.

In order to extend the organization of dairymen in local societies in their respective counties, the Secretary of the State Society was requested to draft simple articles of association which could be used by the county societies, with perhaps such slight amendments as seemed desirable to make. If all the dairy counties will organize they will find that they will be able to extend much greater influence in the support and protection of their industry than if they depended upon individual action. Meetings should be called at once, and societies organized before the session of the Legislature opens. The following is the

Proposed Constitution for County Dairymen's Societies.

PREAMBLE: Whereas, in union and association of those following similar pursuits there is wisdom and strength, we, the undersigned, engaged in the production and sale of genuine dairy products, do hereby associate ourselves together to advance our mutual interests and to protect our industry from whatever threatens its progress and prosperity. To give due form to our organization, we adopt the following articles of association:

ART. I. This organization shall be known as the Dairymen's Society of ——— county.

ART. II. Those only are eligible to membership in this society who are interested in the production or sale of legitimate dairy products, and membership is to be gained by signing the articles of association and paying an annual membership fee of \$1. The membership of any individual may be cancelled by a two-thirds vote at any regular meeting.

ART. III. The officers of this society shall be a President, Vice President, Secretary, Treasurer, and a Board of five Directors, who, with the President and Secretary, shall constitute the Executive Committee of the society. The duties of these officers shall be such as are usually prescribed in similar societies.

ART. IV. Time and place of meeting.—The regular meetings of this society will be held on ——— at ———. Special meetings may be held at any time at the call of the President or of three Directors.

ART. V. The order of business at meetings shall be: 1, reading minutes of previous meeting; 2, election of officers; 3, reports of committees; 4, unfinished business; 5, new business; 6, discussion of stated subject; 7, adjournment.

ART. VI. ——— members shall constitute a quorum for the transaction of business.

ART. VII. These Articles may be amended, or new Articles adopted, by a two-thirds vote at any regular meeting.

ORDERS have been issued changing the terminus of the postal route over the Southern Pacific railroad from Deming to Los Angeles. The terminus in future will be San Francisco, at which place all postal route agents are to report hereafter. This will compel the agents residing in Los Angeles to move to this city or resign.

QUERIES AND REPLIES.

An Insecticide.

EDITORS PRESS:—By request of Mr. McFarland, of Pine Grove, I send you the following recipe, which he has tried thoroughly and knows to be good. He thinks it will kill any kind of insects. I saw his fruit trees, and they look very thrifty. Codlin moth and woolly aphid are troublesome in that section, and he thinks that washing his trees with the mixture saved his fruit. The following is the recipe: Take fresh cow manure, put it in a barrel, then put in sour milk enough to make it thin; stir it thoroughly, and with an old broom or whitewash brush give the trees a good coat every month, commencing the first of March, and wash the trees every month until November. When the trees are in bloom to five gallons of the above mixture put one pound of sulphur and sprinkle the trees. If sour milk cannot be obtained, water may be used, but the milk is better.—J. W.

A Point for Road Makers.

EDITORS PRESS:—May I send through your widely circulated PRESS a hint to those who plan and care for our public roads? Some of our roads are now blessed with a chance to drive on the sides of the raised bed in the middle, and if more, or all, roads could be worked with an eye to two or three tracks, it would pay well for the small extra care in grading. The middle track very naturally takes the bulk of the work and travel; but how convenient at all times, when meeting or passing teams, to have a chance to safely swing off to the side track, and if it is a smooth, moderately sidling, though ungraveled strip, will take much of the summer light wagon travel and save the gravelled bed much wear and dust.—W., San Jose, Cal.

Evergreen Millet and Johnson Grass.

EDITORS PRESS:—Will you or some of your readers be kind enough to answer a few questions for me in regard to evergreen millet (*Banicum spectabile*)? Is it so tenacious of life that it will spread rapidly on ground that is not irrigated, and would it be safe to sow it on a small ranch—a colony lot—for instance, near trees, vines, alfalfa, etc.? Is it more valuable than alfalfa as a forage plant? Do the same facts pertain to Johnson grass that are peculiar to evergreen millet?—J. H. SAWALL, Fresno, Cal.

Let those having experience relate it.

Vines on Dry Hills.

EDITORS PRESS:—We have quite a number of native wild grape seedlings; also a few of the fox grape of Missouri, but are uncertain whether or not they will thrive on the unirrigated hills in this locality. They are in a nursery on low ground, where ordinary varieties mildew. If some one who has had some experience will give us information through your column, he will confer a favor.—B. J. F., Lincoln, Placer Co.

Experience With Incubators.

EDITORS PRESS:—Will some of the readers of the PRESS please give us the benefit of their experience in hatching chickens in an incubator and raising them, and oblige a subscriber?—A. P. MERRITT, Tulare, Cal.

Durocs Again.

EDITORS PRESS:—Can you inform me through your valuable paper who has the Duroc or red hog for sale, as I would like to correspond with them for the purpose of buying?—R. S. SWIER, Lone City, Cal.

These hogs should be advertised; there is much call for them. Whoever has them for sale should inform our correspondent.

Essex Swine.

EDITORS PRESS:—Is there a breeder of Essex hogs in California? If so, why does he not advertise in your valuable paper? Please give the public information on this subject.—N. W. MOTHERSALL, Hanford, Cal.

Essex hogs should certainly be more heard of, and our correspondent's note is commended to the attention of breeders.

State Dairymen's Association.

At the meeting of the State Dairymen's Association last week it was decided that lists should be sent out to obtain the signatures of dairymen, who, by a going and paying an annual fee of one dollar, would become full members of the State society. Such lists are now ready for mailing, and all dairymen are requested to send for them to use in their neighborhoods. It is impossible to get names in all the districts, so if any dairymen who will aid the cause by taking down names in his neighborhood will write to the Secretary the documents will be sent at once. The society should have a thousand members before the first of January, and then an appeal backed by such a body of men cannot well be disregarded. Let everyone who wishes to do something to preserve his industry from the encroachments of false butter take part in the movement. Address E. J. Wickson, Secretary, office PACIFIC RURAL PRESS, San Francisco.

The issue is now uppermost in California, but it threatens the whole coast, and the co-operation of dairymen all over the coast is desired.

THE Ministerial Union have resolved to recommend to the Freeholders the introduction of local option into the charter, each precinct to have the power to determine whether liquor licenses should be granted for that fraction of the ward. Licenses at any rate to be placed at a high figure.

PENDING the action of Congress on the reduction of the tobacco tax, the tobacco trade of the country is in a very unsettled state, and manufacturers will suffer severely unless something is done speedily.

The Dairymen's Convention.

The Closing Session

(Reported Stenographically for the RURAL PRESS.)

W. B. Gaffey, of Santa Cruz, introduced a resolution that all dairymen be compelled to stamp the true weight upon all forms of butter.

Mr. Gaffey: This is one of the most important resolutions introduced into any society in California. I am the first man that called this Dairymen's Convention. I made the call the 21st of last October. I believe in the motto "If you command, you must obey." We came here from the different counties here represented at a great expense and inconvenience to fight against a fraud, therefore we ought not to participate in a fraud. There is not a roll of natural butter offered for sale in San Francisco but what is short weight. This is of no profit whatever to the dairymen. We pay railway charges on a hundred pounds, and that box only contains 90, and sometimes only 88. The groceryman sells a roll to the consumers of this city as two pounds. This is of no interest to the dairymen, but if we come here to battle against oleomargarine, we must not lend our services to participate in a fraud. Every roll of butter offered for sale in the city of San Francisco ought to be marked with its true weight, and I think there is hardly a dairymen but what it would be of benefit to.

Mr. Hebbon: I think it would work great injury to the dairymen to stamp the weight of each roll. I don't see why we should impose any additional burdens upon ourselves.

Mr. DeLong: We are now running 11 dairies, and can say that no two lots weigh alike. We participate in the fraud that is committed on the community, but are helpless. If the dairymen would all adopt the same sized butter molds, I think it would be the easiest way. A box of butter weighing 50 lbs. at the dairy will not weigh within a pound or a pound and a half of that when brought to the city. The facts are that butter that will weigh from 88 to 90 lbs. will bring three cents more than butter which weighs 100 lbs. This is a serious question, and the quicker we settle it the better it will be. Get a uniform sized mold, and compel all of us to mold in that sized mold. Butter which weighs 96 lbs. in winter would weigh 92 in summer. The cause of this is evaporation in transportation. If we get bulk of butter alike, it will weigh like from all producers. The commission merchant is honest; the retailers are to blame. They are seeking the light weight butter. If we used a uniform mold there would be a uniform price and uniform weight.

Mr. Gaffey: How will this uniform mold reach one not a member of this association? We must have a law in the Legislature to prevent any one from selling light weight butter.

Judge Bowers: It strikes me that this is something the dairymen has nothing to do with. If he is unfortunate enough to sell to the commission merchant for less than its weight, it is at his own expense. It is true that the retailers here in this city sell a roll for two pounds, but the dairymen does not sell a short roll for two pounds. It is something the dairymen have nothing to do with. Of course you would like to see the retailer sell it fairly, but if you make it full weight he may cut it off. The dairymen only gets paid for the number of pounds he delivers. If he sends a box of short weight butter, he don't get paid for any more pounds than he sends.

Mr. Hollis Hitchcock: I concur with Judge Bowers in some respects, in others I cannot. He is a better lawyer and speaker, but he don't understand any more about dairying than I do. He is wrong in one respect—that the dairymen have nothing to do with this swindle. I claim we are directly interested. Every box of butter shipped to San Francisco averages \$1 a box for freight, and out of every box we are minus 10 cents. We are swindled out of \$4,000 or

\$5,000 a year in this way. We are not only swindled in that way, but are lending ourselves to a swindle which the groceryman is perpetrating upon his customer. I think we must have a uniform weight—two pounds to the roll. We must have a stamp that will be uniform—a mold of the weight of two pounds, and let it vary with the season. We can't go to work and get a stamp and mark each roll. Short roll butter is a swindle, and it falls in the wrong place. It falls on the poor man who pays for two pounds and don't get it.

Mr. DeLong then offered the following as a substitute for Mr. Gaffey's resolution:

Resolved, That we petition the Legislature to pass a law requiring all dairymen to use a uniform mold to produce rolls weighing as nearly two pounds as possible, that the fraud of short weights on the public be abated.

The resolution was adopted.

A Slander on the Quality of California Butter.

The following was introduced by Mr. Hebbon:

Resolved, That we have read with indignation the slander upon our dairy interest in the editorial columns of the San Francisco Evening Post, in which it is declared that butter consumers in order to secure first-class butter are obliged to import it from the East. We call

the dairymen in this State are not accounted for. If the commission merchant returns them he gets them. It is a known fact among the dairymen that 10 or 20 % of the boxes are lost each year. They cost from two to three dollars when first in use; and I think we, as a body, ought to do something. I find the commission merchants are anxious to have us do something. The commission men are anxious for the consignees to get the boxes back. The plan I would suggest is that we as a body take some steps whereby we ship our butter to none who will not return our boxes.

Dr. Lyford: I would suggest that the Dairy Association make the same requirements as far as their boxes are concerned as the fruit men do. Why can we not protect ourselves in the same way by requiring the purchaser to make a deposit to cover the cost of the box? I would move that a committee of three be appointed to take under consideration the matter of the return of butter boxes, and to secure their prompt return, and that this committee report at the next session of the association.

The resolution was adopted, and the Chair then appointed Hollis Hitchcock, Dr. Lyford and C. H. Smith to act on that committee.

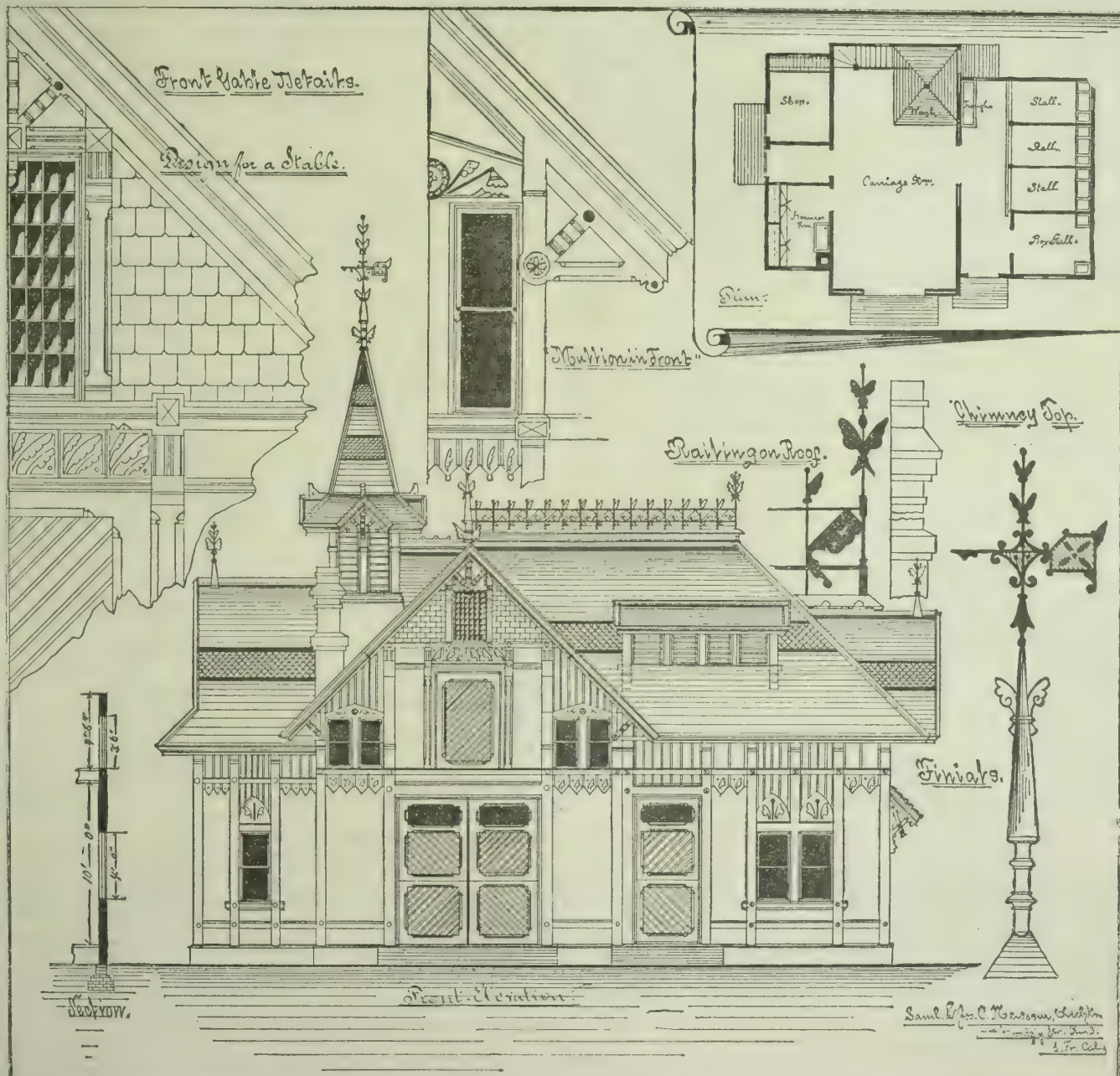
per cent. If you undertake to pass a law compelling every dairymen to have his rolls weigh two pounds, he will lose two and one-half per cent. If you undertake to make butter a certain weight you will have to make it overweight to reach that weight. If the weather is cold and damp there is but slight shrinkage. If it is dry and windy there is considerable shrinkage.

The resolution was laid on the table, as the subject was covered by the resolution for uniform molds as reported above.

The convention then went into executive session, in which ways and means for accomplishing the work in the dairymen's interest were discussed, and then the convention adjourned subject to the call of the Executive Committee, or until the next annual meeting.

A Neat Stable.

Perhaps some of our village or suburban readers are thinking of building a small stable to accommodate a few animals, and desire something ornamental to harmonize with the style of their grounds. They may like the building



DESIGN FOR STABLE FOR VILLAGE OR SUBURBAN SITUATION, BY S. & J. C. NEWSOM, ARCHITECTS.

attention to the indisputable fact that the movement of choice butter is from California to the East in large lots, and not the reverse, and that the butter brought here from the East is of low grade and largely used for cooking purposes. We also announce the decision by well-known experts that in no city of the United States is strictly choice butter so generally available as in San Francisco, nor the average quality of the butter consumed so high; and that the article in question could only have originated in the ignorance or malice of the writer.

The resolution was adopted.

The Charge for Casing Cheese.

The discussion at the afternoon session was opened by Mr. Hebbon. He said: It is customary with many commission merchants to charge half a cent casing. In many instances it is not cased at all, and in many instances the casing is charged to the purchaser. I think this convention should take action in regard to this. Another thing in connection with this: that in our returns we are charged commission on that casing, which is of itself no small item. I think we might effect some benefit to ourselves in that respect.

Mr. Hebbon then moved that a committee of three be appointed to confer with the leading commission men in this city in regard to the casing of goods, to effect a remedy. The motion was adopted, and J. R. Hebbon, D. M. Pyle and Horace Gushee were appointed.

Loss of Butter Boxes.

Hollis Hitchcock: The butter boxes of all

Dr. Lyford offered the following resolution: That the Legislative Committee be instructed to memorialize the Legislature to make it a penal offense for the seller of the roll or cube to sell the same for any greater weight than is contained in each roll or cube.

Mr. Mack: I think the previous resolution covers the whole ground.

Mr. Johnston: I am in favor of uniform weight in butter. I make all my butter as near two pounds as possible in the roll. I sell it by the roll, and will not sell it any other way.

Hollis Hitchcock: In regard to the light-weight butter, I have sold butter made in the same molds and same dairy of 90 lbs. for 2½ cents more than that which made 98 lbs. I contend that the consumer actually loses, or how can the purchaser pay more for the 90-lb. than the 98-lb. rolls? He must sell it by the roll and make the difference.

J. H. Regler: This is a question of vital importance. I tell you that, so far as undertaking to make butter uniform, trying to sell it two pounds to the roll, it will work an injury to the dairymen, and I know whereof I speak. I pretend to say that it is impossible to make rolls weigh evenly out of the same mold at different seasons of the year. You can take butter that is made from the same mold and same dairy at different seasons, and it will differ five

this building they may apply to the architects or at this office.

ANTIQUITY OF ROPES.—Archaeologists know that ropes date from a very remote period, and had reached a date of considerable perfection at the dawn of the historical era. The first ropes were probably made from the fibers of the inner bark of trees, from grasses, or from the hides of animals. Among the relics of the ancient Egyptians have been found sculptures showing the process of rope manufacture practiced more than 4,000 years ago, while the oldest records of that people represent well-made ropes capable of sustaining enormous burdens. It appears that flax and the fibers of the date tree were employed for those ropes.

RECLAMATION OF THE ZUYDER ZEE.—The preliminary surveys for the proposed reclamation of the Zuyder Zee have been finished, and the work of building the walls will soon begin. A dyke about 24½ miles in length will be constructed of sand and faced with clay, reaching 16 feet above the level of the sea, which will make it about 6½ feet above the highest tide. The thickness of the dyke will be such as to enable it to resist the heaviest sea. Operations will begin at four different points, and the calculation is to have it completed in from 7 to 10 years, at a cost of \$46,000,000.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 487.)

There never was any attention paid to it, and they dared not undertake to enforce the law. I have my serious doubts whether you can frame any law, Mr. Chairman, to compel a man to do or not to do what he desires not to do on his own premises; neither can you compel him, in my judgment, even to receive your Commissioners on to his place to see whether it is infected or not, and I doubt very much whether they dare cross his line if he says "You keep off of my premises; trespass not on my land!" I believe if you can make people see that it is to their interest to exterminate these pests, that you can do far more by persuasion, by representation of what is in the direction of their real interests, than you can do by any enactment of the Legislature which compels man, or aims to compel, to do that which he does not wish to do on his own premises. I think if the gentlemen of the convention will look into our institutions they will find that if such a law can be enforced, and was in accordance with the Constitution of the State of California and the Constitution of the United States, that the danger to our liberties would be very great; we would soon find, in regard to other matters, that we would rather that no such power existed in any Legislature.

Mr. White, of Fresno: I have only a little to say, and Mr. Holt, the gentleman who preceded the last speaker, has almost anticipated what I was going to say, but I believe this Committee on Legislation is altogether too small. I think it should be made up with a member from every county in the State. There should be one representative of every county in the State in that committee, and it should be the business of that member to call a meeting of all the farmers, or of all the fruit growers, in that county, and invite the member of the Legislature to meet with them and have the suggestions as referred to by Mr. Holt at hand, and then instruct this member of the Legislature what the desires of the fruit growers are in regard to legislation. I think that every county in the State should be represented in this committee on law.

Mr. Dwinelle: I would like to make a little explanation in regard to this last proposition, that the State Board issued a general invitation to all the fruit growers, shippers and others interested in horticulture in this State to come right here to San Jose, or, for that matter, by inference, to send their representatives, to say just what they thought on this very subject, and if they have not done it, I do not know who is to blame except themselves. A committee of the size called for I am afraid would be very hard to get together. A committee of five is as many as can be got to work well.

Mr. Chandler, of Sonoma: In experience with regard to the codlin moth, I think it is impossible even to keep them out of our orchards simply by cleaning our boxes—clean them at San Francisco and home, too, and between there, if you like—but the only remedy I think there is in the whole thing is not to come here and tell what you ought to do or what the law should force us to do, but to put our shoulders to the wheel, clean our own orchard and use free boxes, and then we will do it.

Mr. Husman, of Napa: On that point I would like to say a few words myself. I know that we are apt to find fault with our neighbor; I know that we are very apt as a people to see fault in others that we cannot see in ourselves, but there is certainly a prime evil. While we perhaps are able to overcome the scale bug, the codlin moth is a different subject to treat. Our worthy President of this convention has been very successful in fighting the codlin moth—in exterminating it from his orchard, but he has had very favorable circumstances in his favor. He has got no other orchard immediately adjoining his; his orchard is isolated from every other; it is a young orchard, and the codlin moth have come in there but to a limited extent. For that very reason he has been able to exterminate them by vigilance and persevering industry. Now, we will take an orchard in the midst of the Willows, or in the midst of any other section where orchards are thick and extend to a considerable extent, and unless there is absolute harmony between the individuals of each and every orchard it is impossible to exterminate the codlin moth. Now, I have got a young orchard of 2,000 trees; I have used the utmost endeavors to cleanse it from the scale bug, and have succeeded. I have an old orchard of perhaps 200 trees that was stated, two years ago, when I bought the place, had outlived its usefulness; that I brought into successful bearing by vigilance and cultivation, and pruning and scraping, and I have made them a success to a certain extent. But I have got the codlin moth. I have followed them up with the utmost diligence during the season; I have exterminated them. You cannot go into my place now, I presume, and find a single larva of the codlin moth, but right adjoining me is an orchard that is literally filled with them. The old bark is sluffing off of the trees; it is cracked loose. You can go there to-day and take off a piece as big as the palm of your hand, and find a dozen larvae. That adjoins my young orchard; it has been literally filled with the scale bug for years, and there has been no effort made to exterminate them. Here is our difficulty; here is the difficulty that we are laboring under; here is what we want a law for—to reach those persons that take no interest in their own property, that won't lift their hand

to exterminate the vermin that is overrunning, and unless we have got a law that will reach those cases, and that can be enforced and will compel men to fight their insects, why we might as well give up the fight. (Applause.)

Mr. Pitkin: I live in the Willows. I have over 70 trees in my home place, and probably have 1,500 apples set out on the new place, and probably will set out as many more this winter, and I am very much interested in the codlin moth. But I want to tell this convention my experience three years ago: I had a hundred apple trees on the place eight or nine years old. The reason I do not know exactly how old they were is because I have only been there three years. I came from the East, where they had the codlin moth, and understood something about it, and the first year, three years ago, when they appeared there, probably I did not have more than five boxes out of perhaps a hundred which I had on the young trees infected or worm eaten; this year I had about half of my crop infected, that is, notwithstanding the fact that I did not thin out my apples at all, as I generally have done, by pulling off all but one cluster when they are about as big as kickory nuts. I let them be for the express purpose of trimming them off, as I was obliged to thin them, and five times my man trimmed that orchard this summer, and every week the damage was taken off. I find that carpet bandages are a great deal better than sack bandages. If you have an old woolen carpet and use it in that way, a great many more moths will stay in there than in any other. I find sometimes as many as 80 in a single bandage that has not been on more than a week. I find this year that out of my apples I have not over 20 boxes out of something over 150 boxes I ought to have out of the infected orchard, notwithstanding we went over that orchard five times and destroyed them. I didn't turn them into a heap to destroy them; I put them in vessels water tight and submerged them in water until every one of those worms were drowned, and then fed them to the hogs. But what is going to be done? I find to day in my boxes which have been there on the place plenty of codlin moth; I go to the house where I store fruit, and there is hardly a crack but what I can find a codlin moth in; I go to the fence on the north side of my place, in fact, on either side where my neighbors have apple orchards, and there too I find the codlin moth in the fence. What are you going to do? Some one says that they are not so much afraid of the codlin moth as they are of the scale; if we can beat that I would like to know how. Two years ago, when this question was agitated here in regard to legislation, I opposed it, and one of the new commissioners of this place told me that it didn't make any difference whether I did or not; if they passed the bill they would come up to my place, and if I didn't wash the trees they would wash them for me. I told him all right; if they killed them I would make him pay for them. That same commissioner I asked him what to do with my trees last spring; he told me to put coal oil on them. I went to one of my neighbors, and he advised me to put it on. I didn't have but two or three trees that had scale on them, for I had dug up some; the result was about two barrels of coal oil onto my peach trees, and my pear and my cherry, my French prune. I didn't touch my apricot, for I thought the scale had not meddled with them. The consequence was that I killed all my cherry trees dead, ten year old trees. Now, if the commissioner had only done that for me, I would have been all right; I would have made him pay for it, but I had done it myself; and I find some scale in my orchard still; red scale on the very peach trees that I gave two or three doses of coal oil, expecting to kill them, and not caring if I did, because I was bound to exterminate the scale. I found the scale on the new growth, and there was not a living scale to be seen before I put it on, to the eye or the glass. I didn't think there was after I washed it the first time. I didn't find any; but, thinking there might be some somewhere, knowing how they multiply, I gave it another dose, and when I got through I had some left, and gave them another dose. The trees are alive, but I would not give much for them, and I am going to dig them out this winter. But, as I told you, I put out 30 acres last year, and I am going to put out 15 this.

Mr. Gardner: I believe all of my experience has been stated here; the last gentleman but one had about the same experience that I had in regard to neighbors and other things, and I would like to see the law more perfect. I agree with Mr. Pitkin; it is a pretty hard matter to keep down the pests, but I believe we can keep them down. I hope the next Legislature will produce a law regarding lands that are held where the title is in dispute. I find difficulty in that way; I keep my orchards clean, but I find my neighbors supply all the new stock I want, more than I can contend with; I hope the Legislature will produce a law that will reach such a case, so that everybody will be protected by a law; even if it can not be enforced, it will help the matter along; there is no use to say you cannot make it right, but try to improve it till you do, and I think you can finally exterminate the pests.

A Delegate: I have listened with a great deal of pleasure to the remarks that have been made, and I also think we can exterminate these pests, or if not exterminate, keep them under. As we have made California the world's renowned State for producing the best fruit, so we can accomplish this, but how can it be done?

It can never be done if A thoroughly disinfects his orchard, and B never does anything towards disinfecting it. I heard one man say a short time ago that it is a very disagreeable matter to inform the Commissioners for fear of offending a neighbor. I don't think we ought to fear to offend our neighbors where there is so much at stake as there is in disinfecting our orchards and disinfecting the boxes in which fruit is shipped. As this gentleman said a moment ago, if the Commissioners had killed his trees then he could have got his pay for it. I don't want any pay if I don't disinfect my own trees, if I don't take proper care of them. I do all in my power to eradicate them. I thank the Lord I have not got them now, but if I don't take care of my orchard myself I hope the Commissioner will do it, and if he can't kill the insects without killing the trees I hope he will kill the trees, and then I will do as the gentleman says, I will plant out again. There has been a great deal said in regard to the boxes. Now, we may have our boxes disinfecting in San Francisco; we may have them disinfected, as one gentleman said, half way between San Francisco and home, and we may again disinfect them at home, and still the codlin moth will be there. There is great danger that in every platform all along the line of the railroad this codlin moth may be scattered, and we cannot get rid of them in that way. I believe the only true way is to have free boxes. In my neighborhood, I believe, without exception, in a radius of six or eight miles, no boxes can be returned. In some instances the commission merchants have returned them, and they have refused to receive them. They either burned them at the depot or sent them back. That is the kind of people we are there, and I hope it will remain so. It don't cost much a box to ship peaches. The total cost is not to exceed five cents. An apple or pear box can be made for nine or ten cents. Now, at the risk of having my orchard destroyed, or having my neighbor's orchard infected with insects of various kinds for the little paltry sum of five or ten cents a box for 500, or 5,000, or 50,000 boxes, it is a small matter to take into consideration, and I believe when fruit growers come to the point and say, "We will not have our boxes returned, and we will disinfect our orchards," then the result will be accomplished; and I believe we can then thoroughly disinfect and get rid of these insect pests.

Mr. Hatch: Last year there was a committee appointed at Sacramento, and the result was published. You remember that there were concessions made by the canners and commission merchants to those who would ship free packages. The canners would allow a portion of the boxes, and the commission merchants would make a reduction of one cent per box on the drayage. When we take those concessions into consideration, and the actual wear in the return of boxes, and the expense which would be necessary to go through and disinfect them, it seems to me, and has ever seemed so since that time, that we would not lose anything, but we would be the gainers financially, even though there were no insect pests to contend with in using the free package.

A Delegate: I have shipped fruit to market in free packages, and I have made it a point to have the commission merchant ask the canners if they would allow me anything for those boxes. The reply was that they had no use for the boxes, and didn't want to pay anything, and I couldn't get any concessions from them. I have not asked the commission merchant for a reduction of one cent a box off the cartage; I suppose he would concede that. There is one thing as to the free package that strikes me forcibly. When a man sends a box of fruit to market, after picking it and carrying it to the boat, there is 8 per cent. commission; he pays for the cartage; he gives his free box; and gets 30 cents a box for his fruit. There is mighty little left. The better way, when apples won't bring more than that, is to feed them to horses, and that would secure better prices for our better fruit; we would get something for our fruit. This flooding the market with cheap fruit is the poorest thing farmers do in this country; I do not do it, and do not see how others do.

Mr. Block: I have had a little experience with free boxes, and I find that my crates cost me 11 cents, and I can afford to furnish the nails and put them together for 13 cents; and my experience in returned boxes is that I lose 5 cents on a box every time, and in free boxes we save about 8 boxes in 100, and figuring that out, I contend that we can pack a free box for half a cent less than we can a return box. We can get a reduction of 1 cent commission from the commission men, so that leaves us a little ahead, and I am satisfied that every man that has tried that, and tried it thoroughly, never will return to the return boxes; and further, it is better for the commission man; he does not have to furnish the lath and the nails and the men to nail his boxes, nor he does not have to furnish the room to put his boxes in and nail them, which is a great deal more to him than one cent, nor does he have to pay the cartage back either.

A Delegate: What are you going to do with 30 cent apples?

Mr. Block: We don't send any 30 cent fruit. We don't send anything to the market in San Francisco which will bring less than 50 cents. If you can't get that for them, let the codlin moth take them away or something else; but, gentlemen, sell nothing for less than four bits a box.

The President appointed the following is the Permanent Committee on Fruit Statistics and

Ways and Means: A. T. Hatch, Cordelia, Solano county; William Johnston, Richland, Sacramento county; F. C. DeLong, Novato, Marin county; M. P. Owen, Sonoma, Santa Cruz county; Frank Buck, Vacaville; Abram Block, Santa Clara, Santa Clara county.

On motion, the convention took a recess until half-past 7 o'clock.

Evening Session

The convention reassembled pursuant to adjournment, Vice-President Johnston in the chair.

Mr. E. J. Wickson reads a paper on Horticultural Organizations, as follows:

Horticultural Societies.

Mr. President and Members of the Convention: As these meetings are called for the discussion of all matters relating to the present and future of our fruit-growing industries, I have thought it not inappropriate to ask attention briefly to the value of horticultural organizations. No one who has attended these meetings needs to be informed of the importance of frankly comparing views and exchanging information concerning the vital questions which are continually arising as our fruit-growing industry expands and develops. There are many matters which no individual is able to fully master, but which can be quickly solved by the united effort of many who have similar interests and are ready to add their share to the aggregate of wisdom or strength requisite to carry forward important measures or enterprises. Nor is it alone in the weighty matters of horticultural law and polity that the value of association among horticulturists lies. Almost every step in the practice of horticulture calls for the light which can be drawn from a comparison of experiences. This is especially true in a State like California, where conditions and materials are so varied, and where every operation of the fruit grower, from the planting of the tree to the marketing of the product, is so new and so unlike the practices prevailing in the older horticultural regions of the world. It cannot be doubted, I think, that not only the general interest of the industry, but the success of each one engaged in it, can be advanced by the interchange of results, processes and observations such as can be had by horticultural meetings. I believe there should be in every fruit-growing community of the State a local horticultural club or society, which should discuss, besides general questions affecting the interests of fruit growers, all local conditions and methods influencing growth, the success or failure of different fruits and varieties thereof, the comparative profits from different lines of production, and other matters which demand local experience and investigation to set forth truth applicable to the wants of individuals within the district. California conditions are so diverse, that, after all, the question of situation and location is the ruling factor in the success of almost all horticultural production. I would then consider the local societies as of inestimable value both to the members of each and to the general advancement of the industry.

But there is something needed beyond this when the upbuilding of the horticulture of the whole State is considered. It is necessary that there should be some central organization by which local experiences may be compared and generalized, and through which the strength of the local societies can be exerted when there is need of united action on matters of general interest to the industry. Thus a State society finds a field for valuable work, and if in the councils of the State society there be gathered the wisdom and force of the local branches, there is hardly any question which cannot be answered, and hardly any necessary measure which cannot be secured.

State Horticultural Societies are among the oldest of the agricultural associations of the United States. Pennsylvania has had one since 1827. Massachusetts has cherished since 1829 a society which is in green old age, for it has to-day 1,000 members, and owns property worth a quarter of a million, the income of which has been devoted to the encouragement of horticultural progress by rewarding originators of new and valuable varieties of fruit by stimulating the production of fine fruit and flowers, and in maintaining a horticultural library which is probably the best in the country. It would be hard to estimate the value of such a society to the country. We in California to-day are profiting by its labors. Indiana has maintained a State Horticultural Society since 1842, Ohio since 1847, Illinois since 1851, and societies have been in action for from 15 to 20 years in Michigan, Tennessee and Arkansas, and Oregon has had a State Horticultural Society since 1870. There are other similar societies in other States which I cannot now recall. These societies are, as a rule, in flourishing condition, and most of them are publishing annual reports of great value to horticulturalists. It is worthy of remark also that so far as fruit growing is concerned, all the State societies are centered in the American Pomological Society, which has representatives in all the States and Territories.

So much for what has been done in other States. What has California done in this direction? We have a State Horticultural Society, organized in 1879, which during the three years of its life has made commendable progress and achieved a very good name. It has about 100 regular paying members, living in different parts of the State, and a small surplus of money in its treasury. It holds monthly meetings, which have been growing in value and interest,

(CONTINUED ON PAGE 498.)

WAKELEE'S

PATENT

AND

Squirrel

Gopher



EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

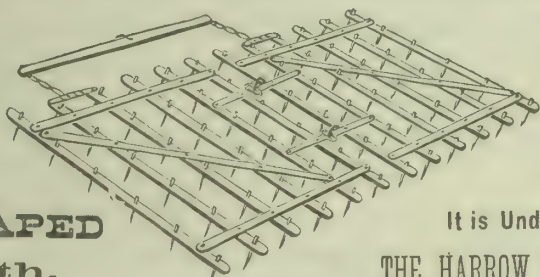
WAKELEE & CO., Chemists,

Occidental Hotel, S. F.

BYRON JACKSON,

Manufacturer of

AGRICULTURAL MACHINERY.

THE
BEST
WOODEN
HARROW,
with
Solid Steel

Will last Longer

AND

DO BETTER WORK

Than any Other

Wooden Harrow.

V-SHAPED
Teeth.

It is Undoubtedly

THE HARROW OF THE AGE!

THE V-TOOTH HARROW.

I believe the above to be the best Wooden Frame Harrow made. The Teeth are made of solid steel, V-shaped, which form is found to give greater strength, last longer and cut better than any other. The frame is strong and well-braced, and they will do the work. Sent on Four. Send for Circulars. Address,

BYRON JACKSON. 625 to 631 Sixth Street, San Francisco. 149 to 169 Bluxome Street.

W. R. ALLEN & CO.,

IMPORTERS OF

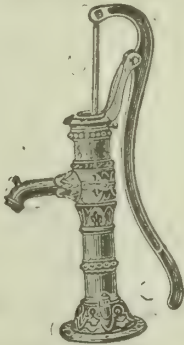
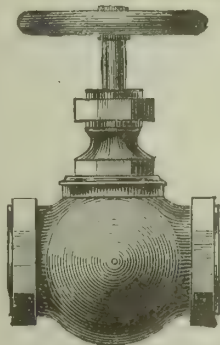
Iron Pipe and Fittings,

Lift and Force Pumps,

Brass Cocks and Valves,
For Steam, Water and Gas,

Sheet Zinc, Iron Sinks,

Plumbers' Goods.



Nos. 327 and 329 Market Street, Cor. Fremont, S. F.

PACIFIC COAST LAND BUREAU.

President, Wendell Easton; Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo-Californian Bank, Secretary, F. B. Wilde, 22 Montgomery street. San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in lots to suit. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock-raising or dairying down to fruit culture. On the east of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale.—The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$20 per acre. Good Grazing Lands at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$6.50 an acre; 840 acres fine grazing land, 7 miles from San Luis Obispo, \$6 an acre; 1,600 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

The best of



Through Dewey & Co.'s Scientific Press Patent Agency.

No. 252 Market Street. Elevator, 12 Front St., S. F. Telephone No 658.

OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others, by reason of long establishment, great experience, thorough system, intimate acquaintance with the subjects of inventions in our own community, and our most extensive law and reference library containing official American and foreign reports, files of scientific and mechanical publications, etc. All worthy inventions patented through our Agency will have the benefit of an illustration or a description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all countries which grant protection to inventors. The large majority of U. S. and Foreign Patents issued to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. Our prices are as low as any first-class agencies in the Eastern States, while our advantages for Pacific Coast inventors are far superior. Advice and Circulars free. DEWEY & CO., PATENT AGENTS.

A. T. DEWEY. W. B. EWER GEO. H. STRONG

F. A. HILL, Superintendent.

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

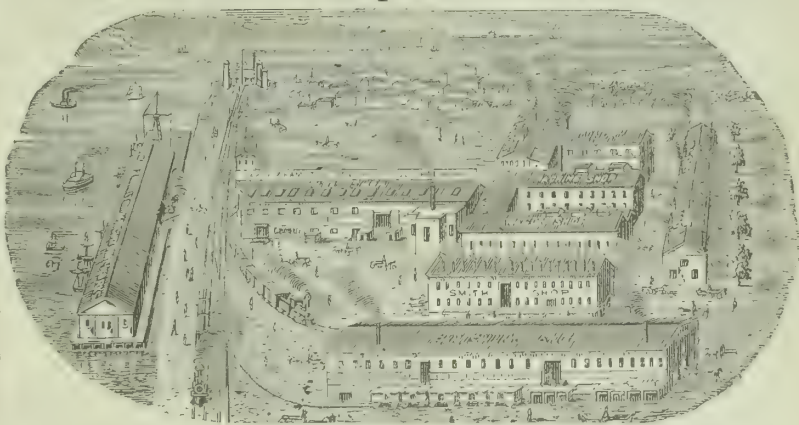
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons,

Spring and Thoroughbrace Wagons

OF ALL KINDS.

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Fresno Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

Agricultural Works on the Coast.



The Largest and Most Complete

THE BUILDINGS are over 1,600 ft. in length, and have a floor surface of 107,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over 600 ft. in length, and have a floor surface of more than 40,000 square ft., including warehouse. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties needing suggestions or assistance in perfecting inventions will have the best kind of aid and assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipments, either by rail or water, thus making a good saving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We are sole manufacturers of the Celebrated Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Always victorious at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the first premium.

WE MANUFACTURE

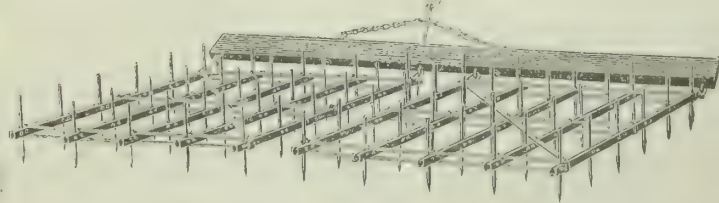
Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Plows. Gillis' Improved Horse Powers. Cultivators. Gen and Cahoon Seed Sowers. Hill's Improved Headers. Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through MESSRS. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best Implements, with all the Latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

Patent Channel Harrow.



THIS NEW INVENTION IS SUPERIOR TO ANY HARROW.

Each Section is Independent of the other. Any Sized Tooth Can be Used. The Frame will Last a Lifetime.

ALSO THE REVERSIBLE MOLD-BOARD STOCKTON GANG PLOW.
Cultivators. Weed Exterminators.

Agricultural Implements.

Manufactured and Sold Only at Our Works,
MAIN STREET, STOCKTON, CAL.

Matteson & Williamson.

MAKE HENS LAY

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, 1 teaspoonful to 1 pint food. Sold everywhere, or sent by mail for 8 letter-stamps. L. S. JOHNSON & Co., Boston, Mass.



Christmas.

Here comes old Father Christmas,
With sound of life and drums;
With merriment about his brows,
So merrily he comes!

His arms are full of all good cheer,
His face with laughter glows,
He comes like any household fire
Amid the cruel snows.
He is the old folks' Christmas;
He warms their hearts like wine,
He thaws their winter into spring,
And makes their faces shine.
Hurrah for Father Christmas!
Ring all the merry bells!
And bring the grandsons all around
To hear the tale he tells.

Here comes the Christmas Angel,
So gentle and so calm;
As softly as the falling flakes,
He comes with flute and psalm.
All in a cloud of glory,
As once upon the plain,
To shepherd boys in Jewry,
He brings good news again.
He is the young folks' Christmas;
He makes their eyes grow bright
With words of hope and tender thought,
And visions of delight.
Hail to the Christmas Angel!
All peace on earth he brings;
He gathers all the youths and maids
Beneath his shining wings.

Here comes the little Christ-child,
All innocence and joy,
And bearing gifts in either hand
For every girl and boy.
He tells the tender story
About the Holy Mid,
And Jesus in the manger
Before the oxen laid.
Like any little winter bird
He sings his sweetest song,
Till all the cherubs in the sky
To hear his carol throng.
He is the children's Christmas;
They come without a call,
To gather round the gracious Child
Who bringeth joy to all.

But who shall bring their Christmas,
Who wrestle still with life?
Not grandfathers, youths, nor little folks,
But they who wage the strife;
The fathers and the mothers
Who fight for homes and bread,
Who watch and ward the living,
And bury all the dead.
Ah! by their side at Christmas-tide
The Lord of Christmas stands;
He smooths the furrows from their brows
With strong and tender hands.
"I take my Christmas gift," he saith,
"From thee, tired soul, and he
Who giveth to my little ones
Gives also unto me!"

—Rose Terry Cooke.

Mrs. Perry's Lodgers.

A Christmas Story.

[Written for the RURAL PRESS by ELsie ANGEL.]

It was the week before Christmas, in the city of the Golden Gate; a clear, crisp, frosty night, just the kind of weather to suit everybody in general, and shop-keepers in particular. The sky was clear and cold and sparkling with stars. The city beneath seemed to have poured its vast population into the streets, as from every direction the crowds gathered and pressed along toward the brilliantly lighted thoroughfares, where the spacious stores had put on their holiday dress, and displayed to the best advantage their tempting and costly wares.

Tom Wedgewood had followed with the crowd for several hours. He had looked in every window, and heard many expressions of admiration or envy, sometimes over wearing gear (for what woman can pass a dry goods store without seeing something she wants?) or those marvels of splendor in the jewelers' line which so few are able to possess. He had seen books and pictures and Christmas cards. Ornaments of all descriptions vied with each other to please the fancy of the passer by, from the simplest vase of stained glass to the exquisite souvenir in Dresden. Even the humble which bruv had become a thing of beauty in its case of rich plush or painted satin.

He had watched the clerks in the candy stores filling as if by magic the fancy box or cornucopia with sweets that the gods might feast on. He had looked with interest in the toy stores, so crowded with eager children and loving parents, and he thought that if there was anything would make a person wish to be a child again it was the toy shop of the present time. The dolls, so varied in their perfect beauty (no wonder a girl cannot have too many of them!) the baby house with its handsome furniture; then the fire-engine, the locomotive, the steamboat—such delights to a boy's heart!

"Upon my word," thought Tom, "I don't know how I dragged through my childhood." At last he concluded that he had walked long enough, especially after a hard day's work, for he was a mechanic. He would look on for a while, and see if there was any one he knew. So he bolstered himself up against a doorway, and scanned the tide of humanity as it swept by.

He saw people hurrying home with their purchases, which would be safely stowed away in some hiding place until the hanging up of stockings or the loading of the Christmas trees. There were young men with their sweethearts, husbands and wives, fathers and mothers with their children, and he thought what a fool he was to be standing alone in the streets with his hands in his pockets (and empty ones at that), when he might have been out with his wife buying presents for his little ones.

There were plenty of familiar faces. His employers passed by. He looked at them without comment, for they could buy without stint; but when a common laborer followed with his wife looking so contented over their purchases, his soul was stirred into bitterness which increased as a tall, thin old man shuffled along. He recognized him as a fellow lodger.

"That will be my fate if I live long enough," and then he looked moodily at the throng as it still surged onward.

"Ah, my landlady!" he ejaculated as a woman almost brushed him. She carried a bundle more suggestive of necessary things than articles of luxury; but although there were lines of care on her face, she was smiling cheerfully at a child who accompanied her.

Two women, strangers to him, stopped, and one looked into her purse.

"I have only a dollar left," she said, "and I must buy some Christmas cards, for I like to remember everyone, even the ash man."

They passed into a store, and Tom turned homeward.

"It's a pity that I am not an ash man, or something worse. Then, perhaps, some one would remember me. Who cares for Tom Wedgewood anyway?" And in spite of the light, and the crowd and the excitement, he felt himself the loneliest man in the world.

II.

Two days later Mrs. Perry stood washing resolutely, while three little girls looked on as the soapy foam collected and formed a sunny mass of mountains, hills and peaks, to their admiring gaze. That tub of washing expressed a great deal to both mother and children. It meant a Christmas dinner and gifts, and good things generally, for Mrs. St. John promised to pay all she owed when these things were returned. Twelve dollars was a small amount to her, but how much it was to the hard-working washer who was her laundress!

It was only four days before Christmas, and Mrs. Perry's slender purse was about empty. She had bought flannel, and stockings, and shoes (and three pairs of shoes are no small item in any one's expenses), for her children could not go naked. Humble as she was, she wanted extra cheer on that day of days, and her little girls fully expected to have their share of gifts and good things. Thanks to her lodgers, she was able to meet her rent; and as she did their washing and mending, that also helped to gain the "daily bread," although her parlor lodger, Tom Wedgewood, was really the most substantial helper, as he paid his way and asked no favors.

Cyrus Briggs had a small back room, and was supposed to "batch," or to keep house on a small scale for himself, but he was really a member of the family, and Mrs. Perry often thought that he was more trouble than all her children, for he was always complaining, and there was no end to his aches and pains. When he first came, five years before, he had told her with a resigned sigh, that his lungs were gone, and that his time was very short. As he was a cadaverous-looking person and advanced in years, the kind-hearted woman had done what she could to make his last days easy. Many a potion of flax seed and lemons, cough mixture and herb teas had been prepared by her patient hands, until he discovered that his liver was diseased. Heart complaint soon developed, followed by a complication of maladies which involved his whole physical structure. As time rolled on it dawned on Mrs. Perry that her elderly lodger took a melancholy pleasure in thinking something was the matter with him, so she humored him, and prepared his mustard plaster and liniment and steeped herbs, as though his troubles were real instead of imaginary ones, while he rocked himself in her cosy kitchen and talked serenely of being found dead in his bed, taken to the morgue, and the final disposal of his mortal remains in the cemetery for the indigent and unknown poor.

The little girls used to open their blue eyes in terrified wonder, but, like their mother, they became accustomed to it, although they had often said among themselves how pleasant it would be if Mr. Briggs could have a real funeral with a long string of carriages so that they could have a nice ride and show their neighbors, the Murphys and the Kanes, that they, too, could turn out in style once in a while.

The old man was sexton in the church of which he was a member, and if he had taken a cheerful view of things he could have said that his lines were cast in pleasant places, for, in addition to a good salary, he never wanted for anything. As Christmas approached, his wardrobe was replenished, and more than one gold piece found its way into his pocket from generous members, to say nothing of a turkey and other savory articles of diet, but he took it all as a matter of course. Indeed, he grumbled because his patrons did no more for him.

While Mrs. Perry was cheerfully drudging to get her Christmas dinner, Mr. Briggs was snarling about his extra work.

"He had to go to the church every day.

Didn't see what the ladies wanted doin' such a sight of trimmin' for. It made too much litter, and he was sick of clearin' up after 'em. The church was a cheerless place. He had the neuralgia awful, and expected an attack of inflammatory rheumatism. His cough was bad, racked him to pieces. Never mind, there was the almshouse. He could go there and get board and lodgin' and doctorin' and not cost him a cent."

Then he sighed and walked off dismally to the church, where the hardest work he did was to unlock the door and light a fire, and at lunch time he feasted like a king on the delicacies which the ladies had provided.

III.

Tom Wedgewood came home from work one night to find a package which had been left that day with two letters. How the words blurred together as he read in his mother's trembling hand:

"It is a long time since we have heard from you, my boy, but your mother still loves you, still prays for you, and hopes she will see you again before she dies. I am, as you know, not over-clever with my pen, especially of late years. Nancy will tell you all the news. God bless my dear Tom!"

Very different was his sister's epistle, with its precise, angular strokes, lengthy and cross written, as English women love to write. A few extracts will suffice for us:

"Yes, Tom, you may have forgotten us, but we still remember you. Mother has knitted some socks and made some shirts for you. The Bible (your other must be much worn by this time) and the handkerchiefs are from me, and the neckties are from—; but you must guess. Only one person could embroider like that."

Tom, I want to tell you a secret. If you are not married, and I hope and pray you are not, there is some one in England you can get. You don't deserve her, but she has refused many good offers, as I have reason to believe, on your account. A few months since we saw the marriage of a Wedgewood in a California paper—Nearly fainting when she saw it. Remember that you are thirty-five, and it is full time that you "settle down," if you are ever going to."

Tom took up his mother's gifts in his large hands. They trembled in his clasp.

"Dear old mammy, how I wish I was a little chap to-night with my head upon her knee. There was some hope for me then, but now I am a bad egg. Yes, a bad egg," he continued, in the vocabulary of his workshop.

Then the dainty ties were taken up.

"And little Mary still thinks of me, God bless her!" and some way he is far off idling through fragrant green lanes with a golden-haired girl, plucking the hawthorne blossoms from the hedges and contrasting them with her own delicate bloom.

"Fifteen years ago!" he exclaimed, with a dreary whistle. "Oh, Tom Wedgewood, what a fool you have been!"

He had promised a fellow workman to go out with him that night, but how could he with those gifts haunting him? What! show Sam Jones, with his slang and profanity, into his room? No, these tender tributes from three pure women must be kept sacred for the present. Besides, I am too much of a woman myself to night," he said rubbing the moisture from his eyes.

He put out his light and threw himself into a chair by the window.

Sam came along whistling, and was told by Mrs. Perry that his friend was not at home. The lamp was not burning, and the door was locked. He must have been out for some time. A smothered expletive from the caller, and off he went, to the relief of the occupant of the dark room.

A few minutes later and there was some excitement in the little hall. Mrs. Perry and her children were at the front door.

"Yes, my dears," she was saying, "mother and Fanny will be back soon, and you will be good and not get into mischief, will you?"

"Yes, they would be very good, and wouldn't she buy a turkey and tell Santa Claus that they wanted two dolls and a story book, and a set of dishes and some candy?"

"If we get some money we will," answered the mother.

Tom saw them pass into the street with their load of fine washing.

"Hard earned money that will bring," he said, and then he was off again among other people and other scenes, until a click at the gate broke in upon his meditations. His landlady had returned. He heard her deep sigh as she opened the door. His heart ached as Fanny tearfully told her sisters that they had come back empty-handed.

It was the old story of unpaid debts. The wealthy lady had plunged into so much extravagance that she had nothing for her laundress, and the money which the latter had expected to meet her bills, replenish her larder and give her children a Christmas treat had been expended in some elegant trifle, and Mrs. Perry had to wait until the first of the year.

No wonder the children's faces were bathed in tears, while their mother sat down dejectedly and pressed her hands over her eyes. It was not for herself she cared, but for those disappointed little girls. And how could she tell Mr. Briggs of her empty purse, and the very simple fare he must expect on Christmas day, for he always dined with them on these special occasions! But even as she was thinking, the shuffling gait was heard in the hall, and he entered with an unusually cheerful expression on his countenance.

"Good evenin', Mrs. Perry. Jest left the church. Brought you some Christmas greens; thought you might like to decorate," said he, throwing a large bunch of pine branches and checker-berries on the table. The poor woman

gave them a dazed look, but the children pounced upon them delightedly, forgetting for the moment their recent sorrow.

The old man had a bundle in his arms which he was holding tenderly as a mother might a child. He was inclined to be communicative.

"I tell you, Mrs. Perry, the church do look neat. The ladies expect to be done trimmin' by to-morrow, (then with a deep sigh) but it'll be an awful sight of work clearin' it away agin."

"It must look very tasteful," said Mrs. Perry, absently.

"Yes, it do. The ladies took holt well this year. Mis' Morse, she's the pastor's wife, you know, and Mis' Winter, she's the deacon's wife, you know, and heaps more women folks, they were all there. Mis' Morse she comes to me, and says she, 'Mr. Briggs, if you will run round to the house after you look up there's something for you;' and says Mis' Winter, says she, 'Mr. Briggs, if you will step in to-morrow I'll give you a couple of pies,' says she. So I went to Mis' Morse's; he (meaning the minister) opened the door. 'Ah! Mr. Briggs,' says he, and he puts his hand in his pocket and gives me five dollars, same as last year. Thought for sartin he would give me ten, as his salary has been raised, but ministers be very much the same as other folks, after all. Then Mis' Morse came out and give me this,' (holding up the bundle.) Now, who can guess what it is?"

"A turkey!" shouted the little maidens, in chorus.

"Correct," answered Mr. Briggs, complacently. "Now, Mis' Perry, you jest feel the hift of it. A nice, plump bird, eh?"

The turkey being duly admired, the old man took it in his arms with a gentle caress.

"You will stuff and cook it for me, same as usual, Mis' Perry?" he asked.

"Yes, she would attend to it with pleasure; but the smile died upon his lips, and left his face doleful enough as she explained the state of affairs, for she was a very frank woman, and told the bitter truth, without mincing matters in the least. He forgot the ginger tea and the hot mustard foot-bath he had intended to take to ward off the chill which he anticipated was in store for him. The children dropped the spicy branches, and cried afresh, while Mr. Briggs, with elongated visage, muttered something about it being "too bad," and walked off to his room hugging his treasure.

Cyrus Briggs was a selfish old man. He had lived for himself so long that Number One was a very prominent individual in his estimation. When he closed his room door he felt ill used. In the first place, he was to lose his dinner; then, to cut his turkey one day sooner than he expected, was a cruel blow, for he had fully calculated on the number of meals which the fowl would provide, and his mouth had watered as he contemplated varying each day's repast with drumstick, wing, breast or back, rendered all the more appetizing by the savory dressing his obliging landlady knew so well how to prepare.

It did not enter his head that it was his duty to share it with others, and he retired entirely unconscious of the niggardly spirit which had taken possession of him. He fell asleep, but his dreams were troubled ones. His turkey was smoking before him. He started to eat, but three pairs of sad eyes were fixed upon him. He could not eat. He tried again, and the fowl got up and confronted him. He followed the rebellious bird, only to find it disappear, he knew not where. This continued all night, and as he awoke in the morning he seemed to hear a voice close to his ear saying: "I was hungry, and ye fed me not." He jumped up, got a light, and found his darling safe in his little cupboard.

It was about 6 o'clock. He opened his door, and heard the front lodger was astir by the splashing of water and hasty movements about the room. He dressed himself hurriedly, and somewhat surprised his stalwart neighbor by walking in upon him as he was brushing his thick dark hair vigorously.

Tom nodded less brusquely than usual, with the words—

"If there is anything to say be quick about it, for I have no time to lose."

The elder man hesitated for a moment.

"I don't know as I should speak about it, but Mis' Perry is in a bad way; no money, and very little to eat in the house. It'll be a dull Christmas for the poor children. Pity folks don't pay their debts."

"I am sorry," said Tom; "but if you mean me, I owe my landlady nothing. If you think that I ought to shell out, I can't do it, for I haven't a cent to bless myself with. I am going to get my breakfast on tick. You have come to a broken bank, my man."

"I didn't mean no offense," stammered Mr. Briggs. "Felt kind o' bad over it, you know, and wanted to talk to some one."

"That's all right," said the other, seizing his hat. "I'm sorry I haven't more time; but you are one of the religious kind, ain't you?"

"Yes, I joined the church over 40 year ago," answered the old man, solemnly.

"Well, then, why not take this poor family's case to the one who can help them? Where is your faith, friend?" And with these parting words, the young man left.

Poor Cyrus Briggs! A struggle was going on in his breast. If he had only succeeded in shirking his duty by shifting it on the shoulders of another, he would probably have felt very well pleased with himself, and taken the credit as belonging to him. But a higher power was exerting an influence over him, and bringing

him face to face with his sordid nature. He had a battle to fight, and at his time of life he was more likely to be the loser than the winner in the conflict. He was grim and moody all day. He hardly opened his lips to speak. "Where is your faith, friend?" Yes, that was the question, and did not his Bible tell him that faith without works was dead?

Late in the afternoon he went after the promised pies. They were large and flaky, and brimful of juicy richness, but they brought no delight to his heart. He placed them beside the turkey. "Enough to last me a week," he said. "Where is your faith, friend?" rang in his ears. He leaned back in his chair and clasped his hand over his knee—a favorite position of his when meditating.

There was a soft knock on his door. It was one of the children.

"Mamma was ready for the turkey."

He took it out himself. The three children fixed their eyes upon him.

"Mis' Perry," he said hurriedly, "you have always been very kind to me, and I want you to accept this. There's enough and to spare for all of us."

He rushed into his room and brought the pies. How the little ones' eyes sparkled! They did not see the painful flush that dyed their mother's face. As for Mr. Briggs, he became voluble as his heart expanded.

"Yes, Mrs. Perry, and there's that poor young feller (pointing toward the front of the house), hasn't a cent to his name. No matter how he's wasted it, he must have his share, and that poor gal in the rear, with a drunken father, there's room for her, too."

His face was shining as it never shone before, unless it was as a child at his mother's knee. Mrs. Perry could not speak, for there was a lump in her throat, but the children were dancing with joy. Their pleasure was by no means diminished when he said to them:

"Come, little women, get your greens, and I will show you how to make some wreaths."

There was a sound of merriment in the small house as Tom Wedgewood came in that night. There was a garland hanging in his window, and a festoon draped his looking-glass. He was met by his fellow lodger, who was so flushed and exuberant that Tom thought for awhile that the old man had probably been treated to something which had gone to his head. (It was the first time he had seen the old chap without his grave clothes on, he explained afterwards.) He received his invitation to dinner the next day with thanks, but felt like demurring when Mr. Briggs insisted upon having him to breakfast also.

"I can just make the handsomest cup of coffee you ever did see, and Mis' Perry will let me fry some bacon and eggs on her stove, and it won't cost you a cent—not a cent!"

"Well, that is an inducement," smiled the young man, with a smile that approached a very broad grin, "only don't get me up too early, for I like an extra snooze on Sundays and holidays."

When he was alone, he laughed as only an Englishman can laugh. He had not told Mr. Briggs that he had received his week's wages that night, and something more beside, for his employers were generous men. As for the old man, he felt the minister's five dollars burning in his pocket. He had commenced giving and could not stop.

The children must hang up their stockings. "Old Santa Claus would probably drop in before mornin'," he told them.

That night (it was Christmas eve), Tom Wedgewood was pushing his way through the crowded markets and leaving orders which suggested that he was either the keeper of a boarding house, or else he was laying in stores for a very large family. He felt rather peculiar and sheepish over his purchases, and more than once "wished there was some little woman to boss this business, as he felt like a cat in a strange garret."

In the meantime Cyrus Briggs was trying to "hold his own" in the toy and candy stores. He was not easily suited, and gave no end of trouble to the impatient clerks and considerable amusement to the good natured ones. For once he was master of the field, and kept a host of people awaiting his pleasure. He looked at all the dolls ranging from a queenly affair priced at \$50 to a very modest midget valued at 10 cents. When the clerk showed evidence of temper he calmly produced his half-eagle and said: "See that! Not so poor as you thought I was, eh?"

A blessing must have followed that golden coin, for the old man's arms were full when he sneaked cautiously into the kitchen where their stockings were hung by the stove. They were well filled, and a goodly array of parcels lay conspicuously upon the table.

The next morning Tom had his breakfast in Mr. Briggs' room, and he thought "it was as good as a circus," he enjoyed himself so much. The host was in his element shuffling around, doing the honors and praising everything.

"Nice cup of coffee, ain't it? Good bread, Mis' Perry made it, but I can beat any woman making bread. Have another slice of bacon? No? Never tasted nicer bacon in my life. Deary me, what a noise those young uns do make. They're happy. (Here he chuckled and rubbed his hands.) Knew nothin' about Christmas when I was a boy, my folks didn't keep it. Thought it was a Papal holiday. You didn't know that afore? Oh, yes, Episcopal folks kept it as well as Catholics, but we thought they was just alike, only a paper wall between 'em,

you know. Where was I born? In old Nan-tucket; folks were whalers, you know."

A thundering knock at the front door caused Mr. Briggs to step to his door to see what was up. Tom's cheeks were dyed crimson, as he heard Mrs. Perry protesting that there must be some mistake. Curiosity prompted the elder man to find out what was going on, and he shuffled to the scene of action, to return shortly with a beaming face.

"A whole cart load of grub. Two turkeys and four chickens, and the prettiest ham you ever see! And squash, and cabbage and—"

Another tremendous knock caused Mr. Briggs to disappear again.

"Never did see the like!" he exclaimed when he made his appearance the second time. "A barrel of flour, a sack of potatoes, a box of crackers, a box of raisins, eggs, butter, and—well, I must take another look. And no mistake, neither! There it is in black and white, Mrs. Perry, No. 20 Blank street. Paid."

Tom arose and went to his own room, while his friend hopped into the kitchen where stood his bewildered landlady surrounded by packages and her frantically happy children. The young man did not go out. He wished to keep from temptation. His previous holidays had not been spent as his mother or sister would approve, and he acknowledged to himself that he could not stand the "chaff of the boys." He enjoyed himself in a new and better way. He read the Bible his sister had sent, and listened with pleasure to the happy shouts of the children over their gifts. Mrs. Perry was very busy, and Mr. Briggs kept up a series of explanatory calls between the kitchen and the front room. "The puddon was on boilin'." It was as chock full of plums as an egg was with meat, "or 'che turkeys were bein' stuffed," "the squash pies were on the way," and so on. "She won't take any turkey and pies, seein' there's enough grub for twenty people. I'm kinder sorry about it."

In due time the dinner was ready. As Tom met his landlady he muttered something about "thanks."

"The Lord has provided it," she said simply.

Cyrus Briggs asked the blessing; not his usual long-winded harangue, in which he was fond of reminding his listeners that they all had "to meet around the judgment seat, and give an account of the deeds done in the body," but a few earnest words of thankfulness which the children especially appreciated.

It was a happy group; but the happiest of all was the quiet man who hardly spoke a word during the meal. How little did any of them dream that he was the benefactor who had provided their Christmas cheer!

When they arose from the table Mr. Briggs took Tom aside.

"They have a grand time at the church to-night, and Mis' Perry and the children are goin'. Won't you come along too?"

"No, thanks," answered the young man, "I have something else to attend to."

When they had gone and the house was quiet, he sat down to write letters. When they were finished, this was an extract from that to his sister:

"I expect to be with you before many months, and if I am not too unworthy, I hope that next Christmas I will have a wife, and that it will be my dear Mary."

The other letter contained more than one blot, and some tears fell as he wrote. We may be sure that it carried joy to a mother's heart, and may we not also hope that there was joy among the angels?

Relative Longevity in Various Occupations.

An interesting exhibit of the mortality in the different walks of life was furnished by the General Register in report on the death rate of the whole population of England in 1851. From this it appears that out of every thousand persons between the ages of 25 and 55, 40 died on an average. Classified according to the most favorable mortality, and increasing downward, we have the following tables:

Below the Average.	Above the Average.
1. Merchants.	7. Miners.
2. Weavers.	8. Tailors.
3. Cobblers.	9. Bakers.
4. Carpenters.	10. Butchers.
5. Blacksmiths.	11. Liquor dealers.
6. Laborers.	

The mortality of the eleventh class is so great that in good insurance companies they are only admitted with great caution, and on short endowment or term policies.

Mariners also are considered poor risks, as 35% of the deaths among them are attributable to accidents; among miners, 25%; among machinists, 15%; and among painters, well-diggers and glaziers, 10% die in consequence of casualties. The callings of brewer, typesetter, tin-smith, lithographer and stonemason are also in a measure detrimental to a prolonged duration of life.

TEA AND COFFEE EXTRACTS.—An aqueous extract of tea, coffee, cocoa or ginger is made by boiling it for 15 minutes in water containing sulphate of lime in solution, then cooling to 60°, when a solution of tannic acid, previously boiled till nearly devoid of smell, is added. A precipitate occurs and is filtered out. It is then left to stand for a day, and an aqueous gelatine solution of three or four grains to the ounce of water is added in quantity nearly sufficient to precipitate all the tannic acid.

Holiday Fashions in San Francisco.

The Late Costumes and Styles—What is Being Worn.

SAN FRANCISCO, Dec. 15, 1882.

EDITORS PRESS:—As the holiday season approaches, the desire to know something of the latest styles increases. In my usual visits to the various establishments of fashion in this city I have been able to see much that is new and novel. First, as to

Dresses.

A graceful house dress, seen at a fashionable dress-making establishment, was a princess polonaise of olive-green wool, draped high at one side, with heavy cord and tassels, which encircle the hips and assisted in forming artistic folds over a terra cotta skirt, slightly trimmed with a narrow gathered ruffle at the bottom.

A popular style of making cloth suits is known as the "Marlborough." It consists of a skirt laid in side plait turning away from the front, thus giving a box plait in the center, and black "soutache" put on in some simple design near the bottom. The fronts of the polonaise are ornamented in the lower corners with "soutache" in a simple arabesque. "Brandebourgs" of black cord are placed on the front, producing a double-breasted effect. Black cords in the back finish the drapery, which is very bouffant.

A handsome black walking dress shown at one of the recent openings at the "City of Paris" had a sham skirt, trimmed around the bottom with three knife plaitings of satin. On this underskirt was another of Rhadames cloth, cut in long laps, on which was a braided design and a tunic of the cloth very much draped in the back. The sleeve had also a design in braid, and the buttons were very large.

A dress for a very young lady had a kilted skirt of Royal Stuart plaid, with a short wrinkled-up overskirt, and Jersey waist of dark green cloth. Long loops of ribbon finished the left side, where the overskirt was raised.

Polonaises are rapidly coming into favor again, especially for cloth and cashmere garments, that may be quite plain or richly embroidered. If in the former material, their style depends upon their smooth, clinging front and bouffant arrangement of drapery in the back.

Some ladies have succeeded in metamorphosing a half worn cloak of armure silk or Sicilienne into such a polonaise as that described above. It should be worn over a silk or velvet skirt.

Cloaks.

There are few new features in the long cloaks worn this winter, and those bought last year do not require the slightest alteration. There is, however, a disposition to widen the lower portion of the sleeve, making them less square and extending around to the back side-seams. The Mother Hubbard design has lost favor.

Ladies purchasing sealskin cloaks should buy those untrimmed, and reserve trimming to freshen the garment after a few seasons. Some half-long sacques have appeared upon very fashionable ladies this winter. The close fitting fur capes, and muffs to correspond, are very "chic" for young ladies under thirty.

Circulars are still very much worn, the "favorite" style being of matelasse (a material in raised pattern), lined with terra cotta, army blue, cardinal or heliotrope plush. A large black fur collar completes the garment.

Millinery.

The bonnets pictured so charmingly in Boydel's famous Shakespeare are the modes now adopted by the fashionable, and that style which all London went to see on Nell Gwynne, with earrings reaching to her shoulders, leads the rest, and is the choice for young and handsome faces.

Lesser "cart wheels" are the Flemish, Rubens and unnamed broadbrims bent into every possible contour that have been already worn. None of these are of stale effect, however, owing to novel modes of trimming and the remarkable results of color mixtures.

Ottomans and plain velvets, ribbed, plain and cashmere plush, corded silk and millinery satins, with remarkable luster and beauty of shading, are new materials for fall and winter bonnets, while felt of every quality, either mottled or solid in color, makes the "stand-by" hat indispensable in every wardrobe. While black is still the preference for real service, full colors will be more popular for the coming winter than they have been for many years; and such rich tones as golden brown, dark greens, Flemish and Russia leather reds, terra cottas, electric blue and dregs of wine are certain to be admired.

As there must always be something odd, private importers have brought out millinery fabrics in Sevres blue, and in the faded greens, pinks, browns, russets and Dutch reds seen in old pictures and tapestries. Some of the

Novel Combinations of Color.

For millinery uses are cloud gray with copper red, electric blue and silver, royal purple with heliotrope, dark green with strawberry, golden brown with Russia leather red, tobacco brown with shrimp pink, and black with amber called Poitiers. Dark maroon and pink are still in vogue for millinery. As small bonnets are the regulation mode for evening wear, much prominence is given to their style and trimming.

The capote, so much worn last season, is still very fashionable, and continues very small, and

is made of the most expensive materials, generally in harmony with the rest of the costume.

Narrow Ottoman, or velvet ribbon with a reverse side of Ottoman silk, is the favored style for capote and cottage bonnet trimmings, and small buckles of metal and cut steel are much used with ribbon for outside garniture.

Beads are still employed for the edges of hats and bonnets, and some imported styles show outspread butterflies of gorgeous beads covering the crown. All of the metal decorations now supplied are odd and rich, wrought silver taking the lead.

Face trimmings in cottage and poke shapes are not confined to the new flowers, which are of satin and velvet, but small birds, jet ornaments, and rolls of silk, satin and velvet, with costly pins and buckles, will be seen this winter.

A great deal of narrow velvet ribbon is used for strings to bonnets, although matrons wear both velvet and Ottoman ribbon of considerable width. Upon a handsome felt hat the brim is raised at the left side front, curling over gradually, while at the right it droops, almost touching the ear. A long plume surrounds the crown, which is somewhat pointed, half covering a group of narrow velvet ribbons drawn down in the opening at the back not covered by the plume, and tied in a common bow knot, the notched ends hanging down. Evening bonnets are made of laces of every description, Spanish and Honiton being the favorites.

Pompons employed on bonnets are small and thick, resembling balls of silk, sometimes beautifully shaded.

Red Bonnets.

Remain in favor for another season, one of Adrianople plush having a garniture of red plumes combined with birds' wings, and an entire bird placed at one side. The strings are of narrow velvet ribbon, tied just under the ear. For a jet bonnet the material is a jet lace crown, a brim-facing of pleated plush, which may either correspond with some tint in the shaded plume or be of black.

The Same Charming Poke Bonnets.

Which added such demureness of expression to small girls' faces during recent months, are again in vogue for fall and winter. Felt and beaver are the every-day materials, while velvet mixed with Ottoman silk and Surah satin for best purposes. Shirred brims with the ends run in to form little tucks are a new feature, and are seen in combination with crowns draped with soft silk and garnitures of soft round pompons.

Sailor hats of felt are in ecru, fawn, dark green, blue, cardinal and russet shades, and are faced with velvet or plush, and set well back on the head. A band of velvet ribbon around the crown with long loops and ends to the waist completes the trimming.

These hats sell much cheaper than formerly. A good hat, felt or beaver, can be had for \$1 and \$1.25, and upwards. Pretty ostrich tips in most of the new shades cost from 75 cents to \$2.

Feather caps are worn this winter; turbans with beaded crowns and deep velvet puff, on a trimming of flat cock's feathers around the band.

LISETTE.

Curious Patents.

Some investigating person has furnished the New York Times with a brief list of patents on small things which in many instances have proved great mines of wealth to the lucky discoverer. The list might be extended to a much larger number, but we only state those given in the Times. Among these trifles is the favorite toy—the "return ball"—a wooden ball with an elastic string attached, selling for 10 cents each, but yielding to its patentee an income equal to \$50,000 a year. The rubber tip on the end of lead pencils affords the owner of the royalty an independent fortune. The inventor of the gummed newspaper wrapper is also a rich man. The gimlet-pointed screw has evolved more wealth than most silver mines, and the man who first thought of putting copper tips to children's shoes is as well off as if his father had left him \$2,000,000 in United States bonds. Although roller skates are not so much used in countries where ice is abundant, in South America, especially in Brazil, they are very highly esteemed, and have yielded over \$1,000,000 to their inventor; but he had to spend fully \$125,000 in England alone fighting infringements. The "dancing Jim Crow" a toy, provides an annual income of \$75,000 to its inventor, and the common needle-threader is worth \$10,000 a year to the man who thought of it. The "drive well" was an invention of Colonel Green, whose troops during the war were in want of water. He conceived the notion of driving a two-inch tube into the ground until water was reached and then attaching a pump. This simple contrivance was patented after the war, and tens of thousands of farmers who have adopted it have been obliged to pay him a royalty, a moderate estimate of which is placed at \$3,000,000. The spring window shade yields an income of \$100,000 a year; the stylographic pen also brings in \$100,000 yearly; the marking pen for shading in different colors, \$100,000; rubber stamps the same. A very large fortune has been reaped by a Western miner, who, ten years since, invented a metal rivet or eyelet at each end of the mouth of coat and pants pockets to resist the strain caused by the carriage of pieces of ore and heavy tools.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 494.)

the reports of which, as published in the papers, are read and favorably commented upon. It seems just on the eve of a career of general usefulness, and should receive the wide support of the great horticultural interests of the State. If its membership should be largely extended, its counsels enriched and its energy increased by such accessions, it may be enabled to hold horticultural fairs and publish reports which would be an honor to California horticulture.

There has also been a good beginning made in the organization of local horticultural societies throughout the State, and it is to be hoped that this work will quickly extend. First in membership and in excellence of exhibition work accomplished is the Southern California Citrus Fair Association at Riverside, which has held three exhibits of semi-tropical fruits, which were worth going the length of the State to see. So far I believe this society has held but annual meetings, and its discussions have been confined to the evenings of fair week. One would think that an organization for more frequent conference meetings would be found very valuable in so progressive a section. Pasadena and San Diego have also held most excellent fruit fairs, and Los Angeles had a Citrus Fair Society which, judging from its exhibitions, justified the proverb that the "good die young;" but its demise reflects no credit on the beautiful city of the south. Orange, in Los Angeles county, organized a local horticultural society, and there is much of the spirit of progress among the fruit growers of that district.

Of the local societies operating upon the plan which seems to me most commendable, the Santa Clara Valley Horticultural Society stands at the head in point of membership, and in the excellence of the work accomplished. Its meetings are held regularly, and the reports show that a large number of important themes have been thoroughly and carefully considered. The San Mateo Horticultural Society holds interesting meetings at San Mateo, and includes among its members many who show their horticultural faith by their works in the beautiful gardens and grounds in the district. Santa Barbara also has a horticultural society which deals intelligently with both fruit and plant topics, and has taken part in several praiseworthy exhibitions. I have heard also of a fruit growers' club among the intelligent ruralists on the Santa Cruz mountains, which must be an organization of much interest, for the region "above the clouds" is one of the most progressive in the State. Ventura county has just established a fruit growers' society, and Fresno has the proposition under consideration. I think there are other local societies which should also be recognized in my enumeration, but I am writing from memory and do not now recall them. It is to be hoped that the number will largely increase, and a complete record should be made hereafter.

In the special field of viticulture there are several local societies which are doing good work at St. Helena, at Napa, and at San Jose. Their discussions are practical, and are the source of much information on vine and wine.

It is plain that the work of reorganization among the horticulturists of California is well under way, and a notable advance should be made this winter. The Legislature will probably have under consideration matters of horticultural interest, and local societies for the presentation of the wants and wishes of the fruit districts will be more potent than individual appeals or warnings to legislators. The prevention and destruction of insect pests, which is now a vital question, should be pushed forward with all the force which organized effort in every district can muster. For such important matters and for the other advantages of local horticultural conference, the increase of acquaintanceship and friendship among horticulturists, and for placing the industry before the public in its proper importance, I would urge the extension of horticultural organization throughout the State.

Discussion.

A Delegate: I think this proposition in regard to organization among fruit growers is a matter that should be well considered, and not only well considered, but well acted upon. We find in almost every business that is known to our country people organized for the purpose of helping along in their business; merchants organizing, tradesmen organizing, and in fact almost every profession has an organization in order to further the interests of that profession, and most certainly there is no profession that needs thorough organization and working together for each other's interests equal to that of the fruit grower. We need the aid of each other's experience and each other's talent. We want all the information we can get on the subject from those that are progressive, and even from those who are not progressive, for we very frequently can profit by a person's blunder; and if I am going along by the side of my neighbor and I make a blunder through my ignorance or carelessness, my neighbor can profit by seeing the result of my blunder; and if we unite and give each other the benefit of what we learn, and work together to help each other to forward our interests, we can certainly make a great advancement to our individual interests, and to the interests of the community, and I would certainly most earnestly recommend that every neighborhood have an organization of this kind, and then let each attend to it faithfully,

and let us help each other in this good cause of making progress in the fruit growing interests. We have a great deal to learn, and we can learn from one another.

Mr. Dwinelle: The gentleman who has read this paper is certainly one who has practiced the doctrine laid down. He took hold of the matter of a State Horticultural Society, and after it failed started again, and mainly through his efforts the matter has been carried to success. I shall never forget the remark a certain gentleman made soon after the organization, when it was objected that monthly meetings were too frequent; that he could not afford the time nor the expense of a trip to San Francisco, some 50 or 75 miles, once a month. Another gentleman said he could not afford to stay at home; that he never made that trip to a meeting of the State Horticultural Society that he did not go home with some information that was worth a great deal more than the time there spent. Now, in that society we have some of the most successful business men in horticulture in this State, and I am sure that those who come to form local organizations will find a profit in following the precepts laid down in that paper.

W. N. Gladden, of Sonoma county: In my part of the country, at Healdsburg, where the facility of raising a certain kind of fruit is very good, but where, as yet, we have but little insect depredation upon the fruit, we have no local horticultural society, but I think it is time we should have one. And I doubt not there are many other places in the State where societies should be formed for the benefit of the fruit growers of the locality. At Healdsburg one of my neighbors who has some fruit inquired of me where I was going; heard me talk of going to San Jose, and wanted to know for what purpose. I told him, and then he got to telling me that he did not know but it would be well to know something about fruit. He said his apples seemed to be diseased at the core, and asked me if I could tell him what ailed them. Of course it was the codlin moth, as I explained to him. There are a great many persons in that part of the country who do not know anything at all about insect depredations by experience; experimentally they do not know anything about insect depredations upon the fruit. We have nothing there but a few codlin moth, and one orchard infested a little with the woolly aphis, is all I know of, although we may have some more. So I hope that the members of this convention living where they have no horticultural society will move in that direction, for probably the people there in the neighborhood need some enlightenment upon the subject.

Mr. Holt: In regard to the association at Riverside I will state that we hold meetings there but once a year. We try to make those meetings effective. We hold discussions there for three evenings in succession. We have our citrus fair in the daytime and hold our discussions in the evening, which are participated in by people who come from different parts of the country, and last year not only were the discussions continued, but there was a very important committee appointed at that time, and they have spent a good deal of time on a very important work for our country in relation to lemons, which especial interest—the lemon industry of California—has been in a very poor condition. They have had their lemon orchards there of seedling trees that bear a very large, overgrown, dry lemon that is known in the markets of San Francisco as the California lemon. It is a poor lemon and brings a very small price there, and it has been on the market so long a time, and it has been so universally and so uniformly poor, that when a customer sees a box of California lemons they jump at the conclusion that they are necessarily a poor lemon. Now, as most of the lemons that are placed on the market are of that character and have been of that character, it has got to take some time to reform that idea that the people have that California lemons are poor lemons. To illustrate this a little: As everybody knows, in the Eastern States or in the greater part of the East, California has a good reputation for fruit; some of our Riverside people last winter went to work and took 20 boxes of lemons—they took the good varieties, what is known as the Eureka lemon—they assorted them and packed them in fine style, wrapped them in tissue paper, and they were put on the market in just as fine shape as any lemons that ever were sold. They were superior lemons, and the facts of the case are that so far as acid tests on those lemons are concerned, the average of those lemons from Southern California show by repeated tests that they are superior. Ten boxes were sent to Denver and placed on the market as California lemons. The result was that the people of Denver looked on those lemons as coming from a State that produced superior fruit, and they stood fairly before the people of Denver, and those lemons sold for \$2 a box more than Malaga imported lemons could be sold for at that time—the imported lemons sold for \$8 a box and the Riverside lemons for \$10 a box. The other 10 boxes were sent to San Francisco. They were the identical lemons, picked and packed in the same manner by the same persons. They were placed in the market in San Francisco and sold for three dollars a box, when the imported lemons were selling for six, seven and eight dollars a box. I do not wish to make any question as to the taste of the San Francisco people, but they are kind of sour on our lemons, and it will take some time to get over it; but when they say we cannot raise a good lemon in southern California,

there are many fruit growers who have made thorough tests of this matter here in the southern part of the State who know it is not true; they know we do produce a good lemon there. They have been on exhibition there, and they have been thoroughly tested for bitterness of rind, quantity of juice and the strength of essence. The average of the strength of imported lemons is about seven per cent. of citric acid; and there are repeated tests of the lemons of southern California that show seven, eight, nine, and even ten per cent. of citric acid. They have been entirely free from bitterness of rind. They have given from 30% to 58% of juice, and we call them a good lemon down that way. Yet, to put those lemons on the market in San Francisco, they won't sell for one-half what the imported lemons sell for. It is simply because they say they are California lemons and not worth a cent. This committee that we appointed there last spring stayed in session eight days testing lemons that we sent for all over the State, whether they came from southern California or northern California or central, we got them from all over the State, and we had them picked on the same day, had them treated in the same style for four weeks, and we took those lemons and subjected them to the same test for bitterness of rind, quantity of juice and for strength of the acid, and the result was that we had two or three varieties at least that stood high up; superior even in all respects to the best imported lemons. We had sent to New York and to San Francisco, and got the imported lemons, and we had some that were sent even from Italy also, by direct importation, and our lemons stood the test with these, and were considered equal in all respects. We consider the work of our society, while we meet but once a year, is very important on that one topic. But this lemon question probably does not interest you as much as it does us, as I said before; but we have done effective work in that respect. In May, once a year, we hold a citrus fair, and we have developed one thing; we can have a fair there without having it backed up by a horse race. [Applause]. We have never had a fair there but what has been a financial success. We have never had a fair there but what has interested the fruit people, the fruit growers and the people who have come there to see it. We have had fairs there that have attracted people from all over the coast, and we have had so many there we did not know where to put them, but we stood them around the best we could. We feel a little proud of our record in this matter of our fair, and we recognize the fact that coupled with those fairs must be the necessary literary exercises and discussions, so that when we get through admiring the productions of the soil, we can also discuss how we can improve them.

Mr. Hatch: I suppose we are now discussing horticultural societies. I have been out of the hall, and do not know what has been said in regard to the State Horticultural Society. I think, though, it should be mentioned here. I do not remember just how long it has been in existence. I was not in at the beginning, but I must say that I think it is a good place to go to once a month. They have a regular meeting the last Friday in each month, and always have some subject for discussion which is of interest to the horticulturist; and those who attend, I believe, as a rule, consider themselves benefited by the meetings, and I do not doubt that there are many here present who might benefit those who congregate there if they cannot be benefited themselves by attending and becoming members of it.

Mr. Loomis, of Santa Clara: I listened attentively to the paper read, and was very much pleased with it, and also the remarks made in regard to horticultural organizations throughout the State, and especially in regard to local organizations. I believe in these local organizations, where people can meet and interchange their views. As mentioned in the paper, we have lately organized a society in the Santa Cruz mountains. We meet there monthly on the second Saturday of each month. We are yet only in our infancy, but, so far, there has been great interest manifested in it, and we look for great good from it. I should be very much pleased to hear of local organizations springing up all over the State, for I believe that great good will result to the horticulturists of California by so doing. We are yet in our infancy in fruit growing in the Santa Cruz mountains, but I believe I speak the sentiments of every one of the fruit growers there, all of the members of our organization, when I say that we are in earnest; when I say that we can produce the best fruit that can be produced, and we mean to fight to the bitter end the insect pests. We unite in this. I believe in these little local organizations, where people meet together and interchange their views; and I hope that a better feeling will exist, and that there may be no discord nor bitter feelings in regard to what may be said in relation to the enforcement of the law.

It was, on motion, ordered that Dr. Chapin be added to the Committee on Legislation, and that the committee be doubled by the addition of eight members of the Senate and Assembly of the next session of the legislature.

(TO BE CONTINUED.)

THE Dukes of Westminster, of Northumberland, and of Sutherland have accepted Vice-Presidencies of a Smoke Abatement Institute in London. A permanent exhibition is to be maintained of smoke abating appliances.

A TRUE assistant to nature in restoring the system to perfect health, thus enabling it to resist disease, is Brown's Iron Bitters.

DYEING LEATHER.—In the glove trade the leather has hitherto always been dyed by brushing on the dyes by hand. The defects of this method are its slowness, the occurrence of large, soiled edges on the fleshy side, and, notwithstanding every care being taken, the uneven character of the dye produced. To avoid these, Joseph Kristen, of Brunn, has a process in which even dyeing is obtained by the application of centrifugal force. The skin to be dyed is fixed on the center of a horizontally rotating disk. The color is also fed on to the center, and by the rapid revolution of the disk is spread equally over the whole surface. The color is forced on to the disk by means of a pump, or it merely flows from a reservoir standing at a higher level. The excess of color driven off at the edges of the revolving disk is collected and used over again until the skin is fully dyed. To dye one skin by this method takes from 10 to 15 minutes. A single color pump may serve for at least five machines, which would require only one attendant, so that by the above arrangement one man could in 12 hours easily dye 150 skins, possessing great evenness of dye and free from spotting.

THE SEVERN TUNNEL.—There appears to be some chance of this tunnel being at length completed, as there are now 2,300 men engaged on the work, and it is expected to be finished in 4 years' time. One hundred and twenty houses have been built and 50 others are being constructed for the use of the workmen. This tunnel, which will be the longest in England, is 4½ miles long and crosses underneath the river Severn about 16 miles from Bristol, 2½ miles being under water. The Great Western Railway Company, which is the promoter, will save 45 minutes in the journey from London to South Wales, and the ferry service at Bristol will also be dispensed with. The work was commenced 10 years ago by the Great Western Company itself and carried on by it until the works were flooded out, when, by the advice of Sir John Hawkshaw, it was handed over to the contractor, Mr. T. A. Walker. The tunnel will be 25 ft. wide, 25 ft. high, and will be bricked from end to end, the thickness of the walls varying from 2 to 3 ft.

No Whiskey!

BROWN'S IRON BITTERS is one of the very few tonic medicines that are not composed mostly of alcohol or whiskey, thus becoming a fruitful source of intemperance by promoting a desire for rum.

BROWN'S IRON BITTERS is guaranteed to be a non-intoxicating stimulant, and it will, in nearly every case, take the place of all liquor, and at the same time absolutely kill the desire for whiskey and other intoxicating beverages.

Rev. G. W. RICE, editor of the *American Christian Review*, says of Brown's Iron Bitters:

Cin., O., Nov. 16, 1881.

Gents:—The foolish wasting of vital force in business, pleasure, and vicious indulgence of our people, makes your preparation a necessity; and if applied, will save hundreds who resort to saloons for temporary recuperation.

BROWN'S IRON BITTERS has been thoroughly tested for dyspepsia, indigestion, biliousness, weakness, debility, overwork, rheumatism, neuralgia, consumption, liver complaints, kidney troubles, &c., and it never fails to render speedy and permanent relief.

SAN LEANDRO PLOW CO.,

Manufacturers of

Gang, Single and Sulky Plows.

Also Manufacture Wagon Beds, Harrows, Seed Sowers and Various Agricultural Implements.

A SPECIALTY

Made of Furnishing Plow and other Extras to Order. Castings of all Descriptions Furnished with Dispatch and at Reasonable Rates.

ORDERS RESPECTFULLY SOLICITED.

ADDRESS ALL COMMUNICATIONS TO

San Leandro Plow Co.,

SAN LEANDRO, CAL.

SPERRY & CO.

MILLERS,

Stockton,

Manufacturers of

New Process

Roller Flour.



San Francisco

Office,

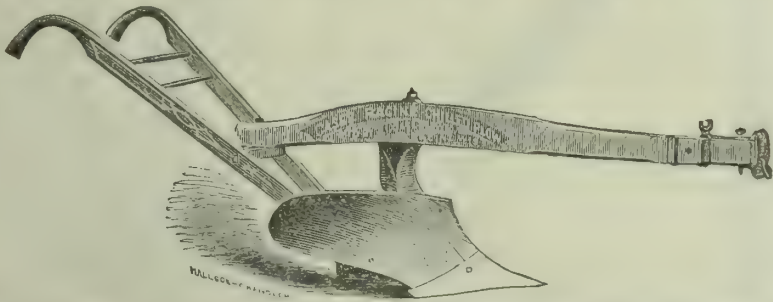
22 California St.

CAPACITY 1000 BARRELS DAILY
STOCKTON CITY FLOURING MILLS

Grangers' Union of San Joaquin Valley,

Importers and Dealers in

AGRICULTURAL IMPLEMENTS.



GANG PLOWS, SULKY PLOWS, SINGLE OR WALKING PLOWS. THE BEST CHILLED PLOW IN USE.

Hollow Toothed Harrows, Cultivators, Barbed Wire, Bailing Wire

Wagons! Wagons! Wagons! Buggies! Buggies!

Coal, Iron and Steel. Builders' Hardware.

Write or Call and see us before Purchasing. Address all Communications,

GRANGERS' UNION,
280 and 282 Main Street, STOCKTON

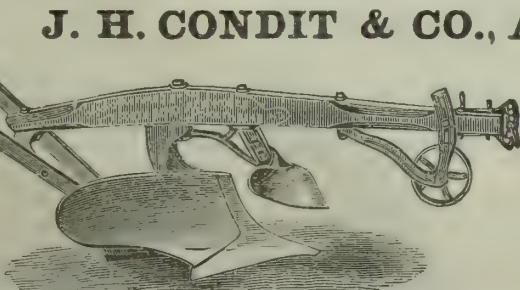
J. H. CONDIT & CO., Agents

-FOR-

OLIVER

**CHILLED
PLOWS.**

Cast Plows and
Extras
Of Our Own
Importation.



Steel Plows, Reversible Molds, Eureka Gangs, Seed Sowers, Harrows,
Fence Wire, Wheelbarrows, Hardware and Ship Chandlery.

Rubber and Leather Belting. Rubber and Hemp Packing. Tents, Hose and Twine. Garden, Flower and Field Seeds—Alfalfa

J. H. CONDIT & CO, Hunter St., near Main, Stockton.

HARNESS, SADDLES, LEATHER & SADDLERY

Goods,
WHOLESALE AND RETAIL.

Harness, \$12.50 to \$75 per set; Saddles \$7.50 to \$50 each; Collars, Halters, Bridles, Bits, Spurs, Whips, Brushes, Robes, Blankets, etc., etc.
W. DAVIS, 410 Market Street.

MYER'S IMPROVED GANG PLOW.

The only Plow that ever Received the \$100 PREMIUM at the State Fair.

Simplest and Most Effective Plow in the World!

The Lifting Gear and Land Gauge need only be seen to be appreciated. The Adjustable Spindles and Boxes are a new feature, and when worn can be replaced without purchasing new wheels or arms.

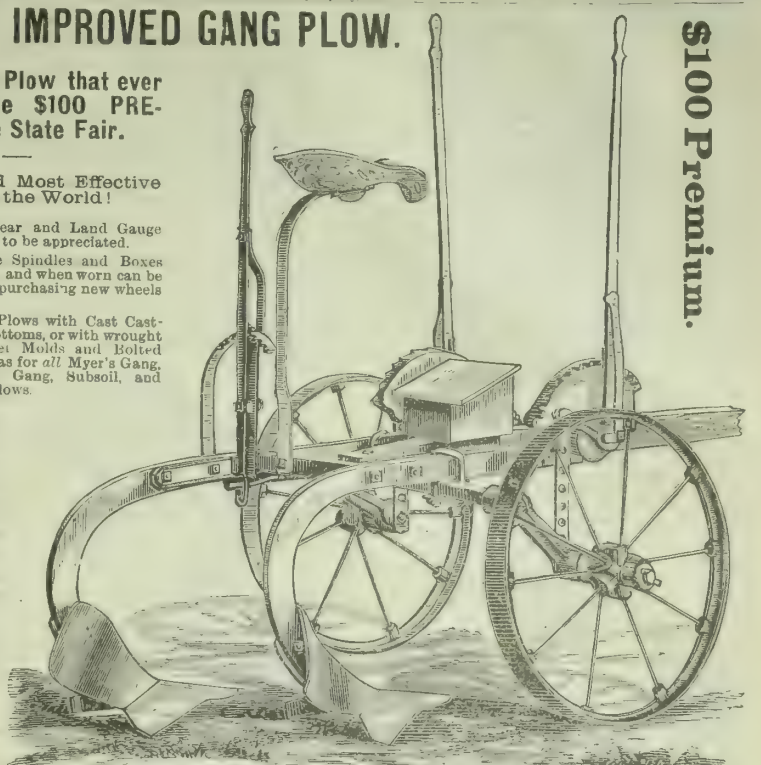
We have these Plows with Cast Cast-Steel Slipshoe Bottoms, or with wrought extra heavy Steel Molds and Bolted Shares; also Extras for all Myer's Gang, Single, Sidehill, Gang, Subsoil, and Vineyard Gang Plows.

We will have, in time for summer following, Myer's Gangs with the celebrated Collins Cast Cast-Steel and Bolted Shares, with extra high Moldboard for Deep Plowing.

In ordering Extras be sure to give number of Plow.

AGENTS SOLICITED AND LIBERAL TERMS GIVEN.

Fifth Street Cars pass the Works every five minutes.



\$100 Premium.

RICE'S ENGINE, BOILER AND PLOW WORKS,
Manufacturer and Sole Agent, Nos. 52, 54, 56, 58 & 60 Bluxome St., Bet. Fifth & Sixth, near C. P. R. R. Depot.

Stockton's Vineyard Gang Plow and Cultivator

Saves from 50% to 75% of the cost, and plows and cultivates deep. Pays for itself every year. This plow is light and durable, being made of wrought iron throughout. One man, with two horses, can plow seven acres of vineyard or hops a day, and then cross cultivate with the shovel cultivator 20 acres a day.

The Latest and Best Invention for Plowing and Cultivating Vineyards, Orchards, Hop Fields, Etc.

REFERENCES.

Charles Krug, H. W. Crabbe, C. Grozinger, T. L. Grigsby, D. Emerson, M. M. Estee, Prof. Husman, Beringer Bros., and others, Napa county. I. De Turk, Wm. McPherson Hill, J. H. Drummond, J. Dresel, James Shaw and others, Sonoma county. R. B. Blowers, L. A. Gould (superintendent of Briggs' Vineyard), N. Wykoft, Mrs. Jackson, Dr. Ross, and others, Yolo county.

WEED CUTTER ATTACHMENT TO BE HAD UPON ORDER.

OTHER ADVANTAGES.

By putting on four plows and four horses, the cost of plowing can be still further reduced. In vineyard plowing, one right-hand plow and one left-hand plow, both facing to the center, are used; and with four horses, two of each are used. The plows are movable on the frame, and reversible, so as to throw the earth either to or from the vines, as desired. The Shovel Cultivator is also reversible, running point foremost, or with the point in the rear, as desired. By dropping one wheel, so as to run in a furrow, and putting on two or more right-hand plows, it can be used for putting in grain, the same as any gang. Address,

P. K. STOCKTON,

St. Helena, Napa County,

CALIFORNIA.

PRICES REDUCED!

JOHN CAINE,

Sole Proprietor of the

Globe Iron Foundry and Machine Shop.

STOCKTON IMPROVED GANG PLOWS,

With Extra Reversible Molds, Standards, Wheels, and Landsides.

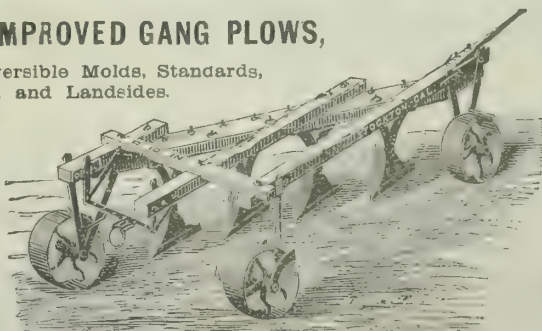
Eastern and Home Made

Sulky &

Gang Plows.

The Russell Manufacturing Co.'s Solid Woven COTTON BELTING, Black Coated.

BEST BRANDS BARBED WIRE.



Agent for
STUDEBAKER
Farm, Freight and
Spring Wagons.
Made to my Order.

GEM and CAHOON SOWERS.

Salesroom and Warehouse, northeast corner of Market and El Dorado Streets, Stockton, Cal. Address, **JOHN CAINE,** Globe Iron Works, P. O. Box, No. 95, Stockton.

S. P. BAILEY.

O. E. BADGLEY.

JOHN BAILEY.

BAILEY, BADGLEY & CO.,

Cor. Main and California Streets, - - - - - Stockton, Cal.

IMPORTERS AND DEALERS IN

AGRICULTURAL IMPLEMENTS, HARDWARE, Etc.,

Made by the best manufacturers. Agents for the San Leandro Plow Co.'s goods; La Selle Farm and Freight Wagons; the celebrated Studebaker Spring Wagons, Carriages, Buggies and Buckboards. The Utica Agricultural Co.'s goods are largely represented by this firm, including their Barley, Hay and Spading Forks, Garden Rakes and Hoes. Being State Agents for the American Hay Carriers and Elevators, they can supply the trade at manufacturers' prices.

We have a large and complete stock of Gang, Platform Gang and Single Plows and Harrows, including the California Spring-Tooth Harrow.

In connection with Agricultural Implements, we keep in stock a full line of Builders' Hardware and Carpenters' Tools. By strict attention to business and selling at the lowest possible rates, we solicit a share of public patronage.

BAILEY, BADGLEY & CO.

Christmas Song.

O'er the hills night shadows steal;
 Scarcely a light breeze stirs;
 See the Virgin mild
 Clasp her new-born Child!
 Round the manger shepherds kneel—
 Dumbly worshippers.
 Hark! angels sing
 Round their heavenly King!
 'Tis for man, and not for them,
 Sleeps the Babe in Bethlehem.

Thou whose head to earth is lowly
 Bowed in woe and shame,
 When no help seems nigh
 To thy piteous cry,
 Think! it was not for the holy
 The Redeemer came.
 Hark! angels sing
 Round their heavenly King!
 For earth's sinful and defiled
 Comes to-night the Savior Child!

He who to the cradle brings
 One pure, generous thought
 To the infant there;
 Brings a gift more rare
 Than the gold and myrrh the kings
 Of the Orient brought.
 Hark! the angels sing
 Round their heavenly King!
 'Tis for men, and not for them,
 Sleeps the Babe in Bethlehem.

—Constantina E. Brooks.

Christmas.

"Well, mamma, I'm sure now that I would rather have a baby doll than a large doll. You know, a baby like Guy, with long dresses, a bib and a lace cap."

"Are you certain, Grace, that that is the kind of a doll that I should write and ask Santa Claus to bring you?"

"Yes; but be sure to tell him that she must have long dresses—just as long as Guy's; and I want a nice little crib with a cunning little pillow and blanket. Tell him all, won't you, mamma?"

"And what will you do with bouncing Betsy then?" asked Clifford.

"Oh, I guess she can be my baby's nurse. I'll make her a long white apron, and then she can hold my baby when I'm busy," said Grace.

"So there, now, I've written and told Santa Claus all you want. And what shall I tell him that you want, Clifford?" asked mamma.

"I want a dog-cart and pony, and a goat, and a pug dog."

"Oh, Clifford! Why, where would you keep them all?"

"Oh, in my room, of course," said Clifford. "Well, I will tell Santa Claus; and now what do you think he ought to bring baby Guy?" asked mamma.

"I think he ought to have a doll baby," said Grace.

"And a nice rattle," chimed in Clifford.

Pretty soon mamma had written the letter to Santa Claus, with the list of all the things for Grace, Clifford and Guy. Grace said she thought, as Santa Claus came down the chimney, the letter ought to be put up the chimney so he could find it.

They waited patiently from day to day, and asked very often how many more days it would be before Christmas.

One morning mamma said: "Children, to-night Santa Claus will come, so be good children and help mamma all you can to trim up the sitting-room with green garlands."

Their sitting-room had a large open fire place such as they used to make in olden times, with a high mantel above it, and here mamma hung festoons of green and filled the vases with sprigs of cedar and red berries. Mamma said they would not make any fire to-day, but would keep the dining-room door open all day and that would warm the room sufficiently. Papa came home early, and at supper the children were so excited that they could hardly eat. After supper papa said he was going out for a short time.

The children were busily talking about Santa Claus, when suddenly there was heard a ringing of sleigh bells. They ran into the sitting-room, and just then they saw Santa Claus stepping out of the fireplace, his long gray beard and long hair covered with snow. He had on a long fur cloak and fur cap, which looked like papa's, but they were so excited they did not notice them. He had a Christmas tree on his back and a large bag in his hand.

"Merry Christmas, my little folks."

The children at first looked a little frightened, but then when he said, "A merry, merry Christmas to Grace, Clifford and Guy," they said, "Thanks; same to you."

Then he placed the tree on the table, lit the lights, and the children shouted with joy to see all the pretty things on it.

Little Guy got so excited that mamma could hardly hold him in her arms, he jumped and crowded so.

After the lights were all lit, Santa Claus took out of the bag a parcel wrapped in white paper, and said, "This is for Grace." Grace took it, made a courtesy and said, "Thanks," ran back of mamma, opened it, and found her long wished for doll, long dresses and all.

Then he said, "Here is something for Clifford." Clifford soon had a tin dog cart and pony, a goat and a china pug dog on the floor. He then went up to him and said: "I know Santa Claus, that you got mamma's letter, 'cause this is just what I wanted."

Then Santa Claus put his hand way down in the bottom of his bag and brought out a pretty Chinese rattle, with cunning little brass bells on it, and Guy crowded and smiled sweetly to Santa Claus.

Then Santa Claus said: "Now, children, I

wish you all a merry Christmas. Be good children, so that papa and mamma will have a merry Christmas with you."

Then he said he guessed he would walk out of the door, as it was easier to slide down a chimney than to climb up one. The children shook hands with him, and he left.

Pretty soon papa came in and the children told him all about Santa Claus and showed him their presents.

For aged men, women, weak and sickly children, with out a rival. Will not cause headache. Brown's Iron Bitters.

OVER 180,000 Howe Scales Sold—Hawley Bros.' Hardware Co., General Agents, San Francisco.

"Got our Money's Worth."

This is the opinion of a gentleman in Islesborough, Ohio, after a trial of Compound Oxygen in the case of his wife: "Her appetite is much better; she sleeps much better; no frightful dreams, such as she had before using the Oxygen; it much stronger; does all her work in the house and considerable outdoors; moves about the house as nimble as a girl of 15 years. In short, she is better all over, and I think we have got our money's worth. I shall always speak in favor of the Oxygen to my neighbors. Accept our thanks for the good health my wife enjoys." Our Treatise on Compound Oxygen, its nature, action and results, with reports of cases, and full information, sent free. Drs. STARKY & PALER, 1109 and 1111 Girard St., Philadelphia, Pa.

All orders for the Compound Oxygen Home Treatment directed to H. E. Mathews, 606 Montgomery St., San Francisco, will be filled on the same terms as if sent directly to us in Philadelphia.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

G. W. McGREW—Santa Clara county.
 M. P. OWEN—Santa Cruz county.
 J. W. A. WRIGHT—Merced, Tulare and Kern counties.
 JARED C. HOAG—California.
 L. L. WOODMANSEY.
 B. W. CROWELL—Los Angeles county.
 L. WALKER—Butte, Colusa and Sierra counties.
 S. E. BAKER—Eastern States.
 J. WILSON, Amador county.
 GEO. McDOWELL—Alameda county.
 N. H. HARGOOD—Plumas county.
 E. T. THURSTON—San Francisco.

IMPORTANT additions are being continually made in Woodward's Gardens. The grotto walled with aquaria is constantly receiving accessions of new fish and other marine life. The number of sea lions is increased and there is a better chance to study their actions. The pavilion has new varieties of performances. The floral department is replete and the wild animals in good vigor. A day at Woodward's Gardens is a day well spent.

To Printers and Publishers.

We offer Scotch brevier type (same as used on this paper) for sale in any quantity from 100 lbs. to 1,000 lbs., for 50 cents per lb., if ordered soon. Also, several hundred pounds of nonpareil at favorable rates. The type is in good condition and is of a very durable character.

Also for sale, desirable fonts of second-hand display type at less than half the price of new.

DEWEY & CO.

Annual Meeting.

The regular annual meeting of the stockholders of the Grangers' Bank of California and the election of Directors for the ensuing year will take place at the office of the Bank, in the city of San Francisco, State of California, on Tuesday, the 9th day of January, 1883, at 1 o'clock P. M.

ALBERT MONTELLIER,

December 1, 1882.

Cashier and Manager.

Our attention has been called to the remarkable curative properties of Burnham's Abietene. It is not a compound, but a pure distillation from a peculiar kind of fir balsam. It is really one of nature's remedies. Used both internally and externally. As a specific for croup it stands without a rival, and does away with the nauseating effects of hive syrup and emetics. Cures colds, coughs, sore throat, rheumatism, neuralgia, kidney troubles, etc. Used as a liniment for bruises, burns, stiff joints, sprains, poison oak, etc., it has no superior. For circulars and testimonials of its merits address Wm. M. Hickman, druggist, Stockton, Cal. For sale by all druggists. Price, 50 cts. and \$1 per bottle.

Successful Patent Solicitors.

As Dewey & Co. have been in the patent soliciting business on this coast now for so many years, the firm's name is a well-known one. Another reason for its popularity is that a great proportion of the Pacific coast patents issued by the Government have been procured through their agency. They are, therefore, well and thoroughly posted on the needs of the progressive industrial classes of this coast. They are the best posted firm on what has been done in all branches of industry, and are able to judge of what is new and patentable. In this they have a great advantage, which is of practical dollar and cent value to their clients. That is this understood and appreciated is evidenced by the number of patents issued through their agency from week to week and year to year.

Apprentice Wanted.

Wanted, a well-recommended, able and steadfast boy, of fair education and good intellect, to thoroughly learn the printing business. None other need apply. Address this office.

By TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

AGENTS can now grasp a fortune. Outfit worth \$10 sent free. Full particulars address E. G. RIDGOUT & CO., 10 Barclay St., New York.

A CORN SHELLER can be obtained for \$5 of Wiester & Co., S. F.

NEARLY 1,000

RECORDED PURE BRED

Percheron-Norman Horses

Imported and bred by

M. W. DUNHAM,

OAKLAWN FARM,

Wayne, Du Page County, Illinois.

33 miles west of Chicago, on C. & N. W. R'y.

468 OF THE FINEST

Imported from France by him during the past 12 months, (259 since July 1st.)



Being more than the combined importations of all other importers of all kinds of Draft Horses from Europe for any previous year; and more than have ever been imported and bred by any other man or firm during their entire business career.

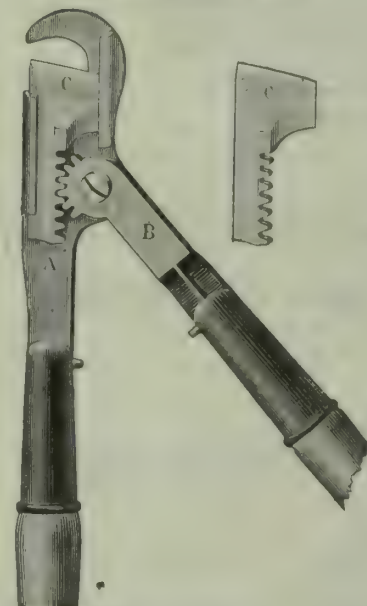
In these statements grade horses are not included to swell numbers or mislead.

Come and see for yourselves the greatest importing and breeding establishment in the world. Visitors always welcome, whether they desire to purchase or not. Carriage at depot. Telegraph at Wayne, with private Telephone connection with Oaklawn.

Dated Sept. 1, 1882. Send for Catalogue S.

THE BOSS PRUNER.

Patented January 8, 1878.



The Boss Pruner made. Small size, cuts 1 inch, price, \$3.50. Large size, cuts two inches, price, \$4.50. For simplicity, ease, rapidity and Durability they are unexcelled.

Apply to

GEO. WOOLSEY,

Ione City, Amador County, California,

General Agent for the State.

JOHN BERGSTROM,
ORCAN BUILDER.

29th. and Mission Sts.

Agents Wanted.

A Library in One Volume. New, authentic and exhaustive. The largest, handsomest, most comprehensive and best illustrated Work on Live Stock ever issued in this country.

Endorsed by Veterinary Surgeons and the Agricultural Press everywhere. The "Object Teaching" Stock Book for every day use.

The "American Farmers' Pictorial Cyclopaedia of Live Stock," embracing Horses, Cattle, Swine, Sheep and Poultry, including Departments on Dogs and Bees; being also a Complete Stock Doctor, combining the effective method of Object Teaching with written instructions.

For Terms and Circulars apply to J. DEWING & CO., 420 Bush St., San Francisco, Cal.

Only "PEBBLE" Establishment.



Muller's Optical Depot,

135 Montgomery St., near Bush.

SPECIALTY FOR 33 YEARS.

The most complicated cases of defective vision thoroughly diagnosed, free of charge. Orders by mail or express promptly attended to.

Compound Astigmatic Lenses Mounted to Order. Two Hours Notice.

Moore's Prepared

SQUIRREL



POISON.

The most successful Poison in use for Squirrel Killing

C. E. WILLIAMS & CO., Proprietors,
STOCKTON, CAL.

Moore's Sulphur Dip; Safe, Sure and Cheap preparation for the cure of Scab in Sheep.

HORTON & KENNEDY'S
FAMOUS

ENTERPRISE

Self-Regulating

WINDMILL

Is recognized as the best.



Always gives satisfaction. SIMPLE, STRONG and DURABLE in all parts. Solid Wrought-iron Crank Shaft with DOUBLE BEARINGS for the Crank to work in, all turned and run in adjustable babbitted boxes.

Positively Self-Regulating

With no coil springs, or springs of any kind. No little rods, joints, levers, or anything of the kind to get out of order as such things do. Mills in use 6 to 12 years in good order now, that have never cost one cent for repairs. All genuine Enterprise Mills for the Pacific Coast trade come only through this agency, and none, whether of the old or latest pattern, are genuine, except those bearing the "Enterprise Co." stamp. Look out for this, as inferior mills are being offered with testimonials applied to them which were given for ours. Prices to suit the times. Full particulars free. Best Pumps, Feed Mills, etc., kept in stock. Address,

HORTON & KENNEDY,

GENERAL OFFICE AND SUPPLIES (as always before)
LIVERMORE, ALAMEDA CO., CAL.San Francisco Agency, LINTHROPE, RICE
& CO., 323 & 325 Market St., S. F.CLUB-FOOT
SHOE.

AUTENRIETH'S CELEBRATED

APPARATUS FOR

Curvature of the Spine, Wry-Neck, Anchylosis, Club Feet and Bow Legs.

Trusses and Crutches, Elastic Stockings for Varicose Veins, Supporters and Bandages of every description. Also, inventor of the Celebrated Autenrieth's Club-Foot Shoe. Send for circulars. WM. AUTENRIETH, 71 West Sixth Street, Cincinnati, Ohio.

STOCKTON

SAVINGS AND LOAN SOCIETY.

L. U. SHIPPEE.....President

FRED. M. WEST.....Cashier

Authorized Capital.....\$500,000

CAPITAL PAID UP.....\$350,000

Receives Deposits repayable ON TIME and ON DEMAND. Pays interest at the rate of 5 per cent per annum after 30 days from date of deposits. Buys and sells United States Currency, Domestic and Foreign Exchanges and transacts a General Banking Business.

M. COOKE.....M. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento.

ALL KINDS OF

Fruit and Packing Boxes Made to Order,

AND IN SHOOKS.

Communications Promptly Attended to.

COOK & SONS, Successors to COOK & GREGORY

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET. - - STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from Hall and Steamboat Stations.

A. & J. HAHN, Proprietors.

Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the Mining and Scientific Press, San Francisco, at favorable rates.

Incoming Fashions.

December sets an approving or disapproving seal upon all fashions, the earlier issue of which has been somewhat experimental, and it is at this time that styles for winter are firmly established. Such new patterns as are now issued are sure to have been carefully considered, and can in no sense be counted as adventurers into the world of dress. They are, in fact, the results of an artistic evolution, and may be accepted without deliberation or speculation.

Ladies' Home Toilet.

Fig. 1.—(Consisting of ladies' basque No. 8388, and skirt No. 8387.) A charming toilette that will do service for reception, street or vis-

green silk of the heavy gros grain variety, and cloth of the same beautiful hue woven in a fancy pattern, are the materials used in the construction of the handsome costume illustrated by this engraving. The skirt is fashioned in the universally adopted four-gored style, and is turned up at the bottom for a wide hem, a box-plaiting of silk being sewed to the hem underneath, and allowed to extend sufficiently below to make up the desired length. The front gore is covered to within some distance of the belt with a uniformly box-plaited section of silk. It is deeply hemmed at the lower edge, and to its sides at the bottom are added other sections of silk which are box-plaited and hemmed to correspond. The pattern to the skirt is in nine sizes for ladies from 20 to 36 in., waist measure.

The jacket presents the fashionable Jersey effect in its close and perfect fit, to the success of which a well curved center seam, low side-back gorers, single under-arm darts and double bust darts all contribute. The center seam terminates at the top of an under box-plate, and the front closes with button-holes and buttons nearly to the bottom, and then flares with a handsome notched effect. A pretty collar with reversed ends is about the neck, adding a novel completion that will prove generally becoming. The pattern to the jacket is in 13 sizes for ladies from 28 to 46 inches, bust measure.

The muff is a fanciful affair, and is made of silk such as is used for the skirt. It is shirred to form two puffs with wide, ruffled ends, and is lined with satin. The hat is a jaunty shape,

covered with hunter's green velvet and richly garnitured with ostrich plumage.

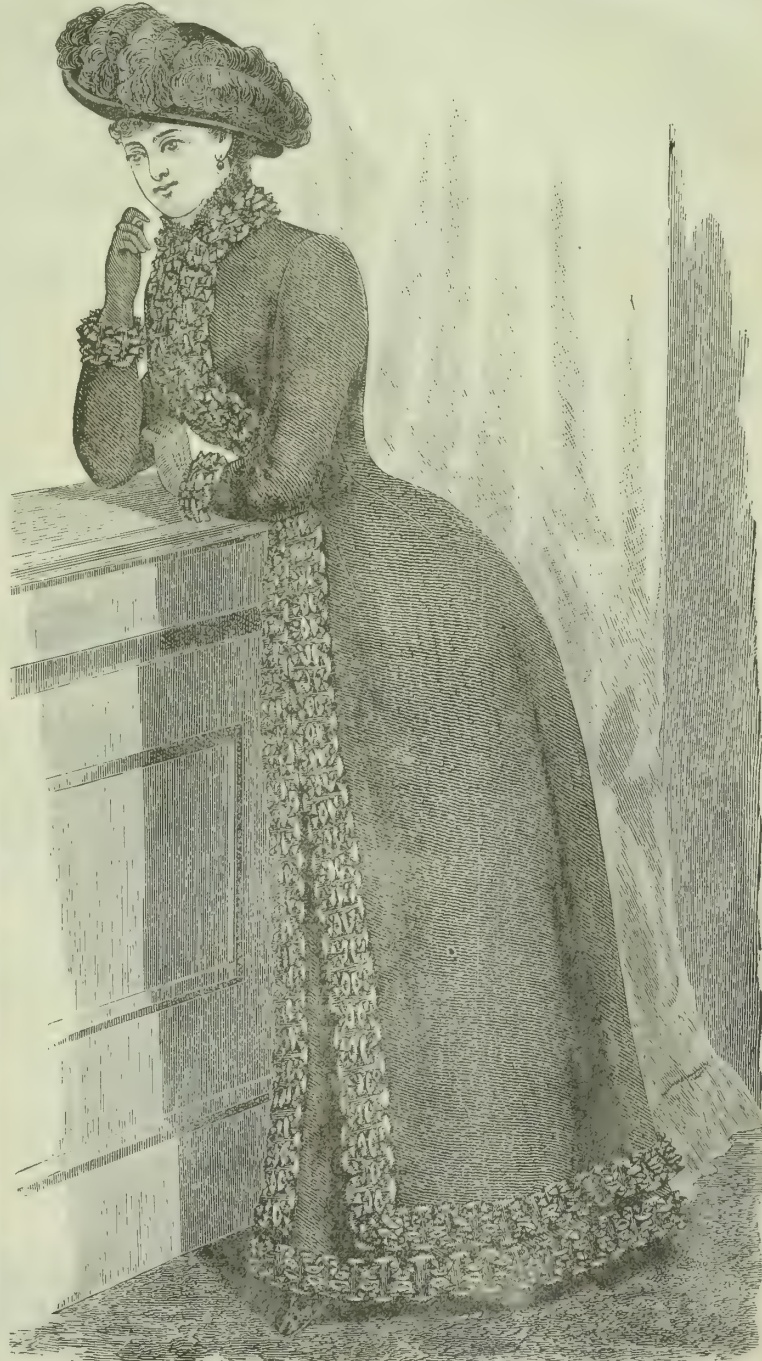
Ladies' Promenade Toilette.

Fig. 3.—(Consisting of ladies' redingote No. 8378, and skirt No. 8150.) Seldom has the world of fashion been as eager in its acceptance of a novelty as it has been in its reception of the redingote, top-coat, surtout, or pelisse, all of which names are applied to the superbly elegant over-garment illustrated at this figure. These top-coats are usually and properly made of handsome cloth in dark greens, blues and browns, and also in black and terra cotta, and are worn over skirts of silk, velvet, satin, etc., of the same color, or over skirts of the same material. The redingote is Jersey-like in its close and



FIG. 1.—LADIES' HOUSE TOILETTE.

FIG. 2.—LADIES' VISITING TOILETTE.



NO. 3.—LADIES' PROMENADE TOILETTE.

iting wear is here exhibited. The combination includes velvet and gros grain silk of a dark blue shade. The skirt is of the round, four-gored style, and about the bottom of its back breadth and side gores is a deep, side-plaited flounce of silk, which is finished to form a self-heading. A narrow, similarly plaited ruffle finishes the bottom of the front gore, and is almost totally concealed by the lower front drapery. This drapery comprises a deep, handsomely plaited fan of silk between plain side sections of velvet, which latter are given a charming, wing-like flare by two plaits laid upward in their back edges. The lower draperies extend more than midway to the belt, and over their tops falls a softly wrinkled *tablier* of silk. The back drapery is of velvet, and falls undraped at one side, while at the other side it is caught up in a cluster of deep plaits, which are fastened beneath a short, crosswise slash made for the purpose. The process throws the lower edge into a point at one side. The pattern to the skirt is in nine sizes for ladies, from 20 to 36 inches waist measure.

The basque falls in double points in front and in three deeper points at the back, while at the sides it arches high and gracefully. The adjustment is accomplished by a center seam, side-back gores reaching to the shoulders, narrow under-arm gores and double bust darts. The sleeves are slightly full into the arm's eyes so as to stand gracefully high upon the shoulders and fit closely to the arms. The pattern to the basque is in 13 sizes for ladies from 28 to 46 inches, bust measure.

Ladies' Visiting Toilet.

Fig. 2.—(Consisting of ladies' skirt, No. 8398, jacket No. 8381 and muff No. 8341.) Hunters'



FIG. 4.—LADIES' CAPOTE.



FIG. 5.—LADIES' POKE BONNET.

smooth adjustment, which is the result of artistically curved center, side and side-back seams and double bust and single under-arm darts. The fronts close to a suitable depth below the waist line, and then fall loose and straight, with a slight but pretty flare, and the skirt is finished at all its edges with wide hems. A pinked quilling or ruch borders the lower edges of the garment, and is also carried up the front edges of the fronts, and then about the neck, outside the standing collar. A lace ruff, added inside, completes the neck dressily. The sleeve fits the arm closely, and at the wrist is encircled by a ruch similar to that ornamenting the remainder of the costume. When heavy goods, such as cloths, are used, it is best to make the ruches single, and pink their edges, as with this finish they look lighter and prettier. The pattern to the redingote is in 13 sizes for ladies, from 28 to 46 inches bust measure.

Ladies' Capote.

Fig. 4.—This bonnet, a medium *capote* in size, is entirely covered with thick gold cord, so closely applied that the lining of dark green is scarcely perceptible. The garniture is a style much favored. Broad ribbon, green velvet on one side and deep yellow on the other, is made into a large Alsacian bow and placed just in front.

Ladies' Poke Bonnet

Fig. 5.—Three shades of terra cotta are deftly combined in this bonnet. It is of plush of the darkest shade, the material being smoothly laid on the frame. The under-facing is of a lighter tone and is of *faillie* silk. Just in front is a cluster of tips of the brightest tint, and from under them looks out a cockatoo head of the same shade.

Lands for Sale and to Let.

Redlands.

Good water, rich soil and magnificent view.
High elevation, dry air, few fogs and northerers.

No brush or fences on the land, which is especially adapted to the culture of the orange and raisin grape.

Near to church, school, store and depot.
Hotel open. Telephone Communication.

Stage from San Bernardino Tuesdays, Thursdays and Saturdays.

SEND FOR CIRCULAR.

JUDSON & BROWN,

Redlands,

SAN BERNARDINO, CALIFORNIA.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "First of the Year" *Eden's* *Redlands* and *Map*, full of reliable information on climate, productions, etc. of

SANTA CRUZ COUNTY.

Address "Eden's Magazine," Santa Cruz, Cal.

Educational.

STOCKTON BUSINESS COLLEGE,

TELEGRAPH INSTITUTE AND NORMAL SCHOOL.
The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address: P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.

CALIFORNIA COMMERCIAL COLLEGE

417 Kearny Street, San Francisco.

The only Business College on the Pacific Coast in which Text Books are furnished FREE to students.

Send for Circulars.

THE DAVIS IRON WAGON.

E. A. SCOTT & CO.,

Proprietors for the Pacific,

P. O. Box 293, Sacramento, Cal.

LA FRANCE STEAM FIRE ENGINE.

Hayes' Fire Truck.

Circulars Forwarded Free to any Address.

REISTER'S PATENT SIDE SADDLE.

This is the finest and best saddle yet invented for ladies equestrian exercises. Send for circular and price list to

L. A. REISTER,

Patentee and Manufacturer,

Chico, Butte County, CALIFORNIA

GILES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

533 California St. SAN FRANCISCO

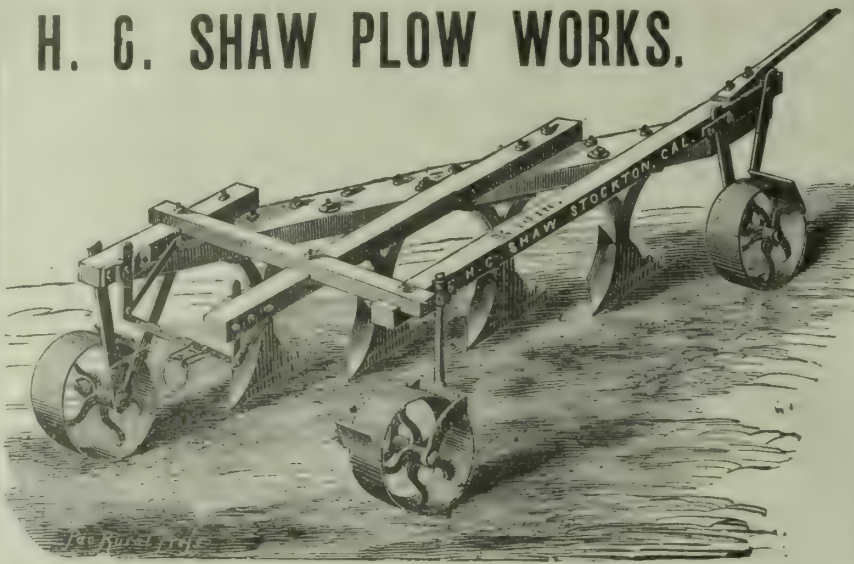


Best in the World. Latest Improvements. Powerful. Warranted one year.
RUPTURE Guaranteed cured in 30 to 60 days by Dr. Pierce's Method.
For full particulars, send for circular with full particulars, from MANUFACTURER ELASTIC TRUSS & BELT CO., 704 Sacramento St., San Francisco, Cal.

Silos, Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.

SANOME, 402 Montgomery St., S. F. Send for circular

H. C. SHAW PLOW WORKS.



THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

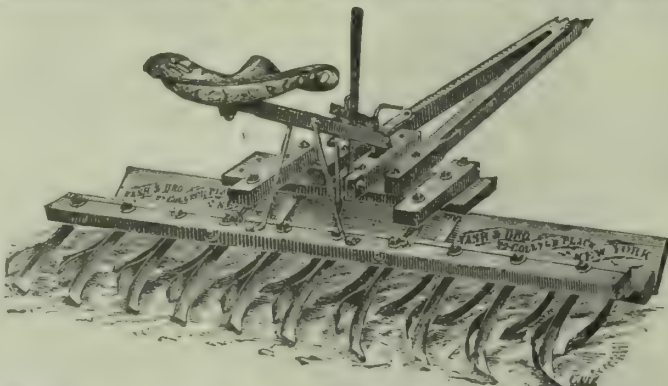
Single and Sulky Plows, Seed Sowers, Harrows, Etc.

201 AND 203 EL DORADO STREET, STOCKTON, CAL.

"ACME"

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.

For the Orchard, Vineyard, Nursery and Grain Field.



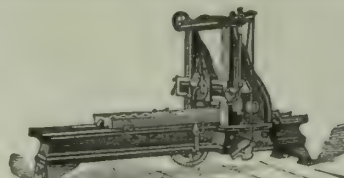
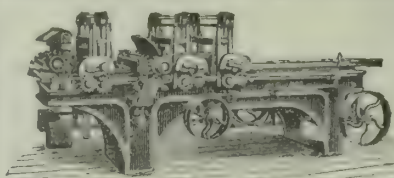
Send for Pamphlet giving Testimonials from the Pacific Coast.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land", where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,

22 College Place, New York City.

SOLD IN CALIFORNIA BY: G. R. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia; Geo. Bull & Co., San Francisco. Sold in Utah, Montana and Idaho by Geo. A. Lowe, Salt Lake City.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - - San Francisco, Cal.
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

CHEAPEST.

BEST.

BOOTH'S SURE DEATH

To Squirrels, Gophers, Birds, Mice, Etc.

Endorsed by the Grange and all others who have used it.
INFALLIBLE SQUIRREL AND GOPHER EXTERMINATOR.

STRENGTH INCREASED. PRICE REDUCED.

Put up in 1 lb., 5 lb., and 5 gallon tins. Manufactured by

A. R. BOOTH, Eagle Drug Store,
San Luis Obispo, Cal.

FOR SALE BY ALL WHOLESALE AND RETAIL DEALERS.

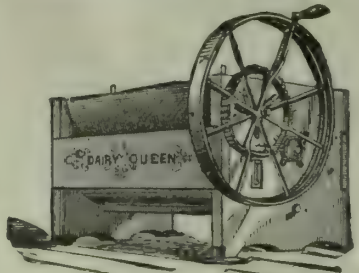


"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.

RECEIVED TWO DIPLOMAS.



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

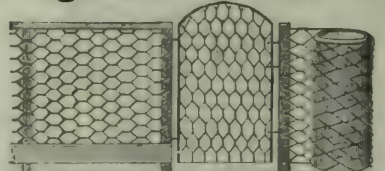
It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Jamestown, Cal.,

Or Jas. L. Haley, Jamestown, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.

Sedgwick Steel Wire Fence

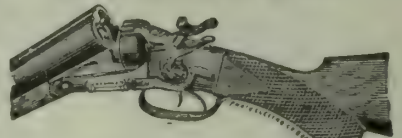


Is the only general purpose Wire Fence in use, being a Strong Net-Work Without Barbs. It will turn dogs, pigs, sheep, and poultry, as well as the most vicious stock, without injury to either fence or stock. It is just the fence for farms, ranches, stock ranges and railroads, and very neat for lawns, parks, school lots and cemeteries. Covered with rust-proof paint, or galvanized, it will last a life time. It is Superior to Boards or Barbed Wire in every respect. We ask for it a fair trial, knowing it will wear itself into praise. The Sedgwick fences, made of wire of non-rust-proof steel, defy all competition in strength, strength and durability. We also have the best and cheapest All Iron Automatic or Self-Opening Gate, also Cheapest and Neatest All Iron Fence. For Prices and Particulars ask Hardware Dealers or address the Manufacturers.

SEDGWICK BROS.,
Richmond, Ind.

Mention this paper.

THE DAVIS GUN.

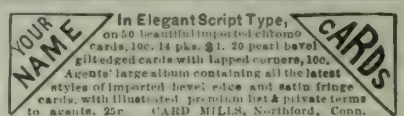


The best Shooting Gun for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12 Gauge, \$35; 16 Gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Firearms and Sporting Goods, 416 Market Street, San Francisco, Cal.

JOHN ELLIS,

Landscape Engineer and Garden Architect,
Practical Nurseryman and
General Horticulturist.

Offers his services in any of the above capacities. Designer of the State Capitol grounds, Sacramento, and of the State University, Berkeley. Surveys and maps furnished, estimates given. Work done economically.
Residence, 850 Folsom St., bet. Fourth & Fifth Sts., San Francisco, Cal.



CAUSTIC SODA,

Common and Powdered.

ALL OTHER SOAP-MAKING MATERIALS.

T. W. JACKSON & CO.,

304 California Street, - - San Francisco.

SOLE AGENTS FOR THE PACIFIC COAST.



Queen of the South FARM MILLS

For Stock Feed or Meal for Family use.

10,000 IN USE.

Write for Pamphlet.

Simpson & Gault Mfg Co.

Successors to STRAUB MILL CO.

CINCINNATI, O.

To Fish Raisers.

I am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address
T. A. BROWN, Sonoma, Cal.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 2 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the Trembly Knitting Machine Co., 163 Tremont Street, Boston, Mass.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 509 South 10th St. Philadelphia. Branch Offices—47 Rose St. New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorety, 529 Commercial St., S. F.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves for Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep, Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal., Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Rows and Chicks for sale.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. R. Game Bantams. Eggs and Fowls for sale.

FOUNTAIN GROVE POULTRY YARDS, Santa Rosa, Cal. High-class Poultry. Eggs for hatching. Langshans, \$3.50; Light Brahmas, \$2.50; Brown Leghorns \$2 per setting.

MRS. L. J. WATKINS, San Jose, Cal. Pure-bred Fancy Poultry; White and Brown Leghorns, Plymouth Rocks, Langshans and Houdans. Eggs and Fowls.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$6. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE

20 Houdans, 25 Black Spanish,
20 Langshans, 50 Buff Cochins,
60 Brown Leghorns, 100 Plymouth Rocks,
50 White Turkeys, 25 Golden Oldies.

For further particulars address as above.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to
ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

EGGS! EGGS!

For Hatching

From as fine Thoroughbred Poultry as was ever brought to the Pacific Coast. Large Illustrated Circular Free. Send for it.

L. C. BYCE,
P. O. Box 71. Petaluma, Sonoma Co., Cal

Dewey & Co { 252 Market Street, } Patent Agents

Oakland Poultry Yards,

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls.

Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to Box 1771, San Francisco.

POULTRY.

Hogs & Cattle.

Langshans, Brahmas, Cochins, Leghorns, Houdans, Plymouth Rocks, W. F. Black Spanish, Guinea Fowls, Aylesbury, Rouen and Pekin Ducks. Bronze and White Holland TURKEYS. Peacocks, Etc. Also, Eggs for Hatching.

Dish-Faced Berkshire Pigs, Poland China Pigs, Jersey Cattle, etc.

PACIFIC COAST POULTRY AND STOCK BOOK.

New Edition, over 100 pages, Handsomely Illustrated. Price by mail, 50 cents.

Stock or Eggs for Hatching guaranteed true to name, and to arrive safely. For further information please write, enclosing stamp. Circular and price list sent on application. Address

WILLIAM NILES,
Los Angeles, Cal.

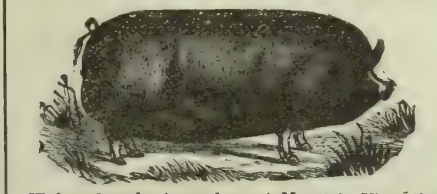
NAPA VALLEY POULTRY YARDS.



I have for sale all the leading varieties of Pure-bred Poultry: Single Birds, Pairs, Trios, or Breeding Yards. At State Fair, September, 1882, on Seven varieties entered I took First Premium on Plymouth Rocks, First on Langshans, First on Black Leghorns, First on Pekin Ducks, First on Rouen Ducks, First on Bronze Turkeys. Special Premium on Langshan Chickens, Special on Black Leghorn chickens, and Special on Light Brahma Chickens.

My stock is well known all over the coast, and needs no praise, as it speaks for itself. Send three-cent stamp for circular and price list.

R. G. HEAD,
Napa, Cal.



We have for sale at our farm at Mountain View Thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pig from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, I. J. Truman, S. F.



GEORGE TREFZER,

Breeder of High Class

Langshans, Black Cochins, White and Brown Leghorns, Pekin Ducks and Toulouse Geese.

My stock is all first-class, and are mated to secure the best results. Eggs and fowls for sale at very low prices. Send stamp for circular.

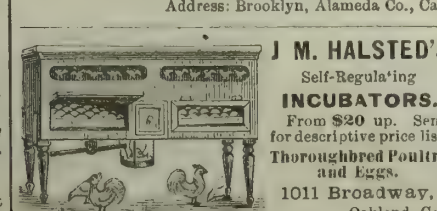
GEO. TREFZER,
Napa City, Napa Co., Cal.



SMITH'S POULTRY YARD,

Blanding Avenue, bet. Everett and Broadway, ALAMEDA, CAL.

Importer and Breeder of Thoroughbred Fowls. Langshans (Croad Strain) American Sebrights, Plymouth Rocks, Brown and White Leghorns. Eggs for hatching. A. H. SMITH. CHAS. W. SMITH, Manager. Address: Brooklyn, Alameda Co., Cal.



J. M. HALSTED'S

Self-Regulating

INCUBATORS.

From \$20 up. Send for descriptive price list. Thoroughbred Poultry and Eggs.

1011 Broadway,
Oakland, Cal.

DON'T FORGET Where to Send for 50 very best NEW CARDS, just issued for 1882, for 10c. 15 packets. All Chromos. The latest fancy designs ever seen. To excel in quality is our aim. Name in new style type. Sample book of all styles. Bevel Edge Imported Holiday and Birthday Cards, with 24 page illustrated Premium List, 25c. Outfit 10c. E. F. EATON & CO. Northford, Conn.

HOG RINGING A FAILURE! OUR TENDON CUTTER A SUCCESS.

ANIMAL CONQUEROR. Pat. Dec. 21, 1880.



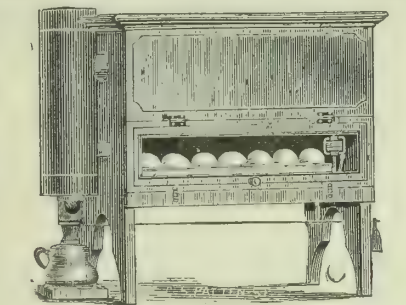
By the use of this instrument we take from the Hog its power to root, by removing a section or piece of the tendon or muscle which operates the shovel at the end of the nose, thereby forever after preventing them from rooting.

THIS IS NO SNOOTER, and we will convince the most skeptical that this little instrument will do its work effectually. Any number of testimonials furnished on application.

Retail price "Conqueror" \$1 each.
" " "Tendon Cutter, \$3.00 each.

Sold by the trade generally, or address
G. G. WICKSON,
General Pacific Coast Agent,
No. 319 Market Street, San Francisco, Cal.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity. \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over

PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium, Diploma and only Special awarded in the entire Fair, in competition with

NATIONAL (Axfords)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon covers, heat entering center; 24 eggs, \$30; 40 eggs, \$75; 60 eggs, \$90; Circular free. Address,

I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & Co., Boston, Mass., formerly Bangor, Me.

LAUREL RANCH.

Thoroughbred

Spanish Merino SHEEP.

First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared

by the Italian Government

Co. Cures thoroughly the

SCAB OF THE SHEEP

The BEST and CHEAPEST

remedy known. Reliable testi-

monials at our office.

For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento

Street, San Francisco

LITTLE'S SHEEP DIP.

Price Reduced

To \$1.25 PER GALLON.

Twenty gallons of fluid

mixed with cold water will

make 1,200 gallons Dip.

Apply to **FALKNER**,
BELL & CO., San Francisco

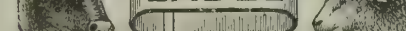
AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy, but a Practical

Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As Fanciers, Amateurs and others are ready to use a good, reliable, Self-regulating Incubator, that can be procured cheap, we now offer one that holds 150 eggs.

The Baby Price, \$28. Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast,
630 Howard St., San Francisco.



LABEL

Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted.

C. H. DANA, West Lebanon, N. H.

SPLENDID! 50 Latest Style chromo cards, name, in case, 10c Premium with 3 packs. E. H. Fardee, New Haven, Ct.

GRANCERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING.....President
A. D. LOGAN.....Vice-President
ALBERT MONTEPELLIER.....Cashier and Manager
FRANK MCMULLEN.....Secretary

DIRECTORS

JOHN LEWELLING, President.....Napa Co
J. H. GARDNER.....Rio Vista
T. E. TYNAN.....Stanislaus Co
URIAH WOOD.....Santa Clara Co
J. C. MERYFIELD.....Solano Co
H. M. LARUE.....Yolo Co
I. C. STEELE.....San Mateo Co
THOS. MCCONNELL.....Sacramento Co
C. J. CRESLEY.....Merced Co
SENECA EWER.....Napa Co
A. D. LOGAN.....Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES OF DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTEPELLIER

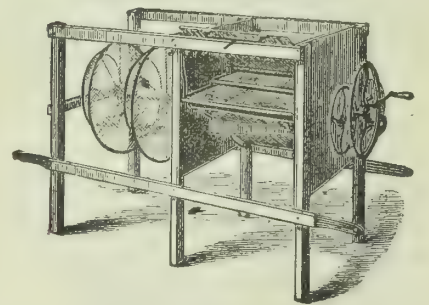
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE BEST. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

11 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

BERKSHIRES A SPECIALTY.



My Berkshires are Thoroughbred, and selected with great care from the best herds of imported stock in the United States and Canada, and for individual merit cannot be excelled. My breeding stock are recorded in the "American Berkshire Record," where none but pure bred Hogs are admitted. Pigs sold at reasonable rates. Correspondence solicited.

JOHN RIDER,

18th and A Streets, Sacramento City, Cal.

FOR SALE!

A first-class, three-fourths Norman Percheron stallion.

Address,

L. V. WILLITS,

Watsonville, - - - California.

Forest Culture.

It is time to talk of tree planting, and we hope that all of our readers are doing a little better than talking—that is planting. The example of Europe in tree preserving and tree planting should not be unheeded. The *Journal of Forestry*, a new Eastern publication, contains some important statements on the progress of forest planting in France, a few of which we give in condensed form. The city of Bordeaux has become of recent years the great commercial center of southwestern France for certain grades of coarse lumber. In 1857 a committee having charge of wood plantations predicted that they would add more than a thousand million francs to the wealth of France in a region the most sterile and forsaken. This seemed at the time the declaration of some wild enthusiast, but the prophecy has already been more than realized. The plantations which have been made have also given employment to a large number of people. A turpentine forest, for example, in addition to the considerable local population required for its attendance, must have homes near their work, gardens and lands for cultivation, and cattle to supply fertilizers for their home land. The forests are dotted all through with little plantations, and the spaces which separate them prevent the sweeping fires which once proved so disastrous. These spaces afford pasture to stock, and the bushes and undergrowth are pulled up, pressed into small bales by powerful machines, and sent to Paris for oven-wood. A growth of young timber takes the place of that which is cut, and the production is indefinitely continued. An official report, speaking of these improvements, and their results in the expenditures of nearly two millions francs for country roads, another million for other improvements, and a million and three-fourths for public offices and schoolhouses, asserts that "this is one of the most beautiful pages in the history of civilization and progress—in a region that 20 years ago was the poorest and most miserable in France, but which is now one of the most wealthy and prosperous."

Prang's Christmas Cards.

The recent years have seen our country's art taste rapidly grow, our artists as rapidly imbibing the inspiration, of which the air has seemed full, and art producers have kept at all times abreast or in advance of the capacity of the public to appreciate; always leading the world toward better, toward purer art, rather than pandering to depraved and lower tastes. It is the subject of congratulation among the world's best men that the tendency of popular taste is upward, not downward. Most active in educating this taste, and giving it something to feed upon, have been the products of the establishment of Messrs. L. Prang & Co., of Boston.

It is no doubt generally known that Prang & Co. offer large rewards for the best designs for their holiday publications, and thus stimulate artists, and at the same time draw popular attention to the best art work. Their several prize exhibitions have attracted the attention and the interest of two continents, and the awards have been the subjects of congratulation and sharp criticism. But congratulation or criticism tend to good results, and we shall have better work and greater interest in good work for all that is said upon both sides.

To give even brief descriptions of the Prize Christmas Cards would make a long article. Of course much of the ornamentation embraces the flora inseparable from Christmas time, and the examples of exquisite rendering of them will command general approval. No one should overlook Prang's cards when they are on Christmas gifts inclined. The display at all the leading book and stationery stores is large and exceedingly beautiful.

AN OLE MARGARINE ANECDOTE.—A dispatch from Petaluma says that at a local meeting of dairymen on Monday interesting discussions were had upon the Act to prevent fraud and deception in the manufacture and sale of butter and cheese. In this connection a member of the Association cited a case which recently came under his observation in a San Francisco restaurant. A customer seated at the table, upon discovering his bread had been oleomargarined instead of buttered, demanded of the waiter that he be provided with butter. The waiter insisted that good butter had already been provided. The customer takes the cake of oleomargarine from the plate, rolls it up in his handkerchief and puts it in his pocket. The waiter calls the proprietor. He demands of the customer what he means to do. The customer readily replies, "Advertise you with it." The proprietor acknowledges the bogus butter, and pleads to be let off. The customer acquiesces on a promise that he will discontinue its use. The point to be gained is more legislation on this subject. There was generally concurrence in the opinion that the law as it now stands is good as far as it goes, but that it does not reach far enough, inasmuch as it does not prevent the restaurant or hotel keeper from forcing bogus butter down the throats of a defenseless public in their pastry, if not upon the bread.

THE HAYES FIRE TRUCK.—We learn with interest that the Hayes fire truck, which is a California invention designed by D. D. Hayes, of San Francisco, is achieving great success. It is now being manufactured by the La France Fire Engine Co., of Elmira, N. Y. An order has just been received from London, England. It is pronounced the leading achievement in modern fire apparatus. The demand bids fair to be universal. E. A. Scott & Co., of Sacramento, are sole agents for the Pacific coast.

CALIFORNIA SPRING TOOTH HARROW.—Messrs. Batchelor and Wylie, manufacturers of the California Spring Tooth Harrow, have removed to 37 Market, to secure more commodious quarters. In connection with the Albion Seed Sower and Cultivator, they are now prepared to fill all orders for these valuable implements.

ARTIFICIAL LIMBS.—Those persons who are unfortunate enough to need artificial limbs are nevertheless fortunate to be living in an age when such things are so skillfully made as to nearly fill the requirements of a natural limb. Charles M. Evans, of Cincinnati, Ohio, manufacturer for the United States Government, has had many years' experience in furnishing artificial limbs, and stands at the head of manufacturers of such articles.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & CO.'S SCIENTIFIC PRESS PATENT AGENCY, 252 Market St., S. F.

FOR THE WEEK ENDING DECEMBER 5, 1882.

- 268,596.—SELF-LEVELLING BERTH—E. P. S. Andrews, Camp Verde, A. T.
268,598.—BALING PRESS—H. C. Arnold, Visalia, Cal.
268,611.—MECHANISM FOR CONVERTING MOTION—W. W. Borden, San Luis Rey, Cal.
268,614.—SHOW BOX FOR JEWELRY—L. Breidenstein, S. F.
268,619.—FRUIT DRIER—R. E. Burns, S. F.
268,641.—ANTI-SCALE COMPOUND FOR BOILERS—Chas. Cryer and C. H. Norris, S. F.
268,649.—BOOT—B. Getteson, S. F.
268,654.—WHEEL FENDER FOR RAILWAY CARS—A. Haman, S. F.
268,690.—HARROW—T. J. Hubbard, Redwood City, Cal.
268,691.—SCREEN FOR GRAIN SEPARATORS—T. J. Hubbard, Redwood City, Cal.
268,692.—SMOKE-CO-SUMING FURNACE—P. H. Jackson, S. F.
268,695.—TILTING MECHANISM FOR HOISTING BUCKETS—J. M. Lachlan, S. F.
268,694.—BOILER-SCRAPING ATTACHMENT—J. M. Lachlan, Grass Valley, Cal.
268,699.—WASHER CUTTER—C. C. Maltby, Chico, Cal.
268,705.—UNDERMOUNT FEATHERING WATER WHEEL—C. Mezan and J. L. McKee, S. F.
268,718.—EXPLOSIVE COMPOUND—C. F. Mohrig, S. F.
268,720.—STAND FOR ROCK DRILLS—E. Moreau, S. F.
268,727.—HARD ROCK DRILL—E. Moreau, S. F.
10,254.—SAFETY—D. W. Smith, Port Townsend, W. T. (re-issue)
268,571.—LEAK STOPPER FOR BOILER TUBES—W. F. Thompson, S. F.
268,586.—PROPELLING CARS—Adam Wingard, S. F.
268,546.—LUBRICATING COMPOUND—J. E. Sawyer, Napa, Cal.
268,467.—COPES SPOUT—J. H. Dunlap, Los Gatos, Cal.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest possible time.

Does Advertising Pay?

The Portsmouth (Virginia) *Times* says: It is sometimes questioned by merchants whether advertising pays. The question will hardly bear discussion in the light of the following facts, rates for transient advertisements being figured: "The Chicago Tribune," it is said, for a column a year receives \$26,000. The New York *Herald* receives for its lowest-priced column \$39,723 and for its highest \$349,000. The New York *Tribune* for its lowest \$29,764 and for its highest \$85,648—and these papers are never at a loss for advertisements to fill their columns. Their patronage comes not from any desire to assist the respective papers, but from business men who find it profitable to advertise."

A firm of manufacturers in Philadelphia placed an advertisement in a journal as an experiment. As they were economical Quakers, they commenced sparingly. Within three months their advertisements were running in seven different publications, and there is no question with them about its paying. As well might an enterprising firm try to save postage as the cost of advertising. Customers go to those who most persistently extend them an invitation. Judicious advertising pays a hundred fold.—*Exchange*.

We desire to call attention to the advertisement, in another column, of D. M. Ferry & Co., Detroit, Mich., the great seedsmen, whose mammoth establishment is one of the sights of the chief city of Michigan. They do the largest business in their trade in the United States, reaching even across the Atlantic and Pacific oceans. The house is entirely reliable, and if you wish to get exactly what you order, you cannot do better than send to them for your seeds, and you may depend upon it you will get the best that the market can supply. Their seeds have become known over the entire civilized world for purity and fertility, and have gained for them an enviable reputation. Their Annual Seed Catalogue, just issued for 1883, replete with information and beautifully illustrated, will be sent free on application.

Worth Hundreds, Etc.

The following candid admission is extracted from a communication printed Dec. 10, 1882: Could agriculturists and horticulturists realize the value to them of the *RURAL PRESS*, your list would be augmented faster than your clerks could enter the names. It has been worth hundreds of dollars to me in the past three years, and it would be cheap at a subscription of \$10 a year, while it is given away at a third of that price.

J. W. Columbia, Dec. 4, 1882.

S. F. MARKET REPORT.

NOTE.—Our quotations are for Wednesday, not Saturday the date which the paper bears.

Weekly Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Wednesday, Dec. 20, 1882.

Trade in grain has slackened off a little, and prices are a shade easier. The rain has improved crop prospects in the eyes of the speculators, and they are bearing a little to-day.

The latest from abroad is as follows:

LIVERPOOL, Dec. 20.—Wheat: California spot lots are dull at 8s 11d to 9s 2d. Cargo lots, 45s 6d for just shipped, 45s 6d for nearly due, and 45s 6d for off coast.

The Foreign Review.

LONDON, Dec. 18.—The *Mark Lane Express*, in its review of the British Grain trade for the past week, says: The weather has been unsuited to thrashing or land work. The markets are well supplied with wheat in bad condition. There is little inquiry, and the worst is almost unsaleable, with prices, generally, 1s lower. Foreign trade small, and prices with difficulty maintained. The demand has been restricted. Cargoes of off coast quiet; supply limited. Red Winter, improved @ 29. There have been six arrivals and five sales; forwarding trade very quiet. Red Winter is firmly held; Flour depressed, and sales difficult at a reduction. Foreign Flour 6d cheaper. The demand for Barley is slack, and prices generally 1d to 2s lower. Foreign Barley keeps falling. Oats unchanged. Sales of English Wheat the past week, 48,883 quarters, at 41s 6d per quarter, against 43,656 quarters, at 44s 9d, during the corresponding period last year.

Eastern Wool Markets.

NEW YORK, Dec. 16.—In Wool, as the year draws to a close, a disposition is manifested by not a few holders in this and neighboring markets to urge supplies somewhat, with the view of reducing present accumulations, and wind up the numerous accounts that may have accumulated for some time. This pressure to realize is noticeable on California and Texas descriptions, super pulled, and also on fine fleeces. Holders do not hesitate now to quote 10c per pound lower all around, while at the same time they are rather active in their efforts to secure bids, and are milling and shipping samples to manufacturers who it is thought would be likely to buy. Sales include 43,000 pounds of Spring at 22¢.

New York Hop Market.

NEW YORK, Dec. 16.—Hops continue steady, but quiet, with a rather better feeling in London. For Choice New State a bid of 95c was made and refused yesterday, holders demanding \$1.05. Lot of 200 bales of Medium in the interior was bought to come here at 90c, and a lot of 28 bales of Very Inferior, 30 per cent. short in weight on spot, brought 80c. We quote Medium to Choice New State at 95¢@1.05, and New Eastern and Yearlings at 90¢@1, as to quality.

Eastern Grain and Provision Markets.
CHICAGO, Dec. 18.—Wheat, unsettled, weak; Early New, strong; 92¢ delivered; 92¢ bid, January. Corn, weak, early, and then strong; higher; 51c cash and year; 49¢, January. Pork, firm; \$17.05 cash; \$17.10, January. Lard, strong; \$10.27½, cash; \$10.32½, January.

BAGS.—Bags are quiet and unchanged.
BARLEY.—Prices are somewhat lower than last week. Much speculation has been indulged in, and values became easily demoralized.

BEANS.—There is no change.
CORN.—White Corn has dropped off about 10c per cbl. There is but little doing in Yellow, and it is quiet at former prices.

DAIRY PRODUCE.—The decline has continued until a price, altogether unusual at this season of the year, has been reached. Cheese is unchanged.

EGGS.—Eggs have recovered a little from last week's decline.

FEED.—Prices are the same as last week. Hay prices rule as follows: Wheat, \$17¢@17.50; Wild Oat, \$15.50@16; Stable, \$12@14; Stock, \$12¢@13; Alfalfa, \$13.50@14.50 per ton.

FRUIT.—There is no change in prices this week. Mexican Oranges are the chief fruit in sight at the stores. There will be something handsomer when the California crop comes in.

FRESH MEAT.—Another advance has occurred, and Beef now reaches 10c for the best, which includes the Christmas Beef. Mutton is also higher.

HOPS.—Prices are dull and nominal, and nothing is being done just at present.

OATS.—Oats are quiet, the best being 5c lower per cbl.

ONIONS.—Onion range higher, say from 75 to 90c for choice.

POTATOES.—Nearly all potatoes are 10c higher than last week.

PROVISIONS.—There is no change.

POULTRY.—High values continue. Turkeys have advanced 1c per pound. Geese and Ducks are almost twice the usual rates. Fowls maintain values. The advance in Meats has led to much increase in the usual holiday demand for Poultry.

VEGETABLES.—There is no change, except a cheapening of Marrowfat Squash.

WHEAT.—No. 1 Shipping Wheat is a shade higher than a week ago, but not so high as it has been since then. The trade is very quiet to-day.

WOOL.—There is talk of an unusually large surplus going over to the account of the new year, and the market is quite dull.

Bags and Bagging.

[JOBBER PRICES.]

WEDNESDAY M., Dec. 20, 1882.
Eng Standrd Wheat... 8 @ 9 Hessian 60 inob... @12
Cal Manufacture... 45 inch... 9¢@ 9½
Hand Sewed, 22x36... 8 @ 9 40 inch... 8½¢@ 9
20x36... 8 @ 9 40 inch... 8½¢@ 9
22x40... 12 @ 13 Machine Sewed... 6¢@ 6½
24x40... 12 @ 13 40 inch... 6¢@ 6½
Mach Sewd 22x36... 8 @ 9 40 inch... 6¢@ 6½
Four Shd. halves... 9 @ 10 Twine, Detrick's A... 7¢@ 7½
Quarters... 6 @ 6½ AA 324 @ 37
Eighths... 4¢@ 4½

Gold, Legal Tenders, Exchange, Etc.

[Corrected Weekly by SUTRO & CO.]
SAN FRANCISCO, Dec. 20, 3 P. M.

SILVER, 4. GOLD BARS, \$90@910. SILVER BARS, 10¢@18 3/4 cent. discount.
EXCHANGE on New York, 30 premium; London, 49¢@ 49½; Paris, 5.13 francs \$1 dollar; Mexican dollars, 57¢@58½; New York (4 per cent), 120¢.

Domestic Produce.

WHOLESALE.

WEDNESDAY M., Dec. 20, 1882.

BEANS & PEAS.
Bayo, cbl... 3 75 @ 4 00
Butter... 3 00 @ 3 30
Castor... 3 50 @ 4 00
Pea... 2 00 @ 2 30
Red... 2 00 @ 2 30
Pink... 2 00 @ 2 30
Large White... 2 75 @ 3 00
Small White... 2 75 @ 3 00
Lima... 3 75 @ 4 00
Field Peas... 3 00 @ 3 50
do, green... 3 00 @ 3 50

BROOM CORN.
Southern... 3 @ 3
Northern... 4 @ 4
CHICORY.
California... 4 @ 4
German... 6 @ 7
DAIRY PRODUCE, ETC.
Butter
Cal. Fresh Roll, lb... 25 @ 30
do Fancy Brands... 25 @ 30
Pickle Roll... 25 @ 25
Firm, new... 25 @ 25
Eastern... 20 @ 25
New York... 20 @ 25

POULTRY & GAME.
Hens, doz... 5 00 @ 5 50
Roosters... 4 00 @ 4 50
Broilers... 4 00 @ 4 50
Ducks, tame, doz... 5 00 @ 5 50
do Mallard... 3 25 @ 3 50
do Teal... 2 @ 2
Goose, pair... 2 25 @ 2 50
Wild Grouse, doz... 5 00 @ 5 50
White do... 50 @ 60
Turkeys... 15 @ 17
do Dressed... 17 @ 19
Turkey Feathers... 10 @ 20
Salp, Eng... 10 @ 15
do Common... 5 @ 7
Quail, doz... 1 25 @ 1 37½
Rabbits... 50 @ 55
Hare... 2 00 @ 2 25
Venison... 3 @ 9

SEEDS.
Cal. Bacon... 15 @ 15½
Heavy B... 15 @ 15½
Medium... 15 @ 15½
Light... 10 @ 10½
Lard... 15 @ 17
Cal. Smoked Beef... 14 @ 15
Shoulders... 14 @ 15
Hams, Cal... 15 @ 17
do Eastern... 12 @ 12½

GRAIN ETC.
Barley, feed, cbl... 1 35 @ 1 37
do Brewing... 1 40 @ 1 50
Chevalier... 1 50 @ 1 50
Buckwheat... 2 25 @ 2 30
Corn, White... 1 75 @ 1 80
Yellow... 1 60 @ 1 62½
Small Round... 1 60 @ 1 62½
Oats... 1 70 @ 1 80
Milling... 1 85 @ 1 95
Rye... 1 75 @ 1 80
Wheat, No. 1... 1 70 @ 1 75
do No. 2... 1 60 @ 1 65
do No. 3... 1 50 @ 1 55
Choice Milling... 1 75 @ 1 78

HIDES.
Hides, dry... 19 @ 20
Wet salted... 9 @ 11
HONEY, ETC.
Beeswax, lb... 25 @ 25
Honey in comb... 12 @ 13
Extracted, light... 10 @ 10
do dark... 8 @ 9

HOPS.
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

ALTS—Jobbing.
Walnuts, Cal... 10 @ 12
do Chile... 7 @ 8
Almonds, hd shd lb... 8 @ 10
Soft shell... 15 @ 17

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

WOLF ETC.
FALL—1882
Oregon... 75 @ 90
California... 75 @ 90
Wash. Ter... 75 @ 90
Old Hops... 75 @ 90

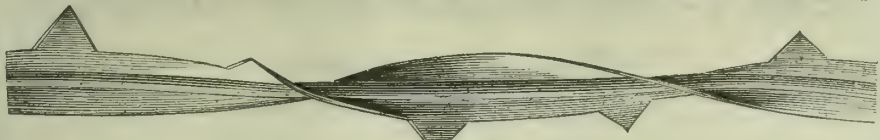
Fruits and Vegetables.

[WHOLESALE.]

WEDNESDAY M., Dec. 20, 1882.

FRUIT MARKET.	
Apples, bx., 35 @ 1 00	Figs, pressed, 7 @ 8
Bananas, bbl., 2 50 @ 3 50	do, do, 5 @ 6
Cocoanuts, 100, 6 00 @ 7 00	Nectarines, 11 @ 13
Crabapples, bsk., 50 @ 50	Peaches, 8 @ 9
Cranberries, bbl., 15 00 @ 17 00	do pared, 16 @ 20
Grapes, bx., 50 @ 1 00	Pears, sliced, 8 @ 9
Limes, Mex., 5 00 @ 6 50	do whole, 6 @ 7
do, Cal., 75 @ 3 50	Plums, 5 @ 6
Lemons, Cal., 2 50 @ 3 00	Pitted, 10 @ 11
Sicily, box, 6 00 @ 7 00	Raisins, Cal., 2 00 @ 2 25
Australian, 2 00 @ 2 25	do, halves, 2 @ 2
Oranges, Cal., 2 25 @ 2 75	do, Quarters, 2 @ 2
do, Tahiti M 35 00 @ 37 50	Eighths, 2 @ 2
do, Mexican, 20 00 @ 25 00	Zante Currants, 8 @ 10
do, Loretto, 20 00 @ 25 00	
VEGETABLES.	
Pears, bsk., 1 00 @ 1 25	Beets, chl., 1 @ 1 00
Pineapples, doz, 6 00 @ 7 00	Cabbage, 100 lbs, 8 1/2 @ 1 00
Plums, 40 @ 60	Carrots, sk., 30 @ 30
Quinces, bsk., 75 @ 1 25	Cauliflower, doz, 1 00 @ 1 25
do, box, 75 @ 1 25	Garlic, lb., 1 @ 1
Prunes, 60 @ 75	do, poor, 10 @ 10
Strawb's, chst., 6 00 @ 7 00	Lettuce, doz., 10 @ 10
Wat'm's, chl., 2 00 @ 2 10	Mushrooms, lb., 10 @ 10
DRIED FRUIT.	
Apples, sliced, lb., 6 @ 6	Peppars, lb., 75 @ 1 00
do, evaporated, 1 @ 12	do, Chile, 7 @ 7
do, quartered, 4 @ 5	Squash, Marrow, 5 00 @ 6 00
Apricots, 13 1/2 @ 17	fat, ton, 5 00 @ 6 00
Blackberries, 28 @ 30	Turnips, chl., 75 @ 1 00
Clitron, 9 @ 10	
Dates, 9 @ 10	

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

FOIL STONE DIAMONDS
SOLID GOLD MOUNTINGS ONLY \$1.00

FOIL STONE DIAMONDS IN SOLID GOLD MOUNTINGS have never been sold in this country. They are entirely new, and the most perfect imitation of the diamond ever produced, and the only one that retains the brilliancy and fire of the genuine diamond. Time has no effect upon the lustre of these goods, and we will guarantee that no one but experts can tell them from genuine diamonds. In order to introduce our Jewelry Catalogue to the notice of new customers for the fall and winter trade, we will offer these goods for the next 60 days at only \$1.00 each. Take your choice of either Ring, Stud, Ear-drops or Rosary Pina for \$1.00. Above illustrations were made from the goods and are exact representations. We will refund the money in every instance if you are not more than satisfied. Regular retail price of these goods is from \$1 to \$5 each, and you can sell hundreds at that price. Send money by registered letter or Post Office order, our risk. As to our responsibility we refer to the publishers of this paper. Address E. G. RIDEOUT & CO., 10 Barclay St., N. Y.

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO.

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

JAS. P. HULME, Late Miller & Co. JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,
SAN FRANCISCO.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,
Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1936 SAN FRANCISCO.

CONSIGNMENTS SOLICITED.

PETER MEYER. LOUIS MEYER

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco

Special attention given to country traders.

P. O. Box 1940.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

[Members of the San Francisco Produce Exchange]

211 and 213 Clay St., S. F.

Liberal advances made on Consignments

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

REFERENCES.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; O. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,

(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and

Promot Returns Advance Liberally on Consignments

CHAS. E. LLOYD.

J. S. BEARDSLEY.

BEARDSLEY & LLOYD,

REAL ESTATE AGENTS.

No. 912 Broadway Street,

Between 8th & 9th Sts.,

Oakland.

Particular Attention given to Negotiating Loans upon Favorable Terms. Acting as Agents for Buyers and Sellers of Real Estate, and the Management of Business for Absent Owners.

BOONE & MILLER,

Attorneys & Counsellors-at-Law,

Rooms 7 & 8 and 19.

No. 320 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank.)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devoted himself almost exclusively to patent litigation and kindred branches.

YOUR NAME
On 50 large size CARDS. Remember, Sentiment, Hand Bouquet, Ac. No. 2, 10c, 14c, 18c, 21c. Please send 20c. for Album of 100 samples and list of 200 elegant premiums and Reduced Price List. 20 fine Gift Bevel Edge Cards, turned corner, 10c.

Your Name in this lettering Agents make 50 per cent. We offer the largest line of Cards the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Book sent free, containing convincing testimony, containing convincing testimony from responsible persons. Address, DR. J. MCLEISH, No. 215 West Fourth Street, Cincinnati, O.

Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,

No. 252 Market St., S. F.

Attention, Book Buyers! Big Pay to Agents!!

FARMERS, Engineers, Mechanics, Mill Owners, Merchants, etc., will find in Moore's UNIVERSAL ASSISTANT, AND COMPLETE MECHANIC, a work containing 1015 pages, 500 Engravings, 461 Tables, and over 1,000,000 Industrial Facts, Calculations, Processes, Secrets, Rules, etc., of rare utility in 200 Trades. A \$5 book free by mail for \$2.50, worth its weight in gold to any Mechanic, Farmer, or Business Man. Agents Wanted. Sure sale everywhere for all time. One agent reports \$137.50 earned in 6 days. Another has paid for two farms. For Ill. Contents Pamphlet, Terms, and 128 page Catalogue of nearly 3000 Standard Books, address NATIONAL BOOK CO., 75 Beekman Street, New York.

Mission Rock Dock and Grain Warehouse.

San Francisco, Cal.

65,000 tons capacity. Storage at lowest rate

CHAS. H. SINCLAIR, Supt.

CALIFORNIA DRY DOCK CO. - - Proprietors.

Office—318 California Street, Room 2.

AGENTS can now grasp a fortune. Out-bid worth \$10 free. Address E. G. RIDEOUT & CO., 10 Barclay St., N. Y.

Musical Gifts

FOR CHRISTMAS.

GEMS OF ENGLISH SONG.

The newest and best general collection.

MUSICAL FAVORITE.

The newest collection of the best Piano music.

MINSTREL SONGS. Old and New

The most popular melodies in the world.

FRANZ'S ALBUM OF SONGS.

Unequaled array of German gems.

BEAUTIES OF SACRED SONG.

Large numbers of the best songs.

The above are types of about 30 volumes, each containing more than 200 pages, sheet music size, and filled with the very best selected music of its class, all permanently valuable, and all neat and elegant books. Price of each, plain, \$2; in cloth, \$2.50; gilt, \$3.

THE NORWAY MUSIC ALBUM is a splendid and unique book, filled with Norse music and Runic rhymes, such as Longfellow loved and Ole Bull best interpreted, and costs \$2.50 plain, \$3 in cloth, \$4 gilt.

Send for Lists, describing our attractive and useful Books of Musical Literature (\$1 to \$2), our collections of classical music, as Sonatas of Mozart or Beethoven (\$5 per vol.), etc., etc.

Any book mailed for the retail price.

OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.

JAPANESE NEST-EGG GOURD

FOR 25 cts. In stamps or money we will send by mail one pkt. each of the following:

Japanese Nest-Egg Gourd, the most beautiful and useful gourd ever seen, exactly the size, color and shape of hen's eggs; Honey Dew Green Citron Melon, the sweetest and best-flavored Muskmelon in cultivation; Cuban Queen 30-pound Watermelon, the largest, finest, sweetest and most luscious Watermelon in the world; Golden Dawn Mango, entirely new, the most beautiful pepper ever seen; large, bright golden color and thick-meat. Address SAMUEL WILSON, Seed Grower, Mechanicsville, Bucks County, Pennsylvania.

D.M. FERRY & CO'S SEED ANNUAL FOR 1883.

Will be mailed FREE to all applicants, and to customers of last year without ordering it. It contains about 175 pages, 600 illustrations, prices, accurate descriptions and valuable directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Fruit Trees, etc. Invaluable to all, especially to Market Gardeners. Send for it! D.M. FERRY & CO. DETROIT MICH.

SMALL TREES

By Mail or Express.

APPLE and CHERRY SEEDLINGS,

\$5 per 1,000.

PEAR, \$10 per 1,000, Mail or Express Free.

Catalogues of numerous other Trees, or Seeds of Fruit and Ornamentals, free.

THOMAS MEEHAN,

Germantown (Philadelphia), Penn.

BEST MARKET PEAR PEACH, PLUM, PEAR, APPLE, QUINCE and other trees; 50 sorts of **STRAWBERRIES** Wilson, Burwell, Munger, Thompson, etc.; 100 sorts of **RASPBERRIES**, Blackberries, Currants, 50 sorts of grapes. Lowest cash prices. Send for Catalogue. J. S. COLLINS, Moorestown, N. J.

BUY THE LIGHT RUNNING SIMPLE AND ELEGANT HOUSEHOLD SEWING MACHINE. GEN'L AGENCY, 9, 11 & 13 FIRST ST. SAN FRANCISCO, CAL.

ARE YOU DEAF?

FERRIS' RESTORATIVE will INvariably CURE YOU. It is endorsed by all home and foreign physicians and scientists. It cures where all other means fail. Don't neglect to send for circulars, it will pay you. ASK YOUR DRUGGIST FOR IT. **EDWIN FERRIS & CO.,** Pikes' Opera House Building, Cincinnati, Ohio.

Wanted—A Situation by a Practical Farmer

As Manager or Superintendent of a stock or grain farm (grain farm preferred). At present Superintendent of a large grain farm in Dakota. I understand stock and grain farming in all its branches. Address, **H. MATTISON, Spiritwood, D. T.**

IMMENSE REDUCTION

In Prices

FOR THE NEXT 90 DAYS,

—BY—

Joe Poheim,
THE TAILOR.

No. 724 Market Street

—AND—

203 Montgomery Street.

Suits formerly made to order \$25, Reduced to \$20. Suits formerly made to Order \$30, Reduced to \$25. Suits formerly made to order \$15, Reduced to \$10.

By all means call and see JOE POHEIM before buying elsewhere. You will get a stylish cut and the best workmanship.

Special attention is called to a large line just imported of Green, Olive, Blue, and all the latest colors of finest woollens that the market ever produced.

Perfect Fit Guaranteed
OR NO SALE.

724 Market Street

—AND—

203 Montgomery St.,
SAN FRANCISCO, CAL.

REMOVED.

Messrs. Batchelor & Wylie,

MANUFACTURERS OF THE

CALIFORNIA SPRING TOOTH HARROW,

and Agents for the

Albion Seed Sower and Cultivator,

HAVE REMOVED TO

37 Market St., S. F.

CHAS. M. EVANS.
FIRST CLASS
ARTIFICIAL LIMBS
SATISFACTION GUARANTEED
U.S. GOV'T.
MANUFACTURER 163 W 4th ST.
CINCINNATI

MATTHEWS' SEED DRILL.

The Standard of America. Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by

EVERETT & SMALL, Boston, Mass.
Hawley Bros. Hardware Co., San Francisco, Cal., and Knapp, Burrett & Co., Portland, Oregon, Agents for Pacific Coast.

Sawing Made Easy.

The New Improved

MONARCH LIGHTNING SAW

Is the cheapest and best. A boy sixteen years old can saw logs fast and easy. Sent on test trial. Send postal for illustrated Catalogue containing testimonials and full particulars. **AGENTS WANTED.** Monarch Lightning Saw Co., 163 Randolph St., Chicago.

D. Langell's Asthma and Catarrh Remedy.

Mrs. W. T. Brown, Monroe, Texas, writes: "I suffered with Asthma 30 years. Your Great Remedy completely cured me. I wish all Asthmatic Sufferers to send their address and get a trial package Free of Charge." It relieves instantly so the patient can rest and sleep comfortably. Full size box by mail \$1. Sold by druggists generally. Address D. LANGELL, Apple Creek, Wayne County, Ohio, proprietor.

U.S.★ WINDMILL.

First Premium at the State
Fair of 1882.



The U. S. Star Windmill has a solid wheel with no movable joints to wear out.

It does its work with less loss of power from friction than any other mill.

It is easily regulated to do as little or as much work as may be required of it.

It is self-governing, and very sensitive to the least change in the wind.

It will run with less wind than any other mill of the same size, doing the same amount of work.

It is simpler and more compact in construction than any other first-class mill.

It is the most durable windmill known.

It is offered at as low a price as any other first-class mill.

D. G. PAUL, General Agent,
Livermore, Cal.

MRS. C. V. TURNER,

Inventor and Manufacturer of the



EXCELSIOR

Perfect Fitting

CORSET,

(Patented July 5, 1881.)

Is now prepared to manufacture to order, on short notice the above Corset.

Rules for self-measurement sent on application, and Perfect Fit and Satisfaction Guaranteed.

On the Alameda, Corner of Polhemus St.,
SAN JOSE, CAL.

All parties are cautioned against making or causing to be made the above Corset without my License Stamp under full penalty of the law.



For the Drainage or Irrigation of Lands.
TERRA COTTA

CHIMNEY PIPE & TOPS
VASES, FLOWER POTS, FIRE BRICKS, Etc.
MANUFACTORY AT LINCOLN, CAL.
SEND FOR ILLUSTRATED CATALOGUE

1310 Market Street, SAN FRANCISCO

Arrears of pay and bounty to Union Soldiers reported on the rolls as deserters, Act of August 7th, 1882.

Pensions for all soldiers disabled in line and discharge of duty, either by accident or otherwise.

Widows of soldiers who died in the service or since discharged from any cause due their military service, are entitled to Pension.

Parents. In cases where the soldier died, leaving neither wife nor children, the parents are entitled to pension.

Bounty. Thousands of soldiers are yet entitled to bounty. Send for blanks and see if you have received all due you.

Discharges. Honorable Discharges procured; also duplicates. Send for blanks.

Increase of Pension. Thousands of Pensioners are now entitled to increase. Send for blank and we will advise you.

Address, with two three-cent stamps.

STODDART & CO.,
Washington, D. C.

Box 623.

How to STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

J. P. SWEENEY & CO., Seedsman,

DEALERS IN

All Kinds of Field and Garden Seeds at Reduced Prices, in Large Quantities.

SPECIALTIES:

Alfalfa, Red and White Clover; Australian, Italian and English Rye Grass; Blue Grass, Lawn, Orchard; Mesquit, Red Top and Timothy Seed; California Forest and Evergreen Tree Seeds. Also Fruit and Ornamental Trees at Lowest Prices at Our

SEED WAREHOUSE,

No. 409 and 411 Davis Street, - - San Francisco, Cal.



KELLER'S NURSERIES, Oakland, Cal.

FOR SALE, AT BEDROCK PRICES,

Fruit Trees, Ornamental Evergreen Trees, Plants and Shrubs; also several thousand Gum and Cypress trees, Flowering Bulbs, Roses Fresh Seeds. Please send for catalogue and price list.

P. J. KELLER, Seedsman and Florist,

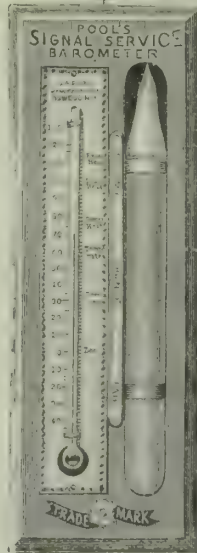
Nursery near Cemetery; Seed and Floral Store, 509 & 511 Seventh Street, bet. Washington & Clay, OAKLAND, CAL.

WHAT WILL THE WEATHER BE TO-MORROW?

Pool's Signal Service Barometer

OR STORM GLASS AND THERMOMETER COMBINED.

WILL TELL YOU!



It will detect and indicate correctly any change in the weather 12 to 48 hours in advance. It will tell what kind of storm is approaching, and from what direction. It is invaluable to navigators. Farmers can plan their work according to its predictions. Saves oftentimes its cost in a single season. Has an accurate thermometer attached to it, which is worth the price of the combination. It is used by Weather Indicators endorsed by the most eminent Physicians, Professors and Scientists of the day. It is the best of its kind in the world.

The Thermometer and Barometer are put in a body finished walnut frame, with silver plated dial and glass, looking like a beautiful watch. It is made in England. When sent by mail, it is packed in a box of wood, and is insured for \$1.00. Agents to make from \$1.00 to \$2.00 per year. It is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as any other instrument of the kind. Very accurate and easy to use. Geo. H. Brown, St. Louis, Mo.

Barometer received in good order, and much used. Geo. H. Brown, St. Louis, Mo.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. Geo. H. Brown, St. Louis, Mo.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:

Every instrument warranted *Perfect and Reliable*. It is made in England, and is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as any other instrument of the kind. Very accurate and easy to use. Geo. H. Brown, St. Louis, Mo.

Barometer received in good order, and much used. Geo. H. Brown, St. Louis, Mo.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. Geo. H. Brown, St. Louis, Mo.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:

Every instrument warranted *Perfect and Reliable*. It is made in England, and is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as any other instrument of the kind. Very accurate and easy to use. Geo. H. Brown, St. Louis, Mo.

Barometer received in good order, and much used. Geo. H. Brown, St. Louis, Mo.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. Geo. H. Brown, St. Louis, Mo.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:

Every instrument warranted *Perfect and Reliable*. It is made in England, and is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as any other instrument of the kind. Very accurate and easy to use. Geo. H. Brown, St. Louis, Mo.

Barometer received in good order, and much used. Geo. H. Brown, St. Louis, Mo.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. Geo. H. Brown, St. Louis, Mo.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:

Every instrument warranted *Perfect and Reliable*. It is made in England, and is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

I find Pool's Barometer works as well as any other instrument of the kind. Very accurate and easy to use. Geo. H. Brown, St. Louis, Mo.

Barometer received in good order, and much used. Geo. H. Brown, St. Louis, Mo.

Pool's Barometer has already saved me many times its cost, in forecasting the weather. Geo. H. Brown, St. Louis, Mo.

BEWARE OF WORTHLESS IMITATIONS. None genuine without our Trade Mark, and Signature of J. A. Pool, on back of Instrument, as below:

Every instrument warranted *Perfect and Reliable*. It is made in England, and is sold at \$1.00. Order at once. It sells at \$1.00. Just the thing for doctors, farmers, sailors, etc. It is sold at \$1.00. U. S. Postage Stamps taken in good order, but money preferred. Agents wanted everywhere. Send for Circular and Price List. Address all orders to **OSWEGO THERMOMETER WORKS,** (Incorporated in New York) Oswego, Oswego Co., N. Y.

We refer to the Mayor, Postmaster, County Clerk, First and Second National Banks, or any business name in Oswego, N. Y.

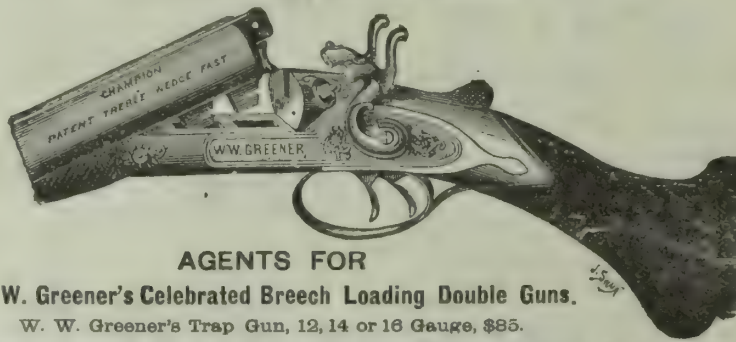
Write your Post Office, County and State plainly, and remit by money order, draft on New York or registered letter at our risk.

This will make a Beautiful and Very Useful Present.

READ WHAT THE PUBLIC SAY ABOUT IT.

NATHANIEL CURRY & BRO.,

113 Sansome Street, San Francisco.



AGENTS FOR

W. W. Greener's Celebrated Breech Loading Double Guns.

W. W. Greener's Trap Gun, 12, 14 or 16 Gauge, \$85.

A full stock of Colt's Parker and Remington Guns, Sharps's, Ballard, Winchester, Kennedy, Marlin and Remington Sporting Rifles, Pistols of all kinds. Ammunition in quantities to suit. A liberal discount to the trade. Price list on application.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House.

J. W. BECKER, Proprietor

BARREN HILL NURSERY,

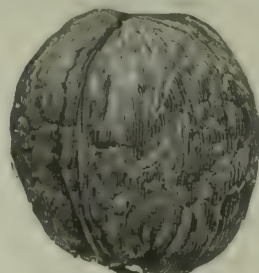
Nevada City, California,

FELIX GILLET, Proprietor.

SPECIALTIES—Nurs of all Kinds (Walnuts, Chestnuts, Almonds and Filberts).

STANDARD PREPARTURIENS,
Or Early-Bearing Walnut.

Introduced into California from Europe in the Spring of 1871, by Felix Gillet, Nevada City, Cal.



The most precocious of all soft shell varieties of Walnuts, bearing sometimes at three years from the planting of the nut. A late bloomer, a regular and prolific bearer. First bearing trees in California at Felix Gillet's Nurseries, eighth crop, 1882. The hardiness and late blossoming of the Preparturiens render it possible to cultivate the Walnut in localities where it has been heretofore deemed impracticable, while its precocity strongly recommends it to all those who are impatient of the time required to bring the common sorts into bearing.

One, two, three and four-year old trees of that valuable variety for sale, all.

California-Grown Trees!

From six inches to eight feet. One year old Trees, heavily rooted, sent by mail to any part of the United States, free of charges, packed in damp moss and oiled paper, at the following prices: 75 cents to \$1 per tree for less than half a dozen; \$8 to \$10 per dozen, according to sizes.

Also, Serotina or Late Walnut—Gant or Jeweler's Walnut—Chaberte Walnut—Mayette Walnut—Black Walnut.

BUTTERNUT, HICKORY, PECAN.

GRAFTED CHESTNUTS (Marron de Lyon and Marron d'Italie).

Italian and American Chestnuts!

Paper-Shell Almond—Spanish and Italian Filberts—Pears, Cherries, Peaches, Plums, Raspberries, Gooseberries, Currants, Etc., Etc.

French, English and Dutch Strawberries (magnificent varieties). Forty varieties of Grapes.

A Novelty in the Vegetable Line:

"Invincible Pear," per quart, \$1; per pint, 65 cents; per packet of five ounces, 25 cents, including postage.

MORU'S NANGASAKI or JAPONICA Large Leaf Mulberry of Japan, for Silk worm raising. Grows splendidly from cuttings. Trees and cuttings for sale.

SILKWORM EGGS.

Italian and French Annuals from FELIX GILLET'S COCONUTS, Nevada City, Cal., at \$5 and \$10 per ounce, mailed free of charges.

See New Illustrated "DESCRIPTIVE CATALOGUE AND PRICE LIST" mailed free to all applicants.

FELIX GILLET,
Nevada City, Cal.

THE DINGEE & CONARD CO'S

BEAUTIFUL EVER-BLOOMING

ROSES

SPLENDID POT PLANTS, specially prepared for immediate bloom. Delivered safely by mail postpaid all postages. Splendid varieties, your choice, all labeled, for \$1; 12 for \$2; 19 for \$3; 26 for \$4; 35 for \$5; 75 for \$10; 100 for \$13. WE GIVE a Handsome Present of choice and valuable ROSES free with every order. Our NEW GUIDE, a complete treatise on the Rose, 76 pp., elegantly illustrated, free to all.

THE DINGEE & CONARD CO.,
Rose Growers, West Grove, Chester Co., Pa.

50,000 APRICOTS

And a large stock of Peaches, Apples, Plums, Keifer and Leconte Pears, Grapes and Small Fruits; sizes suitable to send by mail, express or freight. Also Pear, Apple, Cherry and Quince Stocks. Grafts put up to order in large and small lots. Catalogues showing how and what to plant, with much valuable information, gratis.

Great Northern and Southern Nurseries,
Wilmington, Delaware. **RANDOLPH PETERS.**

Apple, Pear, Plum and Cherry Seedlings

FOR SALE,

At Low Rates for Nos. 2 and 3.

Also Pear, Plum and Cherry Grafts put up to order on short notice and in the best manner. Prices on application to,
E. P. CLARK,
Danville, Lio County, - - New York.

GILL'S NURSERIES.

Special Offer of

Blue and Red Gums. Also Monterey Pines and Cypress 1, 2 and 3 years old, in large lots at low rates. Prices on application. Address

E. GILL, Nurseryman,
28th St., near San Pablo Ave., Oakland, Cal.

LOS GATOS NURSERIES.

I offer the trade this season a large and general assortment of Fruit and Ornamental Trees, and Small Fruits. My Trees are healthy, stalky and well grown. Address,

S. NEWHALL, San Jose, Cal.

FRUIT TREES, GRAPE CUTTINGS, \$4 to \$5 per 1,000.
Rooted Vines, Riparia and other stock. Unirrigated and
healthy. For particulars and prices, address, LEONARD
COATES, Napa City, Cal.

BAKER & HAMILTON,

Junction Market, Pine and Davis Streets, San Francisco.

Nos. 9 to 15 J Street, Sacramento.

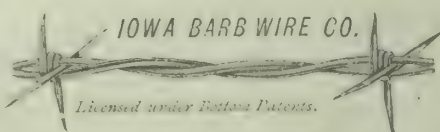
MANUFACTORY: BENICIA AGRICULTURAL WORKS, BENICIA, CAL.

Eastern Office: 88 Wall Street, New York.

IOWA FOUR POINTED BARBED WIRE.

PRICE REDUCED.

It will neither
Rust nor
Decay.



Secure Against
FIRE,
WIND and
WATER.

GALVANIZED OR PAINTED.

15 Feet to the Pound.

IS BARB WIRE DANGEROUS?

It is not where wire, instead of metal or knit, made cutting points, is used for the barbs. We base our reply upon a large experience in manufacturing the trade with barbed wire, thereby occupying a position to learn of any damage caused, extending all the way to the United States. Our experience will justify us in stating, as an absolute fact, that no more injury is done to stock by the use of wire barbs than by the use of any other common kind of fence. We have yet to learn of the loss of a single head of stock caused by the Iowa barb. We attribute this fact to these reasons:

1. It is a four pointed wire, with barbs standing at right angles, and, therefore, always presents a point.
2. It is the only one locked between the two wires, and the barbs cannot work or slip together.
3. It is a wire barb, and pricks instead of cutting the flesh.

DURABILITY.

Barbed Wire has not been in use long enough to state from experience how many years it will last; but, as painted wire first put up shows no sign of deterioration, and lines of telegraph wire have been in use 30 years without the quality being impaired, it is probable that a well galvanized steel double-strand wire fence will last from twenty-five to fifty years.

WHICH IS THE BEST KIND OF BARB WIRE TO BUY.

It is not conceded from these reasons that it is safe to use wire, the question that follows is, which kind is the best? This is frequently asked by the farmer, and we will endeavor to answer it, without prejudice, and honestly as we believe the facts to be. There are four kinds of wire on the market, which we will designate generally, as follows:

A four pointed double wire, with wire barbs.
A two pointed double wire, with wire barbs.
A four and two pointed single wire, with wire barbs.
A four pointed double wire, with metal plate barbs.
From this family of wires we must choose. As regards the difference between a two pointed and four pointed barb, we are satisfied that a four pointed barb is more efficient to turn stock than a two pointed, provided the kind of four pointed barb is such as stand at right angles, simply because a four pointed barb presents a point in any position, whereas, with a two pointed barb, several may be found in succession standing parallel to each other, and, therefore, presenting a point only in one direction. If any one doubts this, let him attempt, to run his hand along on a two pointed barb wire and then on a four pointed and see which has most resistance. We should, therefore, advise buying a four pointed barb wire. Having determined upon this, the question still remains, which of the four pointed wires is the best? The single-strand wire, made of No. 8 or 9 wire has the defect that it is quite impossible to place barbs upon a single wire, so that they will not in time slip and work together. Again, it is very costly, there is no economy in its use as the increased weight per rod is equal to, or more than, the difference in price between that and twisted wire, not to mention the expense of a wind just wind up and set out the single wire for winter and summer, to prevent breaking by contraction in cold weather. The twisted wire, you will observe, is sufficient spring to preserve an equal tension throughout the different temperatures of the weather, requiring no attention. We, therefore, could not advise buying the single wire.

The four pointed metal plate barbs are usually made by a right twist, holding the barb only by a twist between the two wires. This right twist not only contracts the wire, making it heavy per rod, but is liable to injure the near of the metal by twisting so closely. Again a metal plate barb presents a knife blade, or cutting point, rather than a thorn point, and cuts rather than pricks.

Of the various kinds of four pointed wire barbs, the Iowa Barb is the only barb which is locked between the two wires, and also wound around both wires; the lock prevents it slipping on the wire, and winding around holds the two wires together.

We can, therefore, advise every one who wishes to purchase wire and wants the best, to buy the Iowa barb, as it contains all the favorable features that are required, and none of the objectionable ones. It is made only from the best of annealed steel, fully warranted, either galvanized, dipped or painted, put up in spools of from 90 to 150 pounds each. Remember, it will not exceed 17 ounces per rod.

NUMBER OF WIRES.

Although fences are sometimes made of two wires to fence against cattle only, we recommend not less than three, and as many more as desirable. Five wires make a good fence—such is used by nearly all the railroad companies.

Gem Belt Seed Sower.

ADVANTAGES OF THE GEM BELT.

The Gem Belt Seed Sower is run by a quarter turn belt instead of gearing. The Gem does not throw the seed into the air, to be blown about by the wind, but throws it sharply to the right or left.

THE REASONS WHY

The Distributor of the Gem Belt Seed Sower is run by a quarter turn belt instead of gearing. The Gem does not throw the seed into the air, to be blown about by the wind, but throws it sharply to the right or left.

PRICES:

No. 1 Gem, to run with chain and bevel gear, weight 132 pounds.....\$25 00
No. 2 Gem, to run with belt gear, weight 145 pounds.....30 00
No. 3 Gem, to run with all gear, weight 165 pounds.....35 00

The GEM SEED SOWER can only be obtained from us, as we are the sole manufacturers.

Send for Circulars and Price Lists to

BAKER & HAMILTON, San Francisco, Cal.

DOTY'S

Automatic Revolving Scraper.

The Doty's is used in making Roads, Excavating, Ditching, Leveling for Railroads, Canals and Levee Building.



Hundreds of Certificates
from those who have used
them prove it to be the

Best Scraper Made

SAVES

TIME,

MONEY and

LABOR.



DOTY'S REVOLVING SCRAPER.

TIME.

For it revolves, losing
no time to reset for fill-
ing.

MONEY.

For it saves one man—
the filler.

LABOR.

For it is 50 per cent.
easier for both man and
horse.

Our Revolving Scraper is now so well known throughout the country that we shall give no long description of it. It has been on trial for the last eight years, and has been steadily growing in favor from the first. It is simple in construction. There is nothing liable to get out of order. No Pull Rods, Spiral Springs, Triggers, or Swivels to regulate it, to work just when most wanted. It is made to handle dirt, and dirt will not choke it up, or stop its working. The material used is of the best quality. The Handles, Sides and back boards are of selected and thoroughly seasoned oak; the Bottom Plates of Sts. 1. Steel Laid Runners, Malleable Iron Grabs. The new, improved Side Bars and Grab Irons will be much liked.

In simplicity, strength, durability and ease of operation, these Scrapers are unequalled. We ask but a trial to prove their superiority, and we know those who once use them will have no other kind.

Although the universal favor with which it has been received for the past ten years would seem to be sufficient guaranty that it was good enough, yet the improvements we have made in the grab and side bar will commend themselves to everyone at first sight; while the main features of the Scraper have been preserved. These little changes add greatly to its durability and the ease with which it works.

A boy can handle it. One man can dump and manage the Scraper. The ball is taken up, carried to its destination, and dumped without stopping the team. The earth is not dragged along, but carried by the Scraper, which rides easily upon its steel-laid runners, thus greatly diminishing the draft. It dumps by simply raising the handles, which release the load and cause it to revolve, deposit it as desired, and require no other action.

We guarantee the material and workmanship to be as good as heretofore, and believe our Revolving Scraper, as now made, is the BEST IN THE WORLD.

PRICES:

30 Inch Steel Bottom weight 130 pounds.....\$19 00
33 " " " " 145 ".....20 00
36 " " " " 160 ".....21 00

EUREKA GANG PLOWS.

The Eureka Gang Plows are the Standard Gang Plows of the Pacific Coast, and are manufactured by the Benicia Agricultural Works, Benicia, Cal. They are simple, durable, pointed and finished in just classic style, and none but the most skilled mechanics are employed in their manufacture. There are thousands of them now in use on this Coast, and giving entire satisfaction.

THE GALES CHILLED PLOWS.

Farmers, Read This! Consider, be Wise, and Try a Gale.

The year 1881 was filled with great victories for the New GALE CHILLED PLOWS, time and space permits mention of only a few. At the Union Fair of June last, held at Geneva, N. Y., the Gale Plow was awarded Three Premiums. The first Premium in the Plowing Match and Two in the Exhibition of Plows. Also, at the Sugar Grove Fair, near Jamestown, N. Y., in September, the First Prize was given to the Gale Plow in the Plowing Match (two of the committee owning Oliver Plows at the time). At the Seneca County Fair, held at Ovid, N. Y., in October, the New Gale Plow, in very not competition, won all the Prizes—First, Second and Third—in the Plowing Match. Also, the same week, at Perry, N. Y., Wyoming Co., the Gale Plow won the First Prize in the Plowing Match.

PACIFIC RURAL PRESS

TWENTY-PAGE EDITION.

Volume XXIV.]

SAN FRANCISCO, SATURDAY, DECEMBER 30, 1882,

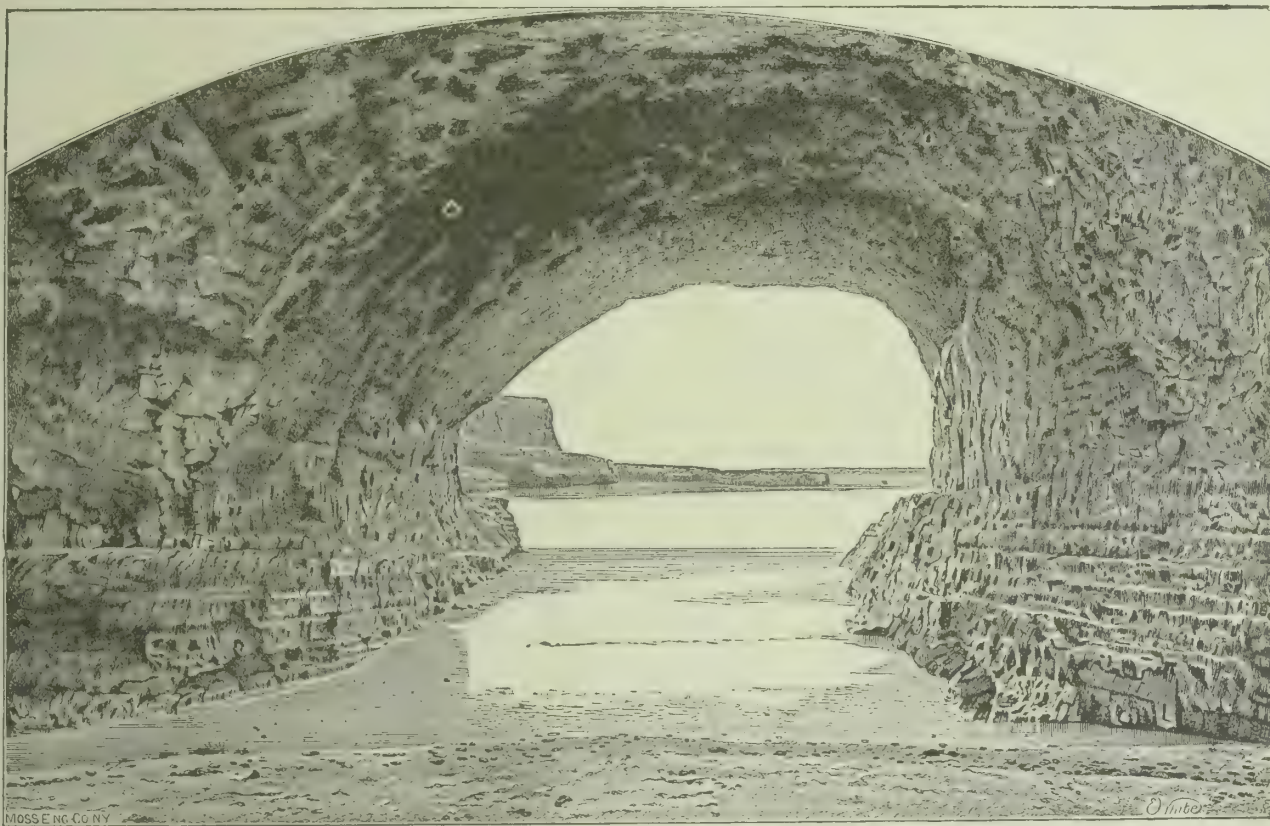
Number 27

Shore Scenes at Santa Cruz.

We give on this page bits of shore scenery near Santa Cruz, engraved from Watkins' photographs. They present the sterner features of the coast line, for there are rocky points as well as smooth beaches in the neighborhood of Santa Cruz and Monterey, and those who visit these popular seaside resorts can choose between plunging into a contemplation of the beautiful in nature's rock-work or plunging into the rolling surf, as pleases them best. The natural bridge is an interesting piece of wave sculpturing, not uncommon, however, on this coast. This one is more noted than most because, perhaps, it is near a resort. But works of this sort occur in many places between San Diego and Puget Sound. In our own bay we have Arch rock, and one of the Seal rocks near the Cliff House is cut through in the same manner by the constant action of the waves.

The point of land which forms the northern and western point of Monterey bay, and near which Santa Cruz is built, is quite picturesque as viewed from the sea. There are outlying rocks from the main wall, as the engraving indicates, and over these the billows seethe and roar constantly. Nowhere along this stretch of the point on the seaward side can a landing be made; but once inside the curve, the long sand beach, which is one of the chief attractions of the town, begins. Here in summer are crowds of merry bathers, and all the sights so characteristic of a seaside resort. The town itself is quiet and old-fashioned. It is easily accessible from San Francisco by rail or steamer. Excursion tickets are sold by the Southern Pacific for this place or Monterey during the summer months at reduced rates, and during the school vacations both these towns are crowded with visitors.

The Santa Cruz and Monterey region is very interesting on many accounts. It has scenes which charm the tourist who seeks historic sights and relics. It has grand forests near at hand and most beautiful groves. It is a land of flowers. Industrially the district is of great importance.



NATURAL BRIDGE ON THE COAST, NEAR SANTA CRUZ.



SCENE ON THE SANTA CRUZ COAST, CALIFORNIA.

A Beautiful Shrub.

The *Leycesteria formosa* is a most lovely shrub. We have not seen it in California, although it may possibly be here, for it will thrive here out of doors, being a perfectly hardy shrub. This shrub belongs to the natural order of *Caprifoliaceae*, and *formosa* is the only species known. When in flower it is a most lovely and beautiful plant; contrasted with the deep green hue of stems and leaves, the purple color of its large berries is really enchanting. The shrub is evergreen, and grows to 12 ft. high, and even if it never flowered at all, it would be very desirable. It is very readily increased by cuttings or seeds, which are numerous produced. In the higher parts of Nepal, where the plant is indigenous, this shrub grows and multiplies most wonderfully, and it only requires an introduction here to California to do the same or better. It is more of this kind of plants that we need here, and the man who makes a note of this will be the person who takes the lead in nursery business and be paid for his trouble.

SOUTHERN CALIFORNIA ESTATES. — *Harper's Monthly* has the following paragraph on a California affair: The possessions of some of the great land owners of this section are prodigious. It is a favorite story that certain men are able to drive a herd of cattle from the northern counties of the State to San Diego, at its extreme southern limit, and quarter the animals every night upon their own territory. Haggin, Carr and Tevis, whose property I was privileged to examine considerably in detail, have some 400,000 acres. Much of this was secured for a mere trifle while in the condition of waste land and afterward redeemed. A neighbor, who had acquired a great estate of a similar kind, mainly while holding the post of Surveyor-General of the United States, drew forth one of the best bon mots of President Lincoln. "Let me congratulate you," said Lincoln, as this gentleman was retiring from office under his administration. "You have become monarch of about all you have surveyed."



CORRESPONDENCE.

We admit, unendorsed, opinions of correspondents.—Eds.

The Lesson of the Season—"Hang On."

EDITORS PRESS:—Farmers have not had much cause for growling this year. The rainfall truly was light, but enhanced prices for all sorts of produce have about compensated for the lessened yield. Possibly the one exception that proves the rule is the Angora goat industry, on which Mr. Kirby expends so much time and money and so much pleasant garrulity in the RURAL.

This is the more encouraging when we recall how black and depressing the agricultural outlook was only a couple of years back. Then nothing seemed to repay cost of production, and we heard rumors of orchards and vineyards and hop yards being plowed up, and of more or less universal insolvency among farmers.

One curse of California's agriculturists has been the feverish haste to obtain pecuniary wealth, and the consequent continual restlessness and chopping and changing from one kind of farming to another. A temporary depression of values caused a disgust for the class of farming affected by that depression. Hop growers, for example, who plowed up their plants in dudgeon, have had ample time this year to regret their ill-advised haste, and to wish heartily that they had had the grit to "hang on."

A more cautious view of the situation usually informs us that when "there's nothing in" an industry, wise men invest therein. When one branch of farming pays well and everyone is going for it, there will surely usually result a glutted and depressed market. As a rule, a farmer is safer to acquire a competence by running a steady business year after year, and not by see-sawing to suit a capricious market. The chances are that by see-sawing he will miss all the high tides of prices, while by hanging on to certain staples he insures occasional success. I trust even Mr. Kirby's high tide in the Angora business may not be in the very far future. His independence and resolution should command an adequate recompense.

Young farmers may well take to heart the lesson of such a season as this to encourage them through life to "hang on"—to have an aim in business and to stick to that aim; to have an ideal before them, a personal ideal of what they themselves would be and a national ideal, which is of course but an aggregation of personal ideals.

There's something a little wrong both in our personal and national ideals at present. Dollar-deification and abject self-abasement at that golden shrine, devoting one's self, body and soul, to its debasing, narrowing, heart-cankering worship; sacrificing at that cursed altar love, truth, honor, manhood, to be blest in return with envy, suspicion, hate and crime, is hardly a pleasant ideal to contemplate. It will hardly be a satisfying ideal to me when

God bends from out the deep and says—
"I have thee the great gift of life;
Wast thou not called in many ways?
Are not my heaven and earth at strife?
I gave thee of my seed to sow,
Bringst thou me my hundred-fold?
Can I look up with face aglow,
And answer, 'Father, I am gold!'"

There's a standard of sterling humanity to be kept unalloyed, as well as a metallic or bi-metallic standard of coin. The imprint on the coin may be a triumph of ingenuity and art; but the image of our Maker, undefaced and undefiled, is the impress—the only impress worthy to be imprinted on the rising race of American youth.

Don't let us get these two things too badly mixed! Don't let us stamp too much of our bodies and souls with the dollar die! Don't let us appraise the dollar at a higher figure than humanity!

Say, if you will, with the "pious editor," I. R. Lowell—

"I do believe that I should give
Wut's his'n unto Caesar,
Fer it's by him I move and live,
From him my bread and cheese air."

But don't go any further and add—

I do believe that all o' me
Both near his superscription—
Will, conscience, honor, honesty,
An' things o' that description."

No matter how high the price, in selling one's self one is sure to make a miserably bad bargain. Greed won't make a healthy national ideal! It won't bind men together! There's no heart-uniting, soul-compelling force in it! Devotion to self it insures; but self-devotion to the right and self-sacrifice thereto, which makes a man's heart to sing, it cannot away with.

And was ever any man the better for having his coffers full of gold? Was ever any nation the better therefore? Political jackals scent its corrupting influence afar, and gather to feed, if it may be, on the nation's vitals. The fouler the corruption the richer the loathsome feast! "Pagan Rome was never so rich as when she had scarce a freeman left. Pagan Rome stood raking into chests the countless gold of her jubilee, just before she suffered her most humiliating shame." All the gold of the New World was pouring into the treasury of her kings while Spain was rotting of inward decay.

James Lick, when near his death, said to a young friend: "Never, my friend, make the amassing of wealth the object of your life. Behold me, as a money-letter most successful, as a man most miserable!"

From the worship of "Covetousness, Lady of ignoble competition and deadly care," good Lord, deliver us!

"Hang on," then, I pray you, to the poet's old ideal—

"The honest man, though ne'er so poor,
Is king of men for a' that."

Another glorious national ideal for the young American to "hang on" to is the ideal liberty. Don't get this ideal also too badly mixed. Don't think that doing that which is right in your own eyes is freedom. Hideous anarchy, rather, that should be named. Free to degrade yourself; to debase God's image, to entangle yourself irretrievably in the chains of evil habits; free to sell yourself to the devil, and to become his bondman? No! ten thousand times, no! Insult and mockery it were to soil the sacred name of Liberty by such revolting license!

"That a good man be free, as we call it, and permitted to unfold himself in works of goodness and nobleness, is surely a blessing to him, immense and indispensable, to him and to those about him. But that a bad man be free, be permitted to unfold himself in his particular way, is contrariwise, the most fatal curse you could inflict upon him—a curse and nothing else to him and all his neighbors. Him the very heavens call upon you to persuade, to urge, to compel into something of well-doing; and if you absolutely cannot, the one blessing left is the speediest gallows you can lead him to."

Be your ideal, then, the liberty which is enjoyed by those alone whom the truth makes free; the freedom to follow the everlasting paths of duty and righteousness, the paths that lead to eternal peace.

"Hang on," dear reader, to the old Christian's doctrine of Peace and Goodwill. Take to your heart one of Longfellow's aphorisms, the law of life—

Live I, so live I,
To my Lord heartily,
To my Prince faithfully,
To my neighbor honestly,
Die I, so die I.

EDWARD BERWICK.

Carmel Valley, December, 1882.

Chile and California.

EDITORS PRESS:—As a continuation of a pleasant half-hour's chat, allow me to furnish your readers with a few data on Chile, some of them not generally known.

It is a well known fact that California and Chile are, in more points than one, each an exact copy of each other.

Thus both countries have a hot and temperate climate, and in some sections even cold, limited alike west and east by the Pacific ocean and high mountain chains, north and south by either deserts or more humid regions (in this latter case inversely to each other). The central valley of both is more or less the same in extent, climate and productions—the great staple being wheat of a good quality.

Aside from the scarcity of quicksilver in Chile and, per contra, its superabundance of copper, their similarity is equally noticeable in the mineral line. Both produce silver, gold, lead and coal. It is a doubtful question if California has even up to now produced the amount of gold collected by the Incas of Peru and Spaniards years back from all over Chile. (Vide "The Era of Gold in Chile," by Vicuña McKenna, 1881.)

California has a fauna and flora of its own, and boasts of her grizzly bear, vulture, manzanita, azaleas, etc. Chile her condor, huemul (this latter exclusively her own) and the most beautiful of all climbers, the copigue.

The grand, imposing redwoods of the Sierras are fitting companions to the giant alerces of southern Chile. Thus half way on the road from Port Montt to Port Varas, in the province of Slanquihue, there is the stump of one of these trees cut 8 ft. from the ground, 14 ft. in diameter. Its top slants towards the high road close by, and has been surrounded by a railing and covered with earth, wherein dahlias and other flowering plants flourish, forming at once a quaint, unique and original sight. This tree or rather stump is not by far the largest of its kind, for there are many giants reaching close on to 300 ft. Very curious is the fact that many of these trees are hollow.

The exuberance of vegetable life in California is well known; everybody has heard of heavy bearing fruit trees, astonishingly quick growing eucalyptus and enormous bearing vines. Let me now give you some equally interesting data respecting Chile.

There is at present growing in Santiago a Lombardy poplar whose trunk, one meter* from the ground, is 3.23 meters thick. A Peumo tree measured three meters from the ground has a trunk 4.9 meters in circumference, and its branches occupy a space of 39 meters. This tree produces an odoriferous fruit exactly like cranberries in color and size. In the same city are three cypress trees with 2.85 meters in circumference at one meter from the soil.

Of six chestnut trees now growing scattered over a space of 100 yards, the largest covers

The meter is about 39½ inches in length.

with its branches 63 meters, equal to 1.93 acres. Its trunk, without the slightest scar or blemish, measures 9.3 meters in circumference, and the crop of fruit from the six trees is annually sold for \$1,000.

Two blue gum trees planted in 1865 now measure 3.74 meters in thickness one foot from the ground. Pear trees three feet, fig trees five feet and peach trees two feet in diameter in full bearing are quite common.

Finally, of the native palm (*Jubea spectabilis*) large numbers of which can be seen a few miles from Valparaiso, there is one tree growing in a court yard in Santiago 20 meters in height and 3½ in circumference. This species of palm out in short lengths and by the application of heat distills in abundance what the Chileans call palm honey, used instead of molasses, being preferable to both it and honey. R. F. B. San Francisco.

POULTRY YARD.

Practical Poultry Raising—No. 2.

EDITORS PRESS:—In making up the breeding pen of fowls you will not, of course, have neglected to provide them with the comforts necessary to a well-arranged chicken house, to-wit: a low, broad perch, dust bin, nest boxes (not of old tin cans or other make-shifts, but such as are roomy enough for the hen to set at ease when on the nest), together with receptacles for gravel-oyster shells and charcoal broken into small pieces.

The stock all right, the next consideration in the line of success is judicious feeding. Give all the variety possible, using condiments (if at all) only sufficient to properly season the food. Beware of dosing breeding stock with cayenne pepper—a most powerful stimulant—the excessive use of which is one of the many reasons why such puny chicks are met with in the unskilled breeder's hands.

Look out for the eggs now. Gather them daily and lay carefully away. A good plan is to have a shallow box, in which put a couple of inches of bran and stand the eggs small end down in rows so as not to touch. Set all eggs as fresh as possible, selecting the best shaped and medium sized.

Now as to hatching. Of course, no one need be told to place the eggs under hens, as that has been the favorite plan for centuries among multitudes of poulterers, but as the

Artificial Incubator

is preferred by many of the more advanced poultry breeders of the day, we think it best to have our little say right here respecting this (to many) wonderful machine. In a former article mention was made of the antiquity and the extent to which artificial incubation was carried on which I need not here repeat, but will say in justice to the process and by way of assurance to those contemplating a trial, that as fine chickens are being raised with infinitely less trouble by this method as were ever raised in the "good old way."

Actual experience demonstrates that among the score and more incubators manufactured in the United States (some of which we have tried with varied success), only about half a dozen are at all worthy of being ranked among the first-class, and even among this small number a choice may very wisely be made. In turning to the advertising department of the RURAL PRESS we find them of all sizes and styles, and at prices that bring them within the reach of all. My advice is to try it on a small scale first, and enlarge only as your success will warrant. We will now leave the artificial hatching process with the remark that a good self-regulating incubator, with determination on the part of the operator, can scarcely fail to result in success.

Returning to the

Natural Method.

We find that when the hen is allowed to exercise her natural instincts, the nest is generally made upon the ground in some secluded spot, where, with the earth to furnish moisture and retain the heat imparted by the hen, a larger percentage of chicks are hatched than by any other method of management with hens. Let us then take a lesson from this, and first of all place the nest boxes of the laying hens on the ground or very low down at least, so that when they become broody they will already be accustomed to the low nest. And now, having some facts in connection with using hens as incubators that have never been in print, so far as my knowledge goes, and to enter into detail of which would make this rather lengthy, I shall retain them until the next. L. C. BYCE.

Petaluma, Cal.

A UNIVERSAL RULE.—As the strength of a chain is equal to that of its weakest link, and the carrying capacity of a water pipe equal to that of its smallest part, so the conductivity of an electric current is only equal to that of the part which offers the most resistance.

A PAPER KNIFE.—A knife for cutting paper has been recently patented. It has bearing-points, and a raised handle between these points, and is made of elastic material so that pressure on the handle will elevate the point of the blade.

FORESTRY.

Preservation of Forest Areas.

EDITORS PRESS:—In view of the approach of the meeting of the Assembly, would it not be well to call attention to a matter that is of the extreme importance to us as a State—the preservation of the forest land? It is wonderful, unaccountable on any theory of common sense, that we have no laws on the subject. It is perfectly well known that the rainfall in every country is dependent upon the area of forest, and that it is absolutely necessary for continued cultivation that this area be not diminished. Some governments, Germany best of all, have for years acted upon these facts, and protected their woodland. Others, Spain for example, have neglected to do so, and have suffered in consequence. In the Eastern States they are beginning to agitate the matter, but they could neglect it for a hundred years and not be as badly off as we are in California to-day. Here it is a present pressing danger that cannot be slighted without incalculable damage in the near future.

We have the most capable country in the world—a second Garden of Eden—but like the first, it might be easily lost. Successive Legislatures, intent on trivialities, have suffered to go on, year after year, the most wild, reckless, wanton destruction of our irreplaceable timber. It is of daily occurrence in these mountains to fell fine tall cedars for a bit of bark to fill a trifling mud-hole. Thousands of acres are yearly burned; other thousands stripped of young and growing trees as well as old. New settlers aim to clear all their land, reserving nothing for the future. Lumbermen and woodmen of all kinds back and slash at their own sweet will; the timber melts away. The Legislature does not act, the people cannot; and in a day not distant, not in the next generation, we shall be brought to face a desert—another Arizona.

We need not only to vigorously check the cutting, but also as vigorously to enforce the planting of forest trees. For every tree that is cut for lumber let two be planted, and taken care of too; let only so much be cut; only cut the old trees, never the small and young; under no circumstances allow a single acre to be swept bare for lumber purposes simply; in clearing land for farms, classify the land. No. 1, heavy timber fit for lumber, should not be cleared at all (as situated in this State such land is not of much value for farms, and should be held perpetually as timber land). Let No. 2 be, say half cleared; No. 3 the bulk of foot hill land, covered with brush and scattered trees, clear, say three-fourths.

Then as to the untimbered parts of the State, let every land owner be required to plant and preserve at least one-fifth in forest trees. Though this may appear a hardship, it is required for the full development of the State, and will, moreover, amply repay every such tree-planter. I have seen in a single season more loss arising from drouth and north wind, such as would have been at least greatly prevented by such a general tree culture, than would have sufficed to belt the great valleys from Sierra to Coast Range, on every east and west section line, with a heavy screen of timber, wind brakes and rain bringers. Then would farmers be free from their terror—the north wind.

Cannot something be done? We have neglected already too long. I appeal to the coming Legislature to inaugurate this important reform by a system of wide-reaching and stringent laws. W. S. P.

Auburn, Cal.

THE GREAT RUSSIAN AND THE LICK TELESCOPE.—The work on the lens of the great Russian telescope is practically done. Recently one of the lenses was taken from the polisher, placed in the cell with its mate and put in place in the temporary tube which has been used for testing it upon celestial objects. The lenses and cell casting of the objective weigh about 420 lbs., and four men were needed to handle it. The tube was inverted and the cell put in place and fastened by capstan-headed screws. It was then directed upon several objects, and to the unpracticed eye it seemed perfection. The brilliancy of even the smaller stars to a novice is astonishingly great. A day or two after several other optical tests were applied, and Mr. Alvan Clark said that the glass was so nearly perfect that it would not be advisable to attempt more work upon it, as the risk would be too great in proportion to any possible gain. The aperture of the objective, as our readers may remember, is 30 inches, the greatest that has yet been attempted, or rather the greatest that has yet been completed, for the same firm have a 36 inch objective now in hand for the Lick observatory. One of the Lick lenses is now at the works of Mr. Clark. It is ground and polished, and the firm is awaiting for Chance, of England, to cast a glass suitable for the other lens. It would seem that the optician is much ahead of the glass-worker in skill, and that great advances are still possible in the manufacture of large lenses when the glass-makers can produce finer glass of large dimensions.

HORTICULTURE.

The Fruit Growers' Convention.*

Full Reports of Addresses and Discussions.

[By resolution of the convention, the publication of the full short-hand report of the proceedings of the convention was entrusted to the PACIFIC RURAL PRESS.—EDS. PRESS.]

[CONTINUED FROM LAST WEEK'S RURAL PRESS.]

The President: The next order of business is a paper by Mr. Shinn, of Niles.

Peach Culture.

Mr. Shinn: I hope it will not be expected that this will be an exhaustive essay, for it will be no such thing. I was only requested to prepare a little paper. I demurred a great deal at that, and state in advance that some important questions in relation to peach culture will be entirely omitted. One in particular is worthy of notice, and that is the insect pests. I know so little about it that I have not been able to say anything about it. In my own experience I know nothing of insect pests affecting the peach or the almond, either upon the leaf or the fruit. I am aware that such discoveries have been made—that several experts and those whose eyes are opened to such things have during this season discovered insects; but how much danger there is in the future in this direction I do not know. I do not know, neither have many of you known, of any insect pests infecting the peach, and this is a great recommendation to the culture of it. I make that remark hoping that what is known of the insect pests upon the peach will be brought out either in the discussion that follows this, if any does, or at some other time. Neither was I able to say anything about the statistics as to the quantity of peaches that have been canned or dried this summer, which is a very important matter in this or any other culture.

Mr. President: In presenting to this convention a brief paper upon Peach Culture I shall not attempt an elaborate and exhaustive essay that shall trace the history and progress of this valuable fruit from its first introduction down to the present time. I shall confine my remarks mainly to topics connected with the present status of this interest as it exists on this coast.

As Americans we have reason to congratulate ourselves upon the fact that nearly all the more valuable varieties of the peach now in cultivation have been originated in our own country, and not a few in our own State. The origin or first discovery of the peach has usually been placed in the far East—probably in Persia. No doubt this claim is well founded. It has been believed that this delicious fruit found its way to our continent from Europe—that the early settlers of this continent brought the pits to this country, and that from these have sprung our entire list of varieties. But this view of the origin of our American peach is now seriously doubted. A writer in the *Gardener's Monthly*, Philadelphia, claims that the peach is indigenous, and that it may now be found wild in Virginia and Maryland. He states that when Wm. Penn arrived in Pennsylvania he found, among other wild fruits, such as walnuts, chestnuts, cranberries, strawberries, also the peach. Penn reports that "not an Indian plantation is without them." This claim on behalf of the eastern side of our continent is probably not well founded; but the claim is now boldly put forth that the peach or almond is indigenous to this side of the continent. It may not be generally known that several of our botanists have believed for several years past that the peach is a native to this coast; but Dr. Kellogg, of the Academy of Sciences, San Francisco, considers the fact now fully demonstrated. He has procured the branches and fruit from native trees growing on the eastern slopes of the Sierra Nevada mountains, in Nevada. The fruit thus obtained is undoubtedly of the almond genus, and is unquestionably indigenous. Through the kindness of Dr. Kellogg I am enabled to place before this convention some specimens of the fruit, to which I invite the attention of all who take interest in such subjects.

The Peach Tree

May be easily grown from the pit, budded the same season to any variety desired, and at the age of one year from the bud may be transplanted to the orchard, and two years thereafter some fruit may be expected. Peach trees should be trained low, and should be so pruned before coming fully into bearing as to insure a low, open and spreading head. Peach and other orchard trees have generally been planted too near to each other for best results. Peach trees ought to be at the least 20 ft. apart each way, and 25 ft. would probably be a better distance in all strong soils. The peach tree thrives in almost all good and well-drained soils. Even light sandy or gravelly soil may produce fair sized trees and good crops, if too much fruit is not allowed to remain on the trees. Wet soils are unsuited to the peach.

Concerning the proper manures for the peach orchard, I only remark that stable manure is

the best that can be applied. But analysis of the ashes of the peach tree clearly indicates that common wood ashes may be profitably applied, and that lime in moderate quantity would also be suitable for the renovation of old trees.

Diseases.

The only formidable diseases to which the peach tree is subject in this State are the "leaf curl" and the "mildew"; and even these diseases do not seriously attack all varieties. The mildew is almost entirely confined in its attacks to the "serrate glandless" sorts, and as these are comparatively few, the planter may readily procure a good assortment without planting any of these.

The "leaf curl" is a much more formidable disease, and if its attacks were indiscriminately made upon all varieties peach culture would be a very precarious business. Fortunately many of our choicest varieties are in good degree exempt from the disease. The curl effects a much larger proportion of white than of yellow-fleshed varieties, and this fact is favorable to the peach grower, because the yellow peaches are more valuable as a rule for either drying or canning. I scarcely need suggest the remedy for leaf curl. It consists in a severe avoidance of the varieties known to be subject to it.

I come now to speak more directly of

The Fruit.

The peach has ever occupied a first place in the estimation of any people who have been able to grow or to obtain it. It has always been found in the orchards of all classes, in any climate suited to its culture. Our markets have been fully supplied with this delicious fruit, but on account of the perishable nature of it and the limited quantity that could be consumed in its fresh state, no effort was made until recently to greatly extend the peach culture. Indeed the maximum of profitable culture of the peach was reached several years ago. But a great and beneficent change has been brought about in the interest of fruit production generally in this State. The introduction of canning and drying processes, as now carried on extensively, has wrought a great revolution in the whole business of growing fruit for market. Every branch of fruit culture has received an immense impetus from this new departure, and peach growers have their full share in the benefit.

Varieties.

On the proper selection of varieties for planting much of the success of peach culture depends. Several hundred varieties of the peach are grown in the United States, a very large proportion of which are unsuited to the uses of the California planter. Indeed, it will be found upon a careful and intelligent scrutiny of the long lists offered from which to select that the number of really meritorious is but small.

Without attempting to offer a special list that would in my judgment constitute a good selection, I may remark that the yellow-fleshed varieties are, as a rule, preferable on several accounts. They are usually much firmer and less liable to become bruised in handling; they are much less subject to leaf curl or the mildew. As a rule, the yellow peaches are more profitable for drying, as they give a larger percentage of dried product. Being firmer than white-fleshed peaches, there is less difficulty in separating the skin preparatory to drying. This is an important advantage, for only peeled peaches that have been dried by a quick process—evaporating—can find remunerative markets.

Clingstone peaches, whether white or yellow, are every way desirable, for drying as well as for canning. The inducements to engage in the business of peach growing, as it seems to me, are many. The trees are readily obtained and easily managed; our soil and climate, in a large portion of the State, are well suited to this culture; the business, as a commercial interest, is fairly established, and the market demand for the products of the peach orchard is rapidly increasing and extending over wider fields, both for canned and dried fruit.

To sum up the whole matter in a few words, let none but the best varieties be planted; let the young trees be trained with low and open heads; let the trees have ample space in which to develop; let no other plants have any share in the soil; do not permit any tree to bear more fruit than it can fully develop. If the peach crop is to be dried let the fruit first be peeled; then dried by some rapid desiccating process. These simple rules faithfully followed will, under favorable circumstances, almost infallibly lead to success in peach culture.

The President: If there is no objection, the paper of Mr. Wickson, and also of Mr. Shinn, will take the course heretofore taken, and all papers brought before us will take the same course.

Mr. Owen: I think there ought to be something said about the peach, and as friend Shinn has given us some very good ideas in regard to planting, cultivation etc., I shall endorse them, but I think he probably made a mistake with regard to one matter, with regard to the variety that is not subject to the curl; if I remember rightly he stated that the Yellow Meacham peaches were less subject to the curl than other varieties. Am I right?

Mr. Shinn: That is right.

Mr. Owen: My experience with peaches leads me to the contrary. I am satisfied we have some three or four white-fleshed peaches that do not curl in my vicinity, and I never saw them curl anywhere, whereas we have no yellow peaches but what do curl more or less

those I will name: for instance we have the Alexander, Hale's Early and Briggs' Red May, that are cultivated in our region as early peaches, that do not curl; they are troubled occasionally with mildew; that is the only thing they are troubled with, whereas all of our yellow peaches do curl more or less; and that leads me to speak of a matter that was discovered some three or four years ago, I forget when. Some two or three years ago the peaches curled badly pretty much all over the State, in fact they were troubled so very much that I know of a great many trees that died with the curled leaf. Some writer has said that he was glad to know that the Early Crawford was one peach that did not curl; he only judged from his locality; I know of some trees of the Early Crawford that absolutely died from the curled leaf, so that we are not always sure about the peach that won't curl until we try it a while at least. There is another matter about the cultivation of the peach that I wish to mention here; it has been talked of a good deal, but still a good many people do not gather the idea about thinning out fruit. If you want a good peach you must thin the fruit; that is, if the trees bear as they do in our region, they are almost sure to produce from two to four times the number of peaches that the tree can mature. Now, if you want a good peach under such circumstances you have got to thin out. Persons have remarked to me frequently when I am going through the orchard and pulling off the peaches, "Ain't you going to leave any peaches on the tree?" Now, after I go through and pull off all the peaches, as they thought, I go through again and pull them all over again, and when I commence gathering my fruit I find frequently that I have not pulled enough yet. I say this because I want it impressed upon the fruit growers. There are a good many fruit growers that fail in this one particular of thinning out fruit. If you want good fruit you must absolutely thin them; you must not be confined to peaches, neither, but your apples, your pears and prunes. I go through my apples and my prunes; I don't bother much with the small prunes; I let them have their own way. But the large prunes and plums I think it will pay to thin them; and the consequence is my fruit is all large and it is all matured. And you take such fruit that has been properly thinned, properly cultivated and on properly pruned trees, and you would hardly think it was the same kind of fruit at all as that you find on trees otherwise treated.

Mr. Proctor: Speaking of peaches, in the southern part of the State, in 1875, I think it was, I had a number of trees that commenced to start out very early in the season; we had rather warm weather in January. I thought that year that I was going to have an extra early crop of peaches, but by and by, the weather turned a little chilly, the trees stopped growing; after a little it came warm weather again, and they started out again; all the trees, without any exception, had the curled leaf; three-fourths of them died back from one-fourth to one-half, and the result was, that for two years after that I had no peaches at all. This year I had better success than I had that year in my young peach orchard, beginning with the early varieties, the Great Red May, Alexander, Red June, Waterloo; none of them had the curled leaf; all fruited fully, and matured the fruit in good season. Next the Early York, Early Tillotson, and Natchez Belle ripened, and they were more or less affected with the curled leaf, and the Early Crawford that came in next were very poor. I thinned out at least four-fifths, and then my trees were crowded with fruit when it came to mature, and they were affected scarcely at all, but the next row, where it was badly affected with the curled leaf, so that I had scarcely any on; then there was some trees, the Morris White, was an entire failure. Ward's Lake badly curled, and then further on, coming to the Solways, a late peach, a yellow peach, the best peach for me because I get more money for it, was not affected at all, and I consider this as some indication in my locality as to those kinds as to what may be expected of them. There is one little peculiarity that I wish to state about: A dozen or two of my trees were near a granite rock, probably two rods square, on a place that has been occupied in years past as an Indian camp. It is covered with decayed ashes and the debris of their camp. There at that place is this Morris White, the Ward's Lake and the Solway. Those trees right about the rock had the curled leaf badly. They recovered and started out a growth like the willow tree, the leaves real fine, and they scarcely had any fruit, and what they did have was small and very poor, and at least one month in each variety later than they were in other parts of the orchard. I don't know the cause of it. I think some one here might have had a similar experience and might tell me something about it. Some of those trees have been killed by the gophers. I replanted them with apricot trees last spring. One of those trees made a nice growth in the first part of the season, took a rest and started to grow again. It had leaves affected much the same as the peach tree. I can't account for it.

Dr. Chapin: As it was stated in the paper read by Mr. Shinn that to his knowledge no insect infested the peach tree, I would like to call attention to the fact that here at San Jose we have peach trees infested with the *Aspidiotus Perniciosus*, and badly too. It would not do to allow you to go away with the impression that there was any tree that escaped the at-

tacks of that insect, so we will have to admit that but one out of the entire list of deciduous fruit trees is exempt from the attacks of the *Aspidiotus Perniciosus*—that tree is the black Tartarian cherry. In the exhibition hall are no less than four or five peach trees on the middle table that are covered entirely with the San Jose scale. Another point with reference to the possibility of disinfecting peach trees in case they are infested with insects, either from the roots or the top. It is now pretty clearly demonstrated that the roots, or peach tops at any rate, can be disinfected by the same solution that we use on the tops of trees. As an instance of this I will state that last winter, in February, Mr. Morrill, of the Santa Cruz mountains, purchased 213 Solway peach trees that were imported from the East by a dealer in those trees. They were rather poor trees, and he was afraid to plant them out, fearing some disease might be connected with them, and so concluded to disinfect them before planting, not caring whether he killed the trees or not. In so doing he dipped the entire 213 trees in a solution of concentrated lye—one pound to a gallon of water—dipping the roots and the top entire. He was telling me three or four days ago—and at my request sent down one of the trees to show the effect of the lye upon the root—that the entire number of trees excepting two, that is 211 out of the 213, are alive, and have made a healthy, fine growth this season, and in no ways are different from other trees planted at the same time. The two trees that were destroyed perished from other causes than the washing by the lye. It would seem by that that the roots of peach trees and anything upon peach stock may be with safety treated with the strong solution of concentrated lye.

Curl Leaf.

Mr. Shinn: It will be remembered that in the paper I read I cheerfully admitted that our experts, Dr. Chapin, Matthew Cooke & Co., had discovered a peach pest, and I rejoice, if it exists, that they have found it. I suppose there is no doubt but what it does exist, but I said, and I think probably it would be the experience of most of the gentlemen here, that I have not seen it anywhere. The peach tree has been free from all pests of that kind up to the present time, and I am not aware of any such pest affecting the apricot; probably there may be, but I wished to speak more especially about the curled leaf. That is a very important matter, but some gentlemen seem to feel that it is more important than I do. I have taken the ground for several years that that there is no serious difficulty in obtaining a line of peaches for an orchard so as to avoid serious injury. Everyone knows that a great many varieties of peaches curl more or less. It is only those that curl excessively; the fruit will fall when the diseased leaves fall, but it will only slightly curl with some of them, and the young peaches will hold their own, and after the new leaves come out they will go on with the growth and the fruit will be practically just as good as any.

Now I feel very confident that those who have found the Early Crawford peach curl badly, that they either have a very bad place for peaches, or they have not the Early Crawford. I have grown it for 26 years, and I have never seen it curl. Probably they have the Late Crawford. Those who have it find it to curl. The Late Crawford will always curl. There are no Late Crawford peaches this year, and a year ago the Early Crawford bore well and the Late Crawford failed. Two years ago was an exceedingly bad year for the curl, as you all know; almost everything lost its fruit but the Early Crawfords, the Honest Abe, the New Jersey peach called Mary's Choice, the Jones Seedling, the Georgia peach, to say nothing of others I might mention, bore good crops that year. The only yellow peaches that I know of that come within my knowledge that curl badly are the Crawford's Late and the Reeves' favorite. I don't call to mind any other. I have no doubt there are others who have different varieties from what I have that curl. All authorities agree that the yellow peaches are less liable to curl than the white. It is very true, as the books say, that there are white peaches that do not curl, but they are not of as much value for commercial purposes. The Alexander, the Briggs' May, the Waterloo, the Governor Garland, and so on, will not curl; but what shall we do with them in these counties? The hot counties of Sacramento and around Vacaville will fill the San Francisco market with them. But when we choose a later peach we come on to those that the canners would like to have. There are a few that don't curl much, the Early York, the Honest John, will not curl much; better let very late peaches alone.

Now I find that the canners do not care about all these freestone peaches; they like Morris Whites, because they are white to the very pit. If we can obtain a seedling white peach that comes at the right time, is of good size, is white to the very pit, like the Morris White, and that don't curl or mildew, it is just what we want. But the Morris White will curl in a curly season; it is a choice peach, but curls badly. I know of others that are white clear through, but they curl badly; and I repeat with great confidence that the yellow-fleshed peaches, as a rule, are less apt to curl than the white-fleshed peaches, and they are more valuable either for canning or drying, because of their greater firmness of flesh, and because they bear carrying to market better.

(CONTINUED ON PAGE 518.)

* This report is now being prepared in pamphlet, and will make the fullest review of the present situation in fruit growing in the State, which has thus far been collected in book form. It will be sent to any address for 25c. a copy. It will be found valuable to keep and to send to horticultural friends abroad. Address DEWEY & CO., Publishers, 252 Market street, S. F.

PATRONS OF HUSBANDRY.

Correspondence on Grange principles and work and reports of transactions of subordinate Granges are respectfully solicited for this department.

Stand to Your Guns.

Stand to your guns! Close the ranks front and rear,
With your face to the foe, no repining, no fear;
Raise high our proud banners, now lowered at half-mast,
Where it ruefully hangs, all the mourners have passed.

Stand to your guns! Save the ship, clear the wreck,
The tars of Columbia must muster on deck;
Launch again on the ocean the flag of the free,
The pirates and smugglers to sweep from the sea.

Then cast overboard every sailor who skulks
From his duty or colors, who grumbles, or sulks
With a mutinous snarl or sneer on his lip,
While pirates are plundering and scuttling the ship.

Drum out every soldier who sneaks from the ranks
While the foe is assailing the front and the flanks;
Comrades who desert while the battle is hot,
By the laws of all nations are doomed to be shot.

Drive out the camp rubbish, who bluster and brag,
The cravens who stand not by gun or by flag;
The Hessians, who battle for rations and pay,
Are sure to surrender, desert, or betray.

In contests for freedom, for country, or creed,
Deserters and trimmers can never succeed;
The soldier in siege, or in field, who has won—
Is he who has loyally stood by his gun.

The past has its glories, the present its hour
To break every fetter that curbs freedom's power,
New duties arise and new triumphs must come—
Full freedom for women and freedom from rum.

Then close up the ranks—let the battle begin—
There are fields to be fought, there are sieges to win;
There are legions to conquer—warm work to be done—
Then muster each man who will stand to his gun.

—C. J. Boutwell.

Election of Officers.

[Secretaries are requested to send further reports and information.]

ROSEVILLE GRANGE, No. 161.—Election Dec. 2.—Walter Fiddement, M.; Joel Gardner, O.; John McClung, L.; George Williams, G. (re-elected); J. Schellhouse, A. S.; E. J. Atkinson, Chap. (re-elected); E. Daly, T.; N. Mor-tes, Sec'y (re-elected); G. Hanish, G. K.; Martha Leavall, Ceres; Josephine Daly, Pomona; Maggie Daly, Flora; Georgie Hill, L. A. S.

NATIONAL RANCH GRANGE.—Election Dec. 7.—W. C. Kimball, M.; Charles Hubbel, O.; E. W. Morse, L.; L. Yates, S.; H. C. Barnes, A. S.; Miss A. W. Baker, C.; T. Walker, T.; Mrs. J. H. Barnes, Sec'y; L. Roberts, G. K.; Mrs. A. M. Field, Ceres; Mrs. Mary Morse, Pomona; Mrs. Josephine Walker, Flora; Mrs. Sarah C. Kimball, L. A. S.; Trustee, F. A. Kimball.

NORTH BUTTE GRANGE, No. 225.—C. C. Pat-ridge, M.; H. B. Stevenson, O.; Dr. McMurty, L.; George Hedger, S.; F. A. Hedger, A. S.; Mrs. R. A. Clyma, C.; L. D. Hedger, T.; Mrs. M. E. Durley, Sec'y; F. F. Clyma, G. K.; Miss Kate Meyers, Ceres; Miss Jennie Hedger, Pomona; Miss May Clyma, Flora; Miss Lena New-kom, L. A. S.; Miss Alice Edmunds, Organist.

GROWTH OF THE GRANGE.—In his annual report of the late session of the National Grange, Wm. M. Ireland, Secretary, made the following statement relative to the growth of the Order during the Grange year ending October 1, 1882, which is more in detail than the statement we had in the outline of proceedings of the National Grange meeting which we published in the PRESS: During the past year there has been a steady increase in the number of new Granges organized, the number of dispensations issued being 77, distributed as follows: Alabama 2; Arkansas 1; Dakota 1; Delaware 5; Georgia 3; Illinois 2; Indiana 2; Maine 5; Maryland 2; Massachusetts 3; Michigan 7; Mississippi 3; Missouri 2; New Jersey 1; Minnesota 1; New York 11; North Carolina 3; Ohio 3; Pennsylvania 6; South Carolina 3; Tennessee 1; Texas 8; Virginia 1; West Virginia 1. As compared with the previous year, this is an increase of 35%. This good work is being kept up, for since the close of the fiscal year, and up to the time the Secretary left his office, there have been put under dispensation 13 new Granges—about the same number as in the same period of last year.

ANOTHER GALA DAY AT STOCKTON GRANGE.—At the last meeting of Temescal Grange it was announced by Bro. Marsh, Master of Stockton Grange, that the installation of officers of his Grange will take place in the Grange hall, Stockton, on Saturday, Jan. 6, 1883. The work of the day will commence with the initiation of a large class in the third and fourth degrees at 10 o'clock A. M. Harvest feast at 12 M. Installation of officers for the ensuing year at 2 P. M. A general invitation is extended to all Patrons in good standing. That there will be a good time and a genial greeting no one who has ever attended a Stockton Grange reunion can have any manner of doubt. Bro. Marsh's cordial address was well received by Temescal Grange.

INSTALLATIONS.—Installations will be in order in the Granges during the coming months, and we hope these interesting occasions will draw out full attendance of members. They should be times for the renewal of faith and of new determination to go forward. They are

notable events in any case and are well worth recording. We hope our friends will not fail to send us accounts for publication in the RURAL PRESS.

AGRICULTURAL NOTES.

CALIFORNIA.

BUTTE.

ORANGE GROWING.—Oroville Mercury, Dec. 22: Two years ago oranges were scarce here in Oroville. A limited number only were grown, and of these many were sent away as samples of what our foothills would produce. Last year the number greatly increased, and this season about 5,000 have been offered for sale. Our trees are all young, and from 1,200 to 1,800 is the greatest number grown upon any one tree. A full-grown tree will produce five times that number, so we safely predict that within a few years there will be an enormous increase in the number grown. Some half dozen varieties are in bearing here in Oroville and vicinity, but the seedlings are preferred to any others. Our native trees produce a larger and finer fruit than the Mediterranean Sweet, the Kouah or the St. Michael. The orange belt is confined to a limited part of this region. The valley land is too damp and cold, the high hills too frosty, so the available land for oranges consists of a narrow belt a few miles in width and 12 or 15 in length. Land is cheap at present, but we predict that within a few years it will be ten times its present value.

LOS ANGELES.

SHIPPING RAISINS.—Mirror: Another car-load of Orange raisins was shipped to Boston last week, making a total of nearly 40,000 lbs. shipped within the past two weeks. This fact is the more significant when it is considered that two years ago the yield of raisins in that community aggregated only 676 boxes, or 13,520 lbs., as compared with 10,000 boxes, or 200,000 lbs. this season.

GRAPE CULTURE.—Anaheim Gazette: Grape culture, which seems now to have "the call," is an industry at once remunerative and pleasing. The only real hard work about grape culture is confined to the four or five weeks annually during which wine or raisins are being made, as the case may be. The routine of a year's work may be thus described: December and January, pruning; February, March and April, irrigating and cultivating; May, June and July are months of comparative idleness, there being nothing required by the vineyard; August and September are also months of comparative idleness, the only work required being the cleaning of casks and other preparations for the coming vintage; October and November are the months of greatest activity, for the grapes must be picked and the wine made or the raisins cured. There is nothing formidable about such a programme, and with the exercise of intelligent judgment and management, there is an abundance of leisure for the vineyard owner. It is also true that there are, and doubtless always will be, vineyardists who from January to December work from morn till night, and never "catch up" with their work. But the same can be said of persons in every calling and pursuit. As to the profits of grape culture, we can speak with authority. Anaheim is the center of the most noted grape growing district in the State. It is surrounded by hundreds of vineyards, great and small, and it is an easy matter to get at the products and profits. Assuming that a vineyard is well cared for and that the vines are vigorous, five tons of grapes to the acre is a very reasonable estimate of the yield. Five tons of grapes is equivalent to 750 gallons of wine. The wine can be sold two months after the grapes are pressed at 20 cents per gallon. The yield, then, of a 20-acre vineyard is 15,000 gallons, worth \$3,000. The expense of cultivating, pruning, picking and crushing grapes does not exceed \$500, leaving \$2,500 as the reward of the year's toil. This is a low estimate—far beneath the results which have been attained in Anaheim this year, last year and for numbers of years. It is also true that some of the vineyards do not produce four tons of grapes to the acre, but in every instance of this kind the low yield is due to neglect of the vineyards at the time when the industry was at a low ebb. Nor is the expenditure of \$500 for labor made in many instances, for there are many owners who themselves care for their vineyards, and only hire extra help during the grape picking season. Two hundred and fifty dollars more than covers the annual expenditure for labor on many 20-acre vineyards in Anaheim.

MENDOCINO.

HOP ROOTS.—Ukiah Press, Dec. 22: The demand for hop roots is ahead of the supply, owing to the stimulus which high prices have given to hop planting. Usually hop roots are a drug, but this year they are worth from \$10 per thousand up. The local demand is very large, and applications have been received from Oregon and Washington Territory—most of which will be unfilled. Aside from the large acreage that will be put out in this valley, we hear of 40 acres in Putter, 40 acres in Little Lake, and an addition in the Round valley fields to be made this spring. The Lakeport Bee says: The hop men are jubilant; hop roots are \$22 per thousand and scarce at that.

NAPA.

ALFALFA ON TULE.—Register, Dec. 23: Included in the 400 and more acres of land belonging to the Asylum is quite an amount of tule land bordering on Napa river. It has long

been the aim of Dr. Wilkins, resident physician, to subdue this tract and bring it into a high state of cultivation. To accomplish this, ditches have been dug, dykes thrown up and several acres were plowed for the first time this fall. It will be one or two years before this latter tract is thoroughly subdued. As an experiment Dr. Wilkins, soon after the first rains of this season, sowed upon some of the unplowed tule land alfalfa seed which was not harrowed in. The tules were first mowed down and the stubble, if we may so term the butts of the stalks, afforded protection to the tender alfalfa plants, for the seed sown sprouted at once. Now the new grass is growing rapidly and evidently will soon cover the ground. This successful experiment is worthy the attention of all who own overflowed lands, for if without the tedious process of plowing and harrowing for two years this land can be transformed into fields of the rapidly-growing alfalfa, much time, labor and expense will be saved.

HORTON'S AGRICULTURAL WORKS.—Napa Register: In the winter of 1873-4 Henry Horton came to Rutherford and began business in a small shanty. He soon saw that the location was a good one, and decided to remain there. During the summer following he erected the main building of his present commodious quarters, which was two stories high and about 40x60 ft. in size. In 1880, finding that he was crowded for room owing to the rapid increase of his business, he erected an addition which now contains his wood-working and machine shops and his blacksmith shop. His machinery consists of a planer, saws, etc., all driven by an engine. The outfit is very complete. Mr. Horton is giving the most of his attention at the present time to the manufacture of carts, of which he makes six styles. He has done very much to popularize that style of vehicle, and he has brought them to almost absolute perfection. He is now turning out four carts a week and has nine men employed. He runs from 8 to 12 men the year round. These vehicles range in style from a trotting cart to a phaeton, and in price from \$60 to \$150. The greatest demand, however, is for medium priced ones. He has filled orders from all parts of the Pacific coast and the Sandwich islands. In addition to his patent carts Mr. Horton manufactures all kinds of four-wheeled vehicles, wagons, buggies and carriages; also agricultural implements of every character. Notable among the latter is a deep-tilling plow for vineyards and a small plow made especially for plowing close to the vines. He has also many other implements. Altogether, Mr. Horton is conducting one of the most flourishing enterprises in the county, or State for that matter, and he well deserves the success he is meeting with.

PLUMAS.

BEEF IN HONEY LAKE VALLEY.—Greenville Bulletin: Mr. Hemler, of Byres & Co., brought in 125 head of beef cattle a few days ago for their meat market here. The cattle were fattened in Honey Lake valley. Hemler says there are more beef cattle now in that country than he has ever seen before; every pound of hay is sold and much of it already fed out. He further says that business of all kinds is very prosperous, owing to the ready sales and advanced prices realized by the farmers.

SACRAMENTO.

ORANGES.—Bee, Dec. 23: Mrs. Carroll, from her home on P street, between Eighth and Ninth, left at this office to-day a sample of oranges, grown there from seed planted by herself, which for size and sweetness cannot well be excelled.

SAN DIEGO.

CAJON LAND.—Riverside Press, Dec. 23: The Riverside capitalists who have recently purchased some 47,000 acres of land in and adjoining the Cajon valley, in San Diego county, have placed 3,500 acres of the best valley lands on the market. The gentlemen having the land in charge are Messrs. J. H. Benedict, S. B. Bliss, S. H. Ferris, J. H. Ferris and Dr. J. Jarvis. These gentlemen are incorporating a company to be known as the El Cajon Land Company, with principal place or business at San Diego, to handle the land. James H. Benedict goes at once to San Diego to open his office and get ready for the auction sale to take place as soon as it can be arranged.

SAN LUIS OBISPO.

EDITORS PRESS:—A nice fall of rain, 35 100, is sufficient to keep grass growing and farmers' hopes buoyant. A larger breadth of land will be cultivated and seeded this year than any previous one, and more solid improvements are going ahead in city and county. Quite a business boom is in progress, while land is going up fast. It is selling at \$40 per acre more than two years ago. Notwithstanding the immense quantity of it in market, and the fact that Government land is open to the public, and there is a probability of all the railroad land being again thrown open to the public in this county, quite a large breadth is also being planted in fruit and vineyards, which do well here. As yet nearly all the fruit is imported.—O'BRYNE.

SANTA CLARA.

DAIRYMEN'S MEETING.—Mercury, Dec. 21: At a meeting of the Santa Clara County Dairymen, at the City store, Col. Younger presided and Capt. Chamon de St. Hubert officiated as Secretary. As the attendance was not large it was decided to defer permanent organization until the next meeting, to be held the first Sat-

urday in January, at 2 P. M. At the request of Mr. Cahalan, the Secretary read the law to prevent the manufacture of false butter proposed by the State Convention. Col. Younger said that the State Dairymen's Association is formed in San Francisco, and that every dairyman ought to enroll in the institution in order to help one another. That in the East they have like associations of 300 to 400 members, and that they all find it to their benefit. On motion of Mr. Cahalan, a committee of three was appointed to concert with the Gilroy Association for the protection of butter, and Mr. Cahalan, G. Fitzgerald, of Burnett, and Wm. Quinn were appointed. A motion made by Mr. Cahalan that the press of Santa Clara county receive thanks for the able help it has given in the cause of butter, was unanimously adopted, and the meeting adjourned to Saturday, Jan. 6th. G. Fitzgerald, of Burnett, Thos. Fitzgerald, of Almaden, Simon Matthews, Thos. J. Russell, J. Q. Pearl and Tyler Beach signed the roll, making a total of 25 members.

SANTA BARBARA.

YELLOW CORN.—Independent, Dec. 20: A fine specimen of yellow corn raised by Mr. Hazelrigg on the Ables place, on the Los Alamos road, was left at this office a day or two since. The ears are a foot in length, with 18 rows of large, well-formed grains. No better corn was ever raised in a Missouri bottom.

SIERRA.

THE GRASSHOPPERS.—Reno Journal: Mr. Allen Tremble, of Beckworth, Sierra Valley, reports that grasshopper eggs are not as plentiful this fall as they were last. They deposited large quantities of eggs in his fields, and he began to feel discouraged, but large numbers of birds fed on them, nearly cleaning them out. Then, too, the warm weather of October hatched out many, which have since been killed by the storm. Mr. Tremble thinks the prospects are good for a respite from the ravages of the plague next year.

SONOMA.

HORSE SALES.—Enterprise, Dec. 21: H. H. Helman has just bought from Messrs. Wilsey & Fairbanks, Petaluma, the fine Norman stallion "Julius Caesar," paying \$2,000 for him. Mr. Helman had his pick of the 10 horses recently imported by them. "Julius Caesar" is a beautiful animal, weighing 1,650 lbs., and is pronounced by all who have seen him to be one of the finest Norman horses ever imported from France. Mr. Helman has sold his stallion "Twilight" to A. Carmichael, who takes him to Tulare county, receiving \$1,200 for him.

FRUIT DRIERS.—Santa Rosa Democrat, Dec. 21: H. Lapum, C. Winkler and James Gregson have tested the practicability of fruit driers in connection with their orchards and the drying of such fruit as has heretofore been fed to hogs or allowed to go to waste, and in each case it has proved a financial success, and more especially in apples, which have net from 25 to 50 cents per box. Three patent driers are in use in the valley, viz: Street's, Plummer's and the Champion. Mr. L. has the Champion and Plummer, and thinks the Champion the more valuable for general usefulness. Those that use Street's patent wish for no better drier.

STANISLAUS.

WHEAT.—Modesto Herald, Dec. 21: The farmers of Stanislaus county have utilized the good weather during the past month by seeding a large area in wheat. The amount of fallowed land is greater than ever before cultivated in the county, and particularly on the West Side, where they meet with so many failures on account of drouth. The rain has held off long enough to create some little anxiety, but when it does come they will be the more joyful, as they will be the better prepared for it.

TULARE.

NEW WHEAT.—Visalia Delta: A. J. Scoggins has experimented successfully for three years past on his ranch near Lemoore upon two fine varieties of wheat, one of them entirely new, and the other rarely met with. Getting a head of the noted Egyptian wheat (*Triticum compositum*) from New York three years ago, he raised about thirty pounds, and last year and this about a dozen sacks. About three years ago he also began hybridizing White Chili and Club wheat. In this he succeeded so well that the hybrid variety thus obtained has reproduced itself two years in succession. The berry, both of the hybrid and the pure Egyptian, or many headed wheat, is very large, white and plump, rather longer than the Chili berry. Next year Mr. Scoggins hopes to have enough of both varieties to sell seed. Judging from appearances no more valuable varieties of wheat can be added to the choice wheat already produced in Tulare county. The Egyptian, or many headed wheat, which is also a bearded wheat, has retained here, during the three years, all its characteristics, although it has been known, according to the best authorities, to have degenerated in England to a one-headed species.

TUOLUMNE.

EDITORS PRESS:—I beg leave to correct a few typographical errors in "Tuolumne County Notes," on page 462 of the RURAL of 16th inst. The paragraph "About Potatoes"—my neighbor's name is Shine, not Shive, and the tuber mentioned is Burbank's "Sport," of which your readers have been posted in two past seasons by the originator, Mr. Luther Burbank, of Santa Rosa.—J. WINCHESTER.

YOLO.

EDITORS PRESS:—As I see but little from Yolo, I thought that it would be well on Christmas day to give you an item from (to our mind) one of the best counties in the State. They may talk of their orange groves in southern California, but you need not travel so far. If you will but come to Woodland, you can feast your eyes on orange trees loaded with the golden fruit at the present time, and as for your colonies, there is land in sight of Woodland, the county seat, for sale in lots to suit, that cannot be beat for grapes, apricots, in fact almost anything you want to grow. Water is handy; you can irrigate or not, suit yourselves. Farmers have sown an unusually large area this year. It has been a most favorable season for seeding the land to grain, and a majority are through seeding. There is the usual prophesying and growling about dry weather; but I cannot see any need of uneasiness as yet. True, a good rain would be of great benefit, but it is early yet, and if we get a good rain in the early part of January and our usual amount of spring rains, Yolo will fairly groan under the weight of the enormous wheat yield. —C. HATCHER.

ARIZONA.

EDITORS PRESS:—THE RURAL is exceedingly welcome always, as I am able to see how things are going all the time in California, where I am wishing to return. There are some fine farms along the San Pedro and Gila rivers. Fruit trees grow wonderfully, but late frosts often hurt the fruit. The surest industry seems to be cattle. Water not being diffused over the country makes extensive ranges wherever there is water. Grass grows everywhere, and people are losing millions by not having cattle to pasture it off and put water in the midst of it. There are places here where wells might be sunk and water raised in the midst of the finest grass, where cattle would always be obliged to come back for water, thus never wandering to other folds. At the present time only springs and streams are occupied. As I travel over the country I see glorious opportunities for men of some means to take places where a few years would give great returns. The trouble is, it is too much of a hermit life for most people. Still, nice homes might be made, where the climate is delightful and as healthy as anywhere on earth, all through this part of Arizona. —H. H. MESSENGER, Dudleyville, Pinal Co.

NEVADA.

THE MEAT SUPPLY.—Eureka Sentinel: The beef boom which began in San Francisco and the East some time ago continues, and some apprehension is felt that the drain of cattle from this State, which has been quite extensive during the year, will affect the local markets. The San Francisco papers state that within the past week choice cuts have retailed from 20 to 25 cents per pound, which heretofore were wont to pass out of the butchers' hands at 15 to 20 cents. In an interview with local butchers during the week we have ascertained that there is no immediate cause for beef-eaters to be alarmed. They do not deny that the prices will advance, but say this has always been the case during the winter months, commencing generally with January. Much depends on the severity of the weather and the condition of the ranges. The price for beef on foot is now about six cents. In a short time it is expected to advance from 10 to 11 cents. So far our local butchers have experienced no difficulty in buying all the cattle they want for use at current rates. Sheep are plentiful, and the price of mutton will probably remain stationary. Our leading butchers believe the present boom is caused more by a corner in beef than in a diminution of the supply. The large shippers are said to control the market, and they have created the erroneous impression that cattle are becoming scarce. It is asserted that the shipment of beef will soon be confined to a few combinations on this coast. Large companies, it is stated, are forming to operate for complete control of the certain sections. One Eureka is said to have joined a party of San Franciscans to organize a cattle range in the northern part of California, to take in the entire surrounding region, and for this purpose has put \$60,000 in the pool. This we learn from pretty good authority. When the meat interests, therefore, become so thoroughly concentrated, it is quite easy to bring about a boom. Nothing but an extreme surplus can break the price.

A CARSON VALLEY RANCH.—Carson Index: Senator Fred. Dangberg's ranch in Carson valley, 16 miles south of Carson, is the largest in Douglas county. There is in one body of his land 1,400 acres, and he has this year harvested 500 tons of grain. Mr. Dangberg has cut at least 1,000 tons of hay this year. A new granary is being rapidly pushed toward completion, and when finished he will have ample storage capacity for 1,000 tons of grain. He employs from 30 to 40 men. We yesterday saw 12 men at one time shingling on one side of the new granary. Across his ranch for a mile to a mile and a half each run the east and west forks of Carson river. In the use of this stream he has the most extensive and complete system of irrigation that we have seen. It includes a great many miles of ditches, and a reservoir of 80 acres in extent. Most of his land has been cleared and reclaimed from willows and sage-brush. Other portions that at first would seem worthless alkali desert, by flooding when the river is muddy, has received a deposit of sediment that has made it suitable for cultivation. For the first month in spring it takes the entire attention of 11 men to irri-

gate the land, and for 12 months thereafter, or during the summer, six men are employed in that work. Mr. Dangberg, as our readers are aware, has just been elected a State Senator from Douglas county by a handsome majority.

News in Brief.

DE LESSEPS announces that the creation of an inland sea in Africa will be prosecuted by private enterprise.

THE Old South Church of Boston has called Rev. George A. Gordon, of Greenwich, Conn., at a salary of \$8,000 and the parsonage.

THE United States ship *Alaska* is being fitted for a voyage to the Hawaiian Islands to participate in the coronation of King Kalakaua.

IN the Maine ship-building districts during the year there were launched a total tonnage of 62,567, and there is now on the stocks a tonnage of 23,016.

A NEW ORLEANS drummer was detained three days in New Laredo, on the Rio Grande, getting a sample trunk passed through the routine of the Mexican Custom House.

THERE is a great stir among the German press in consequence of the arrest at Vienna of the Berlin journalists who fled to Austria to avoid the fulfillment of sentences to eight months' imprisonment for libeling Bismarck.

THE Cheyennes are peaceably organizing to protect themselves from the impositions of large cattle raisers. The Indians propose taxation pro rata among the herders, which it is thought will be a protection to the lesser cattle dealers.

THE new plans for the Channel tunnel have been issued, and are said to meet with the approval of the military critics. They bring the entrance and approach to the tunnel three miles inland, within the range of the defenses of the Dover garrison.

A TELEGRAM from Troutenan, Bohemia, states that 50 spiritualists residing there have been summoned before a magistrate. The local press urges the Minister of the Interior to institute an inquiry on the subject of spiritualism, owing to the number of cases of mental derangement arising from its practices.

A COMMITTEE at Paris for the promotion of a treaty of commerce between France and the United States have decided to make presentations to the French Government next week, urging it to carefully watch the interests of French commerce during the discussions in Washington on the tariff question.

A LARGELY attended meeting was held in London Sunday night for the purpose of organizing a fund to relieve the distress in Ireland. Many telegrams and letters from clergymen, describing the outlook as a gloomy and appalling one, and stating that the people were on the verge of famine, were read.

THE Department estimates for the Appropriation bills in course of preparation by the House of Representatives are in amount as follows: For pensions, \$101,575,000; fortifications, \$1,000,000; navy, \$23,481,078; legislative, executive and judicial expenses, \$21,840,170; sundry civil expenditures, \$34,181,376; District of Columbia, \$775,149.

HUMBOLDT county and the section surrounding is undergoing a boom, as prospective railroads promise to give the world's market for its great timber resources. The cedar and redwood of that section are in demand in the East and in Europe, and there is a market all over the world for the pine, and the supply of oak bark for tanning is inadequate to the demand in San Francisco alone.

WAKELEE'S SQUIRREL POISON.—Wakelee's Squirrel Poison is one of the oldest preparations for ridding the land of this expensive vermin. Wakelee was killing squirrels by the thousands before any of the more recent poisons were thought of. This being so, and it still being in the market as a standard preparation, is proof that it has deadly qualities in effective form or it would long since have dropped out of sight. The fact of the matter is that Wakelee's Exterminator is in the market on its merits and will stay in until the last squirrel or gopher is "fired out."

THE IMMIGRATION ASSOCIATION.—A meeting of the Board of Directors of the Immigration Association of California was held on Friday, December 22d, at No. 10 California street. The following officers were elected for the ensuing year: President, Arthur E. Briggs; Vice-President, William L. Merry; Treasurer, Wm. Steinhardt; Secretary and Land Officer, C. H. Street (the two offices being consolidated on the score of economy); Assistant Secretary, Paul Acker; Assistant Land Officer, J. R. Honn. The Executive Committee in office during the past year was re-elected, viz: James P. Kelly, T. L. Baker, William Blanding, J. V. Webster and A. R. Briggs. Colonel Preston, the former Secretary, will make his annual report at the next monthly meeting of the Association. The President and Secretary were instructed to explain personally to subscribers the reasons for carrying on the Association under its present plan of working, and to request a continuance of subscriptions. The Directors tendered a vote of thanks to Colonel Preston for his services as Secretary during the past year. The Board then adjourned.

AN effective medicine for kidney diseases, low fevers and nervous prostration, and well worthy of a trial, is Brown's Iron Bitters.

New State Officers and Legislature.

The following is a list of the State officers elect, with postoffice addresses of same:

Governor—George Stoneman, San Gabriel, Los Angeles county.
Lieutenant-Governor—John Daggett, Oakland—formerly Klamath Mills, Siskiyou county.
Secretary of State—T. L. Thompson, Santa Rosa, Sonoma county.
Controller—J. P. Dunn, San Francisco.
Treasurer—W. A. January, San Jose.
Attorney-General—E. C. Marshall, San Francisco.
Surveyor-General—W. I. Willey, San Diego.
Superintendent of Public Instruction—W. T. Welcker, San Francisco.
Clerk of Supreme Court—J. W. McCarthy, Modesto, Stanislaus county.
Railroad Commissioners—G. J. Carpenter, Placerville, El Dorado county; W. P. Humphries, San Francisco; W. W. Foote, Oakland.
Board of Equalization—Charles Gildea, San Francisco; L. C. Morehouse, San Leandro, Alameda county; C. S. Wilcox, Yuba City, Sutter county; John Markley, Salinas.
Congressmen—Charles A. Sumner, San Francisco; J. R. Glascock, Oakland; W. S. Rosecrans, San Francisco; James H. Budd, Stockton; Barclay Henley, Santa Rosa, Sonoma county; P. B. Tully, Gilroy, Santa Clara county.

Senate.

First District—San Diego and San Bernardino, John Wolfskill, D., Bernardo, San Diego county.
Second District—Los Angeles, R. F. Del Valle, D., Los Angeles.
Third District—Ventura, Santa Barbara and San Luis Obispo, George Steele, R., San Luis Obispo.
Fourth District—Fresno, Tulare, Kern, Mono and Inyo, Patrick Reddy, D., Bodie.
Fifth District—Mariposa, Merced and Stanislaus, J. D. Spencer, D., Modesto.
Sixth District—Monterey, San Benito and Santa Cruz, Benjamin Knight, D., Santa Cruz.
Seventh District—Santa Clara, C. H. Maddox, D., San Jose; B. D. Murphy, D., San Jose.
Eighth District—San Francisco and San Mateo, Jeremiah Lynch, D., San Francisco.
Ninth District—San Francisco, T. McCarthy, D.; John Harrigan, D.
Tenth District—San Francisco, David McClure, R.; George H. Perry, R.
Eleventh District—San Francisco, Edward Keating, D.; T. R. Nelson, D.
Twelfth District—San Francisco, J. T. Dougherty, D.; Martin Kelly, D.
Thirteenth District—San Francisco, J. F. Sullivan, D.; W. Cronan, D.
Fourteenth District—Alameda, Henry Vrooman, R., Oakland; George E. Whitney, R., Oakland.
Fifteenth District—Contra Costa and Marin, W. B. English, D., Concord, Contra Costa county.
Sixteenth District—San Joaquin and Amador, B. F. Langford (joint), D., Acampo; F. T. Baldwin, D., Stockton.
Seventeenth District—Calaveras and Tuolumne, C. D. Reynolds, D., Milton, Calaveras county.
Eighteenth District—Sacramento, Joseph Routier, R., Routier's P. O.; Frederick Cox, D., Sacramento.
Nineteenth District—Solano and Yolo, J. M. Dudley, R., Dixon; K. E. Kelley (joint), D., Fairfield.
Twentieth District—Napa, Lake and Sonoma, Dennis Spencer, D., Napa.
Twenty-first District—Sonoma, George A. Johnson, D., Santa Rosa.
Twenty-second District—Placer, J. A. Filcher, D., Auburn.
Twenty-third District—El Dorado and Alpine, Thomas Fraser, R., Placerville.
Twenty-fourth District—Nevada and Sierra, C. W. Cross, D., Nevada City; H. W. Wallis (joint), R., Forest City, Sierra county.
Twenty-fifth District—Yuba and Sutter, A. L. Chandler, R., Nicolaus.
Twenty-sixth District—Butte, Plumas and Lassen, W. W. Kellogg, D., Quincy, Plumas county.
Twenty-seventh District—Mendocino, Humboldt and Del Norte, P. H. Ryan, D., Eureka.
Twenty-eighth District—Siskiyou, Modoc, Trinity and Shasta, Clay W. Taylor, D., Shasta.
Twenty-ninth District—Colusa and Tehama, J. F. Foster, D., Red Bluff.

Assembly.

Alameda—L. H. Cary, R., Oakland; W. B. Clement, R., Alameda; R. L. H. Brown, R., Haywards.
Amador—A. Caminetti, D., Jackson; Robert Stewart, D., Volcano.
Butte—L. C. Granger, D., Oroville; T. R. Fleming, D., Gridley.
Contra Costa—G. W. T. Carter, R., Byron.
Calaveras—A. R. Wheat, D., Valley Springs.
Colusa and Tehama—Reuben Clark, D., Williams, Colusa county.
Del Norte—W. A. Hamilton, D.
El Dorado—C. F. Irwin, D., Placerville.
El Dorado and Alpine—Thomas B. Rowland, D., Rowland's, Lake Tahoe.
Fresno—W. D. Grady, D.
Humboldt—I. H. G. Weaver, R., Eureka.
Inyo and Mono—J. M. Keller, R., Lone Pine, Inyo county.
Los Angeles—A. B. Moffitt, D., San Fernando; H. W. Head, D., Garden Grove.
Lake—H. J. Crumpton, D.
Mariposa and Merced—W. L. Smith, D., Mariposa.
Marin—S. C. Bowers, D., San Rafael.
Mendocino—Archibald Yell, D.
Monterey—Thomas F. Faw, D., Chualar, Monterey county.
Napa—F. E. Johnston, D.
Nevada—J. L. Lewison, R., Truckee; A. Walrath, R., Nevada City; J. O. Sweetland, D., Sweetland.
Placer—P. McHale, D., Michigan Bluff.
Plumas and Lassen—Calvin McClaskey, D., Susanville.
San Francisco—Ninth District—E. Gausrail, D.; W. J. Simon, D.; Thomas F. Barry, D.; James Callaghan, D. Tenth District—Charles A. Muddock, R.; J. H. Culver, R.; B. F. McKinley, R.; A. G. Booth, R. Eleventh District—Peter Wheelan, D.; Thomas Healy, D.; Bernard Rawley, D.; Sydney Hall, D. Twelfth District—T. H. McDonald,

D.; M. R. Levenson, D.; James J. Flynn, D.; P. Plover, D. Thirteenth District—Charles A. Hughes, D.; D. H. Bibb, D.; Thomas H. Murphy, D.; E. J. O'Connor, D.
Sacramento—H. M. Larue, D., Sacramento; F. D. Ryan, R., Sacramento; Gillis Doty, D., Elk Grove.
San Diego—Edwin Parker, D., San Diego.
San Bernardino—Trueman Reeves, R.
San Luis Obispo—S. H. Hollister, R.
Santa Barbara and Ventura—C. A. Storke, D., Santa Barbara.
Santa Clara—A. B. Hunter, D., Santa Clara; J. H. M. Townsend, D., San Jose; Adam Rhie, D., Gilroy.
Santa Cruz—Lucien Heath, R., Santa Cruz.
San Benito—J. H. Mathews, D.
San Joaquin—S. L. Terry, D., Stockton; C. S. Stephens, D., Stockton; J. W. Kerrick, D., Colledgeville.
San Mateo—J. V. Coleman, D., Menlo Park.
Sierra—M. Farley, D., Downieville.
Siskiyou and Modoc—Peter Peterson, D.
Stanislaus—E. B. Beard, D.
Solano—Joel A. Harvey, R., Fairfield; D. G. Barnes, R., Vallejo.
Sonoma—John T. Campbell, D., Santa Rosa; S. M. Martin, D., Petaluma; John Field, D., Cloverdale.
Sutter—S. R. Fortna, D., Yuba City.
Trinity and Shasta—M. Briceland, D.
Tulare and Kern—W. L. Morton, D., Grangeville, Tulare county.
Tuolumne—F. D. Nicol, D., Sonoma.
Yolo—D. N. Hershey, D., Black's Station.
Yuba—W. M. Cutter, D., Marysville; N. Coombs, D.

Recapitulation.

Senate—Democrats, 30; Republicans, 10; Democratic majority, 20. Assembly—Democrats, 62; Republicans, 18; Democratic majority, 44.

PATENTS AND INVENTIONS.

List of U. S. Patents for Pacific Coast Inventors.

From the official list of U. S. Patents in DEWEY & Co.'s SCIENTIFIC PRESS PATENT AGENCY, 252, Market St., S. F.

FOR WEEK ENDING DECEMBER 12, 1882.

268,860.—CHIMNEY—J. Brown, S. F.
268,870.—COMBINED FRAME AND PLAUQUE—Amos Currier, S. F.
268,903.—WING GATE FOR FLUSHING SEWERS—Samuel Johnson, S. F.
268,916.—RAILWAY SIGNAL—G. Macquart, Red Bluff, Cal.
268,931.—JUMPING ROPE—Fred. K. Pohley, S. F.
269,124.—AUTOMATIC TELEGRAPH SIGNAL BOX—Paul Seiler, S. F.
268,950.—FRUIT PICKER—L. Simkins, Marshfield, Or.
268,953.—GIRTH—Alonso W. Smith, Cana, Cal.
268,960.—CIGAR PERFORATOR—John Talbot, Sacramento, Cal.
268,963.—SPEEDING DEVICE FOR STAMP MILLS—Wm. E. Upton, S. F.
268,977.—DRYING MACHINE—H. B. Angell, S. F.
268,928.—RAIL COUPLING AND BED PLATE—John Ney, Sheridan, Cal.
268,899.—EVENER HINGE FOR HARNESS—Wm. A. Howard, Dixon, Cal.
269,092.—ELECTRIC LOCOMOTIVE—E. J. Molera, S. F.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co. in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast Inventors transacted with perfect security and in the shortest possible time.

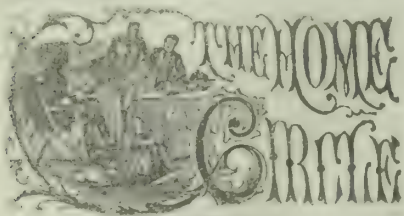
Notices of Recent Patents.

Among the patents recently obtained through DEWEY & Co.'s SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of special mention:

CHIMNEY.—Jeremiah Brown, S. F., Cal. No. 268,860. Dated Dec. 12, 1882. This invention relates to certain improvements in the construction of chimneys, and is especially applicable to double or sectional chimneys. The inventor constructs a double chimney having the inner smoke flue composed of sections with joint bands surrounding said sections and having curved elastic stays connected with them and pressing against the interior of the outer section. This inventor has taken out numerous patents for chimneys, and has made a specialty of their construction. The condensation of the warm air and gases within the chimney flue causes a deposit of moisture within, and this causes the soot to stick and clog and fill up the flue. Mr. Brown prevents this by coating the interior of the flue or chimney with black lead or a mixture thereof, which presents a smooth surface to which the carbon will not adhere, and this keeps the chimney always clear and in good order.

CIGAR PERFORATOR.—John Talbot, Sacramento, Cal. No. 268,960. Dated Dec. 12, 1882. This is a device for perforating the tips of cigars, so as to provide a draft through the cigar without cutting off the end, and it consists of a pair of semi-conical jaws hinged together, so that they may be opened and closed by handles or otherwise. Within these jaws are a series of projecting pins, which, when the end of the cigar is inserted and the jaws closed, will perforate the cigar tip transversely.

JUMPING ROPE.—Frederick Pohley, San Francisco, Cal. No. 268,931. Dated Dec. 12, 1882. This invention relates to a novel attachment for skipping ropes, and it consists of handles or attachments having bells or chimes fixed to them, and surrounded by a perforated protecting case, so that when used the bells may ring or give a musical sound to keep time to the movements in skipping.



New Year's Eve.

How shall we speed the Old Year out,
And greet the New Year, coming in?
With wassail, dance and noisy rout—
With singing, games, and banquet din.
Shall wassail cups weave her spells,
And ply at will her wizard wand?
Shall Bacchus bring his satyr band?
And folly ring his foolscap bells?

Back, Circe! with thy viper wand:
Bacchus, begone! Thy brutish band
With riot shall not curse the land;
Go, Folly! change thy court-fool dress
For garb of sense and soberness;
On one day of the year, at least,
Herd not with demon and with beast;
Approach not with thy Bacchant rout
Thy motley retinue of sin.
When we would speed the Old Year out,
And greet the New Year, coming in;
Far otherwise, Old Year! shall be
The parting we would have with thee,
Gray pilgrim to eternity.

Turn we the pages of the past,
And read in silence, first to last,
The records which the passing year
Hath writ imperishably there;
How many a page is blurred with tears,
And interlined with doubts and fears!
How many a worthless blank appears,
Mementoes of wasted hours,
Neglected duties, wasted powers!
How frequently between the lines,
We meet with fearful Folly's signs!
When recklessly we crushed the flowers
That bloomed to bless us and to cheer
Along the pathway of the year.

We mind not now the tears, the pain,
The summer's showers, the winter's rain,
For but for these much golden grain
Would dormant in our hearts have lain,
Which now the reaper's scythe shall know
They made the roots of purpose grow
Firm 'round the rock-fast soul below,
And many a fragrant flower arose
From out the ashes of our woes;
And as for fear, and shame, and doubt,
That blot the pages roundabout,
Time's hand will surely wipe them out!
But, oh! these dreadful blanks that stand
Accusing ghosts in memory's land,
Pointing to wrecks that strew the strand,
These will not at our bidding go,
Nor vanish with the winter's snow.

Gray pilgrim to Eternity!
Shall we in vain appeal to thee
To hide these specters from our eyes,
And leave to us thy lessons wise?
Ah! heed our penitential sighs
Before thy brief existence ends,
Our future yet shall make amends—
Come, come, Old Year, let's part as friends:
For lo! upon the threshold stand
Faith, Hope and Love, linked hand to hand,
Bright heralds from the heavenly land!
And I must haste to let them in,
Already their sweet songs begin:

A tender, solemn song, to suit the sadness
That doth beset the parting hour of friends—
A blitheome song of triumph and of gladness,
To greet the New Year when the Old Year ends
—C. W. Hubner.

A Long Parting.

"How handsome he is," thinks Daisy, as she leans over the rustic fence watching the mower as with long sweeps of his scythe he cuts down the swaths of grass. "I really believe that a man looks better in the roughest of clothes than in those stiff immaculate garments they call 'dress suits'—that is, if he is good looking at all."

It is only this morning that Daisy has come to the country to revel in its bracing air for the first time in her young life.

"Where are your roses, pet?" her father had asked her one day, a few weeks before, waking from his business plans to notice the pale, listless look of his child.

"I think I want quiet, papa. I am tired of dressing, calling and parties. Papa, may I not go to the country—to my old nurse's—instead of the Branch this summer?"

And Mr. Nelson had answered yes.

"I would like to come with you, but business will not allow it. So enjoy yourself all you can, my pet, and write me very often."

And with these words, kissing her affectionately, he had left her in Farmer Shear's care, who was waiting her arrival at the small station. Farmer Shear's wife had been Daisy's foster-mother, caring for her ever since her mother on her death-bed, calling her weeping housekeeper to her, and laying her child in her arms, had said:

"You have served me faithfully, Susan, and I know you will be kind to my baby."

And well that trust had been fulfilled. The first great grief Daisy had ever experienced had come to her when, two years before, her story opens, her kind nurse had left her for a home of her own, offered her by a worthy farmer, who recognized in her just the sensible qualities his farm needed in a mistress.

It is 2 o'clock; dinner has been over a couple of hours, and since then Daisy has been luxuriating in the wild flowers and thousand and one delights new to her city-bred eyes. For the past 10 minutes she has been watching the mower at his work. She knows that he is Farmer Shear's nephew, for she met him at dinner; but she only gave him the most casual

observation then, and now she notices, for the first time, how more than averagely fine looking he is.

She thinks herself unseen; but she is not, for a pair of amused dark eyes are watching her furtively as she peeps through the only partially concealing screen of wild rose vines that trail about her feet and, clambering upward, fling their scented arms high over head, making a charming frame for a charming picture. A great red lily lifts its tinted chalice in the center of the meadow; the sunlight touches it and makes it such a thing of beauty that Daisy longs to possess it. But the scythe with its measured strokes is nearing its slender stem.

"Oh don't."

The exclamation is involuntary, and Daisy flushes crimson as the mower glances up at just conscious of her presence.

"The lily," she says, in answer to his questioning look. "I thought you were going to cut it down, and it is so pretty."

"Permit me."

It is the action of a moment to pluck it and present it to her, and as he does so Daisy wonders as much at the young man's easy, unembarrassed manner and refined tones as she did at the comeliness and grace of his appearance.

That was how it began—the summer idyl that was destined to have such an abrupt ending. Both young, both impulsive, what wonder that the more these two saw of each other the stronger grew the charm that drew them together.

Mrs. Shear looked on unsuspiciously; it pleased her genial heart to see "the children," as she called them, enjoying themselves; and so the summer hours flew all too swiftly by. At length came a day when, all through an accident in which, by the falling of a tree, Steven Haughton nearly lost his life, the thin veil which the saucy boy god had been rearing, called friendship, fell aside, and his true face became disclosed, and with a sense almost of fear, Daisy awoke, as from a dream, to see whither she had been drifting.

"Can it really be that I care for him—this young farmer who a few months ago I did not know?"

Then she questioned her heart, and its answer came quickly:

"Ah yes, I do! I do!"

And Stephen, lying in his room with his broken arm in a sling, felt happier than a king. Never, to his dying day, would he forget the look of anguish that he had read in the lovely face his eyes had rested upon when they had opened from the unconsciousness that the dreadful stunning had brought.

"She loves me!" he thought triumphantly, "and before long, please God, I shall hear her sweet lips say so."

But it was not to be, for it so happened that the young man had just arisen from his bed of pain and resumed the role of a convalescent, when Mr. Nelson came to spend a few days with his daughter. It was but a short time before, with a keenness of vision for which he congratulated himself, he saw how matters were. He noticed how the blood rushed to the young man's pale cheeks whenever Daisy addressed him, and how an answering lightsprung into the maiden's blue eyes.

"This will never do," he thought to himself, in positive alarm. "My Daisy a farmer's wife—or rather drudge? The idea is preposterous! How foolish I was ever to allow the child away from me. But after all it is not beyond remedy. He has not spoken to her, I know, for she would have told me. I will take her home at once. Once away from his society the danger will be over."

Poor little Daisy! She acquiesces unquestioningly to her father's sudden mandate of departure, as what else can she do? She well knows what the feeling is that throbs with her every pulse for Steven, but, though his admiration has been plainly evidenced, no words of love have been spoken, and when she sees how quietly, almost coldly, he answers her farewell, her warm young heart chills. And the years pass, and yet it does not awake from that chill.

In vain does her anxious father, inwardly remorseful for what he recognizes as his own doing, gratify, before it is spoken, every desire; nothing brings back the old, happy girlish animation.

At length they go away, Mr. Nelson fondly hoping great results from the change of scene and surroundings.

They are in London, when one evening Mr. Nelson urges his daughter to accompany him to hear a noted lecturer.

"I do not care much to go, papa, but to please you I will," Daisy answers.

And before long, leaning upon her father's arm, she enters the thronged hall.

Their tickets entitled them to seats in one of the foremost rows, and thither the usher takes them.

The lecture begins even as they enter.

What is it that causes Daisy to start and tremble? As the deep rich tones of the orator fall upon her ears they bring with vivid force that summer of five years ago, when all unmasked and unsought her girlish heart went out of keeping forever. With an effort she controls herself and raises her eyes to the platform. Her ears have not deceived her. She sees a tall manly figure whose handsome features, eloquent with power and talent, are those of the never-forgotten hero of her fancy.

At the same moment, looking down, his gaze meets full her own.

Never before did the great question upon which he is treating get as ably handled.

"Our favorite orator surpassed himself," so says the voice of the press the following day.

It does not tell, for it does not know, what it was that lent such more than usual fire and vigor to the speaker's utterances; but we who are behind the scenes can say that it was the radiant expression of surprised gladness that looked out of Daisy's blue orbs.

As Mr. Nelson and his daughter issue from the hall, some one comes toward Daisy with outstretched hand, and the exclamation:

"How glad I am to see you, Miss Nelson! It is an unexpected and therefore all the more welcome surprise. I read your familiar name amongst the list of arrivals published in the paper, but I did not know whether it were really my old friend or not."

The bright color bathes Daisy's face at the unaffected pleasure in his tones, and she answers frankly and simply, as she places her small gloved hand in his:

"I, too, am very glad to meet you." Then, turning to her father, who by this time has recognized to his infinite wonderment in the celebrated orator the young man he met five years ago in the country, she says: "Papa, this is Mr. Haughton—you surely remember him."

After that every evening that Mr. Haughton's engagements allow him to call his own finds him at Daisy's side, and after a little everything is explained, and she learns how it was that he had allowed her, though loving her passionately, to go out of his life without a word or question, and how he, whom her father had looked upon as a detrimental, was in reality heir to a large fortune, and even then engaged in the scientific pursuits which afterward made his name noted. His health for the time having suffered from over application to study, he had come to his uncle's, his mother's brother's, to recruit, knowing the benefit fresh air and outdoor exercise does both to the brain and body.

A month goes by, and one afternoon Mr. Nelson concludes an all-important conversation by saying:

"I hope, Mr. Haughton, that now you are to be my son-in-law, you will let bygones be bygones, and bear me no malice for the past. I thought I was acting for the best. My daughter was my all, and I considered you not a desirable match for her. I trust you will pardon me for my frankness when I assure you how proudly and gladly I now resign her to you. When I intimated to you that there was another suitor in the case I did deceive you in the word—only in the letter—for there was one rich, and with fine prospects, who for some time had looked upon Daisy with the same feelings as yourself, though the truth was, and I knew it, she regarded him with utter indifference."

Stephen took the old gentleman's proffered hand.

"I can certainly condone the past," he answered, "in view of the joyous future which you have opened before me in giving me the right to woo for my own dear daughter."

And so, not long after, the merry bells ring out, and the sun, streaming through the stained glass church windows, falls like a radiant benediction upon the bowed heads of Steven Haughton and his newly-made bride.

And their prospect is of the happiest; for the love that could keep true, "though lost to sight," for five long years, will surely never falter through the varied experience of the wedded existence whose fairy portals they are so hopelessly and trustingly entering.—Rocky Mountain Husbandman.

Mosquito Breeding Cellars.

EDITORS PRESS:—I write you an experience I have had with that bloodiest of bloodthirsty villains, the mosquito. The dwelling is situated in a nice, healthful neighborhood, no stagnant water or heavily irrigated land near, yet toward evening a huge swarm of hungry wretches would suddenly appear, and only retire from sight, hearing, feeling, when the shades and chills of night were too much for them.

The house is one story, and covers quite an area of ground, standing on posts about three feet long. Having occasion to go under the building, I found it alive with the wretches, and soon concluded how it was they contrive to be present the year round. The space below the floor is boarded round rather loosely, giving enough light and air and yet keeping a sufficiently even temperature for breeding mosquitoes, and no strong drafts of wind to scatter them. A bath room and porch with loose floor doubtless helps them to moisture. I have treated them to several vapor baths from a pan of live coals sprinkled with black pepper. This has thinned them out a good deal, and I think removing a few side boards on cold windy days will let a breeze through their quarters that will astonish and clear them out. I write you this as I know of several parties troubled in the same manner who cannot conceive where their tormentors come from and go to, and should it help any to more comfort or less bites, I shall rejoice with them.—O. S.

[People who find enough stagnant water or moisture under their houses to allow mosquitoes to breed, had better look out, or fevers will carry them beyond the reach of the insects.—EDS. PRESS.]

Home Talks.

[Written for the RURAL PRESS by JANE PONDROUB.]

I happened in to see Mrs. Delester one day when she was ripping up some old dresses and wrappers.

"Don't leave your work, but let me come right in there," I said, as she nodded to me from her little sewing-room window. So I presently found her with a big work basket on each side of her and a lap full of pieces.

"These dresses can't be worn about the house any longer," she said, as her scissors flashed along the seams; "they've had new sleeves and been mended till I really must give them up; but still the back breadths will make good quilts, and that is what I am about to do with them."

"A very good idea," says I, feeling in my pocket for my thimble. I always take my thimble when I go to see Mrs. Delester; for she has four children, and I have none.

"Is this the way you want them put together?" I asked, taking from the right hand basket pieces cut ready for sewing.

"Yes, that is right, Auntie; you see, I make the pieces just as large as I can and have any uniformity to them. Here is one quilt cover I have finished; it is quite gay with strips of the children's old scarlet merinos and my green and brown plaid."

"Just pretty and warm looking," says I; "and now when you get them ready to quilt, hang out the stars and stripes, and I'll come over and help you all day." Our houses are near enough together, so that we can make out to see a flag on the back gate post; it means, "Come and spend the day." If it is on the right side of the gate, it means, "Come to-morrow;" if on the left, "Come to-day." We invented this before the telephone, but never got out a patent.

"I'd like you to come, though I am so much in debt to you and your thimble; so I'll hoist the flag," said she, laughingly. "But don't expect to do any old fashioned quilting; I shall just tie them with red or blue yarn."

"What, make comforts of them all?"

"Oh, we can call them what we like, comforts or quilts, but I have noticed that knotted ones wash and wear about as well as the quilted, and do not take a quarter of the time to make them. These will last until my girls are large enough to make more. To be sure the midgets help me some now so as to learn to sew. I give them all the new pieces, as that makes it more fascinating. Even Curtis asked for a needle when he saw his sisters so proud of this work, and he can sew faster and better than May, as she is younger than he, you remember."

"Can I see their work?" I asked, eagerly.

"Certainly, there are their three boxes on that shelf. You see they have written their names on the end of each so that no mistake can be made."

"Well, well, if this don't beat all!" says I, wiping my glasses and taking a good look at the neat stitches. "And Curtis can do every bit as well as either of 'em, according to my judgment."

"They like to work and play together. I have been teaching Grace to make a rice pudding after a recipe I read in the *Household*, and Curtis has made her promise to let him make the next one."

"Oh, let him make it the day I come to quilting!"

"All right, I will."

Just then we saw Mrs. Clinn coming through the gate, so we put down our work and went into the sitting-room. We sat talking awhile, and then I asked Mrs. Delester if I might show Mrs. Clinn the children's patchwork. She was willing, so I got the boxes and she brought out her scarlet striped quilt.

"Dear me!" exclaimed Mrs. Clinn, "what handsome colors you had. Why didn't you piece it some nice way? 'Wild-Goose Chase' or 'Log Cabin,' now, would have been something worth while."

"I really like plain stripes best," said Mrs. Delester, smiling. "And then I could sew them together on my machine in an hour or two, while it would take me months to piece them the other way. I should feel as though I had wasted my time and health too. Then what is the use of cutting cloth into little bits just to sew them together again?"

"Oh, to look pretty, of course," and Mrs. Clinn laughed a little uneasily, but finally continued with more animation, "You ought to have seen my 'Rising Sun' bed-quilt, I reckon you'd think that looked better'n a straight piece o' cloth; everybody says it's splendid. I took a mighty sight of trouble to get the right shades. I sent to Stockton for some I couldn't get here. And I'm right sure I could take the premium away from you if we should both take our quilts to the Fair."

"I don't doubt it," laughed Mrs. Delester. "I should have to give them a lecture on saving time and labor before they would appreciate mine."

"Now see the children's sewing," said I. "Here is what Curtis has done, and these are the two girls'."

"Why, patience me alive! I should no more think of getting my boys to sew than two wild-cats; and as for Katy, I never thought of teaching her yet; I reckon I couldn't keep her at it five minutes if I should try."

"Let her bring her patchwork over here and

sew with my girls some Saturday afternoon; a doll's bed-quilt would be a good thing to begin on."

"She'll be mighty proud to come, and I'll be glad to have you; your children are so quiet like. I don't know how you manage no more'n I know what makes your parlor look so much better'n mine. My furniture is just as good as anybody's for all't I know, but some way the room don't hit your heart like this does. Now, do you two just come home with me and tell me what's wrong."

As she would take no denial, we were soon in her little parlor. Yes, the things were good enough for any village house. There were several large pictures, a good-sized mirror and walnut furniture; a Brussels carpet, too.

"Now, sit down here and tell what you'd do if 'twas your'n. No, you needn't be afraid of hurting my feelings, that's what I want you to do."

"Well, I hope we may not hurt you if you are so eager for it, but if the room was mine I would lower the pictures till the bottom of the frames were as low as my chin, and I could look at the picture as easily as I could look at the landscape from the window, and I would have them hang nearly straight or flat against the wall instead of tipping forward at such an unnatural angle. That is a fine large mirror, but it is also too high and tipped so as to reflect the room and yourself in an unnatural manner. If you want to see your dress you have to stand in the middle of the room to do it. If I should want to go up close to it to see how to tie my bonnet strings I am so short I could only see my face and not my bonnet strings at all. Let the bottom of it down below your waist, hang it nearly perpendicular, and it would suit you better, I think. Then perhaps you would like a few books on your what-not and some of the last magazines on your table. A bouquet in the center would be pretty."

"Katy could make some silver cardboard ornaments like Grace Delester's; they are quite an addition to a room," said I. "And now I have thought of a good plan: Send her over to my house, and I'll put her up to making Christmas presents; it pleases children so much to do that. So if she asks you for a little money, you'll know what it is for."

"I reckon she'd be right proud to make something for her pa; and I'm much obliged to you both. And now if you could stop till I get the hammer and put the looking glass and one picture right, I could do the rest afterwards."

With some little trouble this was accomplished to Mrs. Clinn's satisfaction, for she could use the hammer as well as a good many California women can; then Mrs. Delester said:

"Now I think you would like a walnut shelf supported by brackets underneath your mirror—have it long enough so that there would be room on each side for a vase in which you could put ivy to train up around the glass. You could add flowers if you wished at any time, or slip a saucer under each vase and fill them with flowers."

"Oh, yee, I reckon that would look real pretty. I s'pose you wouldn't believe it like, but I can begin to feel the prettiness already."

"I don't doubt it at all," said Mrs. Delester. "And sometime we will come over and see the beautiful reality you will make."

JANE PONDROUS.

AN IRON MAN.—Launceston, Tasmania, can boast of being the first town which has produced an iron man who can walk like his brethren in flesh without the aid of steam. The curious piece of mechanism we refer to is the invention of Mr. Hornburg, a mechanical engineer. The figure, which is dressed as a footman, is 2 feet 10 inches in height, and weighs 160 pounds. Its action arises from the power of a spring concealed in its inside, which enables it to walk with the greatest ease and wheel a man's perambulator before it. With the assistance of an ingenious piece of mechanism, an eccentric motion is obtained, which by the help of levers causes the legs to ascend and descend, similar to the walking movements of a human being. The automaton has been exhibited at the local Mechanics' Institute.—*Cotton, Wool and Iron.*

IMPROVEMENT IN PIANO CONSTRUCTION.—A Munich inventor has brought forward an improvement in the construction of piano-fortes, which, it is claimed, meets the problem of equalizing the strength and fullness of the different octaves. A series of tuning forks are freely suspended over the three highest octaves of the piano, each fork having the exact pitch of the string over which it is suspended. The vibrations of the string are communicated to the fork, which, in return, reacts on the string, and thus a full and sustained tone is secured, in strong contrast to the usual short and dry tones of this instrument.

STRENGTH OF DIFFERENT KINDS OF HEMP.—Careful experiments made at the cordage works of Messrs. Frost, of Shadwell, Eng., and reported in *Iron*, give the following figures as the results of the trial. The experiments were made with fifty yarns of each kind, all spun 25 thread, and with the same machinery. Five tests were made with each kind, and the average breaking weight of each given as follows: Manila, 2,459 lbs.; Italian, 2,212 lbs.; New Zealand, 1,433 lbs.; Sisal, 1,280 lbs.; Russian, 1,228 lbs. It will be observed that the strength of Manila hemp is more than double that of Russian. The experiment is a very interesting and useful one.

Young Folks' Column.

Our Puzzle Box.

Numerical Enigma.

I am composed of ten letters.

My 1, 5, 3, 4 is a desire.

My 2, 3, 4 is a tree.

My 1, 5, 10, 7 is a part of a bird.

My 4, 2, 8 is a covering for the head.

My 6, 9 is a negative.

My whole is the name of an American city.

MELANCTHON.

Decapitations.

1. Decapitate a part of a window and leave a kind of tree.
2. Decapitate gravity and leave a numeral.
3. Decapitate a fancy and leave a personal pronoun.
4. Decapitate to tie and leave a negative.
5. Decapitate a plant and leave to delineate.
6. Decapitate an insect and leave a reptile.
7. Decapitate faculty and leave to perform.
8. Decapitate to stand in suspense and leave a preposition.
9. Decapitate to melt and leave employment.

ALICE SARAH.

Syncopations.

1. Syncopate a covering for the head and leave a vessel for carrying coal, etc.
2. Syncopate nice and leave an exclamation.
3. Syncopate to conceal and leave to hasten.

W. H.

Charade.

You cannot guess my puzzle wrong:
My first doth to a male belong;
Next, here together—one, two, three—
All standing in a line—you see.

Of these two portions I consist,
And in all novels do exist;
To guess my name, I pray persist,
For easy 'tis, I will insist.

Anagrams of Towne.

1. T on gin, Wen.
2. Rove, Dan.
3. Rest hen, Mac.
4. Not run bad.
5. Not let, Ti?

JENNIE.

Answers to Last Puzzles.

CROSS-WORD ENIGMA.—Rocky mountains.
TRANSPPOSITIONS.—1. Rate, tear; 2. Tar, rat; 3. Mar, arm; 4. Dare, read; 5. Meet, team; 6. Apple, pea.
HIDDEN INSTRUMENTS.—1. Drag; 2. Make; 3. Hoe; 4. Fork; 5. Plow.
CHARADE.—Verb-a-tim.
BLANKS.—1. Heir, air, ere; 2. Pair, pear, pare; 3. Been, bin.

Chippy's Book Account.

[Written for the RURAL PRESS by G. W. T. C.]

Looking over some little account books that were lying around on the table a few evenings since, I found one of them to be Chippy's account book. She had a regular account against her mamma and papa, and what do you suppose the charges were? There was quite a variety of them, and when they became too numerous for her little head to keep track of them all, for fear that she would lose some of them, she wrote them in a book. The first charge was

"For not growing for one week, \$.05."

Yes, it was a fact. Her mother had tried every device known under the sun or that mother wit could invent to induce her give the house a rest from her inveterate growl. She was never asked to do anything but what it was, "Why can't Alex do it?" "But it is not his work." "Well, I help him do his work, and he might do mine sometimes, and I think it right mean." "That is your lookout; you need not help him." "Well, Mary might do it; she is doing nothing, and I washed the dishes for her last night when she wanted to get ready for the party. I have to work all the time, and nobody else does nothing." And yet she was the pleasantest little girl that skipped the school grounds; a genuine favorite with all her schoolfellows, and truly the social feature of our family. When she grows to young womanhood she will be a treasure to the household that loves to have young folks around, for she will fetch them.

Her mother and I have often talked over these queer opposites in Chip, and have concluded it is her way of taking a rest, and home is the place for rest. Nature will not admit of her being on her good behavior all the time, so she gives us the benefit of the resting spells. One day, while growing over the table setting, she says to her mother, "I wish I could do something to make some money." Her mother replied rather forcibly: "I will give you five cents a week if you will stop your growling, and give us a smile when we ask you to do anything." "I'll do it," said Chip, who was ever ready for a trade; "I think I can get through a week anyhow." I could find but one charge against her mother on this score, so I conclude that habit, which is second nature, had been too much for her the next week. The second charge was:

"For not asking for tea or coffee for one week, \$.05."

This was a proposition she made to her mother to keep up her income when she found the other five cents a week was lost. Her mother does not believe in children using tea or coffee, and she has a hard time, I tell you, to withstand the assaults three times a day. She declares she will see their noses cheese first before they shall have a drop, and has used up every emphatic term of denial known to the household vocabulary. She took up Chippy's offer so quickly that she expressed a regret at not de-

manding ten cents. I found four charges under this trade. The next was:

"For not saying 'What?' for a week, \$.05."

I found upon inquiry that she had acquired the habit of saying "What?" every time she was spoken to, whether she heard what was said or not. She thought that for five cents a week she could quit it. There was a line drawn across the entry as though to efface it, and the reason was, as Chip said, that she lost it six times the first day and gave it up next came.

"For clearing the table and washing dishes at night for one month, \$.30"

This was the best trade her mother ever made with her, as it put an end to all squabbles as to who should clean off the supper things, and we all marched into the sitting-room after supper in peace.

All these trades have had a softening effect on Chippy's home character. The very fact that all these failings of hers had a money value which she could turn to account when she was hard up for a few nickels, seemed to make them stand out apart from her so she could look at them as she does at her dolly at arms' length, and the more she looked at them the more ashamed she became of them.

The next time I will tell you of her accounts with her papa.

Point of Timber.

GOOD HEALTH.

Digestibility of Breadstuffs.

The digestibility of bread is largely dependent upon its greater or less porosity, as produced by the material used and the treatment in making. The more gluten the bread holds the more porous it becomes, and, as a matter of course, the less it contains the more compact it will be.

The cereal richest in gluten is wheat, rye being considerably inferior in this respect. Among the non-nitrogenous food elements of grain is the starch flour, which, in the process of baking, is transformed, in the crust of the bread, into dextrine and sugar. The outside of the loaf for this reason is much more digestible than the interior. It is quite commonly admitted that an admixture of bran with flour renders the latter much easier of digestion. Those who have given thought to the subject advise a proportion of bran to flour as one to four. The slightest comminution of the grain, as well as the amount of husky portion retained in the well-known graham flour, produces a slight irritation of the digestive organs, which results in separating the peptic from the husk of the grain, and admits of its mixture with the gastric fluids, thus greatly facilitating the process of assimilation. This mechanical irritation, particularly in the cases of the aged and weak, can only be otherwise produced by the use of alcoholic and similar stimulants, the effect of which is only temporary, and, for the most part, injurious.

Bread should not be made without salting, for the reason that the starch of the flour contains a large amount of the salt of potash, which neutralizes much salt in the system. Aside from its porosity, the amount of water contained by bread is an important matter when viewed from a hygienic standpoint. Dry bread which has been baked some little time is most healthful, as the chewing process must of necessity be thorough and the bread consequently fully salivated previous to its entrance into the stomach. Fat is present in moderate quantities in cereal bread; wheat contains 1 1-5, rye 1 3-5, and corn 4 4-5, from which it may be seen that flour made from corn is best adapted for the use of those persons engaged in heavy work. Those, on the contrary, who have little manual exercise are best suited by the wheat flour, in which there is little fat. But since the human system demands a small proportion of digestible fat, the mixture of the dough of bread with milk is urgently recommended as furnishing the needed element in its most digestible form.—*Translated from the Walzen Mueller.*

DOES SMOKING INJURE THE MEMORY?—This question is answered by the *Herald of Health* as follows: Concerning the Abbe Moigno, an aged man, who possessed a remarkable memory, some practical facts and hints as to smoking and study have just been published. Before he ever commenced the use of tobacco he learned 12 foreign languages, and stored in his mind an immense number of historical, geographical and general facts. Whenever he wanted to recall the meaning of a word or the date of an event, he had no difficulty in doing so. As to philology and chronology, he was one of the most extraordinary characters of his time, and Francois Arago used laughingly to threaten to have him burned as a wizard. In course of time Moigno fell into the habit of snuff taking, and after associating with some Bavarian scholars he attained to smoking three or four cigars a day. "One day," says he, "I was painfully surprised to have to recognize that I was constantly obliged to turn to my dictionaries for the meaning of foreign words, which before happened to me seldom, or never, and that the dates of numerous facts which I had made my own had fled from my memory." The sufferer made a resolution that he would give up the use of tobacco, and he said: "It was for me a complete resurrection, not only of the memory, but of the general health and well-being."

DOMESTIC ECONOMY

Orange Marmalade.

EDITORS PRESS:—Last year I called upon a friend who had some flourishing orange trees growing in her garden. The fruit was beautiful to the eye, but she told me it was utterly worthless, being so bitter that no use could be made of it. As I had never gathered oranges from the tree before, I brought a few home with me, when it was suggested that they might be made into marmalade, large quantities of bitter oranges being annually imported into Scotland for that purpose.

I made the experiment, and with such success that the marmalade was pronounced equal to the veritable Scotch marmalade, both in appearance and flavor. As there may be some of the readers of the RURAL PRESS who will be glad to know what to do with their bitter orange, I send the recipe copied from a Scotch cookery book. It may be that some persons will find the bitter flavor too strong for their taste, and will prefer the marmalade made partly of sweet oranges.

Chip Marmalade.

Wipe the oranges with a wet cloth, and grate them all over on a coarse kitchen grater, just enough to allow some of the essential oil to escape. Pour boiling water over them, and allow them to stand till cool. Cut them in two and squeeze out all the juice, carefully removing the seeds.

If the oranges are not very juicy it is well to take out all the pulp and pour water upon it. Allow this to stand till wanted, then strain and add to the juice. Boil the skins in water until sufficiently tender to be pierced by a straw. Scrape off all the thick white part and cut them with a sharp knife into very thin chips. Add the juice and an equal weight of white sugar. Boil altogether until the chips are transparent and the juice thick and rich in appearance. Put into jelly glasses and tie a paper over the top. It will keep for any length of time if properly prepared, and is a very welcome addition on the breakfast table. I. H.

Walnut Creek.

ROAST TURKEY.—The secret in having a good roast turkey is to stuff it palatably, to baste it often and to cook it long enough. A small turkey of seven or eight pounds should be roasted or baked three hours at least. A very large turkey should be cooked an hour longer. After the turkey is dressed season it well, sprinkling pepper and salt on the inside; stuff it and tie it well in shape; either lard the top or lay slices of bacon over it; wet the skin and sprinkle it well with pepper, salt and flour. It is well to allow a turkey to remain sometime stuffed before cooking. Pour a little boiling water into the bottom of the dripping-pan. Just before taking it out of the oven put on more melted butter and sprinkle over more flour; this will make the skin more crisp and brown. While the turkey is cooking boil the giblets well; chop them fine and hash the liver. When the turkey is done put it on a hot platter. Put the baking-pan on the fire, dredge in a little flour, and when cooking, stir in a little boiling water or stock; strain it, skim off every particle of fat and add the giblets; season with salt and pepper.

PUMPKIN PIE.—Take a quart of rich milk, scald it, and when it cools stir in five eggs carefully beaten, two cups of pumpkin steamed or cooked in the old-fashioned way with only water enough to prevent its burning, ginger, mace, cinnamon and nutmeg to the taste, with about a cupful of sugar and a pinch of salt. Beat the whole together thoroughly, and add a cup of cream, and stir it in carefully just before pouring into the baking plates. Line the pie plates with rich paste, fill them to the height of three-quarters of an inch, and bake in a moderately quick oven till firm in the center.

SWEET POTATOES.—Sweet potatoes require more time to cook than common potatoes. To boil—Take large, fine potatoes, wash clean, boil with the skins on in plenty of water, but without salt. They will take at least one hour. Drain off the water and set them for a few minutes in a tin pan before the fire, or in the stove, that they may be well dried. Peel them before sent to the table. To fry—Choose large potatoes, half boil them, and then, having taken off the skins, cut the potatoes in slices and fry in butter or in nice drippings. To bake—Bake as the common potato, except give them a longer time.

CHICKEN PIE.—Cut up the chicken, and if they are old boil them fifteen minutes in a little water, which save to put in the pie; make a paste like common pie crust and put it round your pan or dish; lay in the chicken, dust flour over, and put in butter, pepper and salt; cover them with water, roll out the top crust quite quick and close the pie round the edge; make an opening in the middle with a knife; let it bake rather more than an hour. If you warm a pie over for the next day pour off the gravy and warm it separately, and add it to the pie.



DEWEY & CO., Publishers.

A. T. DEWEY.

W. B. EWER.

Office, 252 Market St., N. E. Cor. Front St., S. F.
Take the Elevator, No. 15 Front St.

ADDRESS editorial and business letters to the firm. Individuals are liable to be absent.

Our Subscription Rates.

SUBSCRIPTIONS are payable in advance at the rate of \$3 per annum. Twenty-five cents extra will be added to the advance sum for EACH THREE MONTHS DELAY which may for any reason occur in the payment of any yearly subscription to this paper. No new names received without payment for some period in advance. We much prefer \$3 a year in advance to \$4 at the end of 12 months.

We hope the terms offered above will induce those subscribers who for one reason or another are not paid in advance at present, to settle up to date and one year in advance at the very reasonable rates here offered for so valuable a publication on this Coast.

ADVERTISING RATES	1 week.	1 month.	3 mos.	12 mos.
Per line.....	.25	.80	\$2.20	\$5.00
Half inch (1 square).....	\$1.50	\$3.00	10.00	24.00
One inch.....	2.00	5.00	14.00	40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing on extraordinary type or in particular parts of the paper at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening

Entered at San Francisco P. O. as second-class matter

The Scientific Press Patent Agency.

DEWEY & CO., Patent Solicitors.

A. T. DEWEY.

W. B. EWER.

G. H. STROMS

SAN FRANCISCO:

Saturday, December 30, 1882

TABLE OF CONTENTS.

EDITORIALS.—Shore Scenes at Santa Cruz; A Beautiful Shrub, 509. The Week; The New Regime; Close of the Volume; Postal Telegraph, 518. Patents and Inventions; No. 100 of Recent Patents, 513.

ILLUSTRATIONS.—Natural Bridge on the Coast near Santa Cruz; Scene on the Santa Cruz Coast, California, 509.

QUERIES AND REPLIES.—Chufas; Scare-Crow for Geese, 518.

CORRESPONDENCE.—The Lesson of the Season—"Hang On," Chile and California, 510.

POULTRY YARD.—Practical Poultry Raising—No. 2, 510.

FORESTRY.—Preservation of Forest Areas, 510.

HORTICULTURE.—The Fruit Growers' Convention, 511, 518, 521.

PATRONS OF HUSBANDRY.—Election of Officers; Growth of the Grange; Another Gala Day at Stockton Grange; Installations, 512.

AGRICULTURAL NOTES. from the various counties of California, Arizona and Nevada, 512-13.

HOME CIRCLE.—New Year's Eve Poetry; A Long Parting; Mosquito Breeding Cellars; Home Talks, 514.

An Iron Man; Improvement in Piano Construction; Strength of Different Kinds of Hemp, 515.

YOUNG FOLKS' COLUMN.—Our Puzzle Box; Chippy's Book Account, 515.

GOOD HEALTH.—Digestibility of Breadstuffs; Does Smoking Injure the Memory, 515.

DOMESTIC ECONOMY.—Orange Marmalade; Roast Turkey; Pumpkin Pie; Sweet Potatoes; Chicken Pie, 515.

ENTOMOLOGICAL.—How Scale Insect May be Carried, 517.

MISCELLANEOUS.—The Great Russian and the Lice Telescope, 510. Pruning Orange Trees; A Valuable Medicinal Plant; Two Little Known Pears; The Decline of China, 517. New State Officers and Legislature, 513.

NEWS IN BRIEF.—On page 513 and other pages.

Business Announcements.

Agricultural Machinery—George Bull & Co., S. F.
Nursery—Luther Burbank, Santa Rosa, Cal.
Cards—Stevens Bros. & Co., Northford, Conn.
Roses—Wm. B. Reed, Chambersburg, Pa.
Insecticides—T. W. Jackson & Co., S. F.
Grapes—Howe & Hall, San Francisco.
Harmon Seminary—S. S. Harmon, Berkeley, Cal.
Oil Stoves—John F. Myers & Co., San Francisco.
Real Estate Agents—W. R. Matthews & Co., S. F.

The Week.

It is the mid-day of holiday week; Christmas merriment realized; New Year's happiness anticipated. The two days of respite from ordinary duties, for Sunday and Christmas fell side by side, gave to many workers the unusual vacation of nearly one-third of a week all in a heap—too much of a treat to come often. The days were peerless and were enjoyed most thoroughly. The vernal temperature and the bright sunshine led the people out of doors, and walking and riding filled most of the hours. In the city the Golden Gate park was thronged, and the shore of the placid Pacific was studded with footprints. In the country there was a round of rides and excursions, and home gathering around the brilliant Christmas trees—a day and a night of solid joy and merriment. We doubt if California homes ever knew a more joyous Christmas time.

And now comes New Year's, with its new hopes and fears, new triumphs and new trials, for no year was ever free from all of them. May it fall to the lot of all our readers to sow the fondest hopes and reap the greatest triumphs, for thus it will be a happy New Year to all of you.

The New Regime.

We print upon another page a full list of the men into whose official charge the affairs of the State were entrusted at the last election. It clearly appears how great a change was made by that election, not only in the political affiliations of the majority, but in the personnel of the list, for there are very few who have hitherto participated in the regulation of State affairs either in the legislative or executive departments. We see, however, a large array of excellent men—men whom we know to be actuated by true motives to serve the public interest, and who will be of great value in the coming law-making. These men, and others like them, will assume a great responsibility in this winter's work. If they are bold and persistent advocates of the right, they will do the public an invaluable service, and they will advance their own interests as well, for the people are not so disposed to blind adherence to leaders as formerly, and they will hold each man responsible for his individual work. It will be a hard winter's work no doubt. In a political revolution there is always a tendency toward excesses, and the fever for place has attacked so many that the Legislature will be vigorously assailed and urged to provide for the thousands who have been for several years seeking and waiting for the rewards of party loyalty. It will be a grand season for jobs and conspiracies of all kinds, and the greedy will be unceasing in their endeavor to capture the inexperienced and too confident legislator. He will be wise and the people's friend who withstands the pressure and uses his influence in favor of economy and the encouragement of industry.

Upon the rural members of both Houses will rest special responsibilities. With them will rest the character of the legislative bodies to a great extent. City representatives are always more or less prone to espouse causes urged by ambitious or greedy individuals under the guise of public benefit. In the rural majority must be found the unyielding force which will crush all such measures out of sight. The rural representatives will also be called upon to secure the enactment of laws for the preservation and protection of our leading industries from the encroachment of pests, both great and minute. The Fruit Growers' committee is in session in San Jose as we write, and a bill will no doubt be introduced at the opening of the session which, it is hoped, will check the spread of injurious insects by securing a united and concerted movement among fruit growers for their destruction. Another matter of great importance to the producing interest will be the enactment for the protection of butter against imitations and adulterations. For both of these measures the strength and support must come mainly from the country members, who understand the evils and dangers and desire to free their constituents from them. There will be other important measures introduced, no doubt, in the agricultural interest, as, for example, the continuation of the experimental work of the College of Agriculture and other praiseworthy measures. To secure money for carrying forward efforts of this kind, the opposition of the town's representatives will have to be overcome in many cases, and the united work of those who appreciate the value of the means proposed will be required.

We have full hope that the incoming administration will work well for the public interest; and if such be their record, it will be quickly and generally recognized. The party which has regained power after so long a retirement should understand that its acts will be submitted to the closest scrutiny, and that an honest and wise course alone will win.

Close of the Volume.

This issue closes a volume of 528 pages, the largest volume of the PACIFIC RURAL PRESS which has thus far been published. As we stated last week, it is, in some respects at least, the best volume we have sent out. We trust our readers are pleased with it—we will not say satisfied with it, because we do not wish them to be satisfied until we give them something very much better. We shall furnish something better during the next six months, and better still thereafter. We do not propose to be satisfied in this business so long as we have strength to go a step forward, and so we say to our readers, be pleased if you can, but do not be satisfied yet. We are not in this race against competitors, because we see none in our line. We are running against our own record, and we propose to beat it each successive trial.

Upon the last page of this paper may be found the index for the papers of the last six months. It has been carefully prepared and will be found of great assistance to those who keep their papers for reference. A review of the index will show the stranger the range of subjects we have covered, and is perhaps the best prospectus of the RURAL which could be prepared.

GOOD PRICE FOR HAY.—The Boise Statesman says that hay is worth \$25 per ton in Boise City.

"PECULATIONS carried to extremes," is what Henry Clewes calls corners in grain.

Postal Telegraph.

Why not postal telegraph as well as the old-time mail service? Why should the public enjoy the transmission of news, etc., at a nominal rate by train, and be forced to pay a private corporation a large rate by wire? That is the question, and the answer, in our opinion, is that the working of the telegraph at cost by the Government is just as much a needed contribution to the spread of intelligence to-day as the establishment of cheap mail service was years ago. It seems coming to that gradually. The probability is that we shall soon do much of our business and personal communication by lightning.

The present Postmaster-General is understood to favor the project, and various trade organizations have declared themselves as supporters of the demand for government telegraphy. It is not a new thing. It has been fully tried in England, and we are not therefore undertaking any visionary enterprise in adopting it. The English government bought the private telegraphs in 1869, and has extended them more than four fold since that time. The enormous increase in the value of the service to the public is, however, the chief feature. When the telegraphs were operated by private companies, rates were charged according to distance, and were very much higher than the rate established by the Government, which is one shilling, about 25 cents for 20 words besides date, address and signature to any part of the kingdom. With anything like the same ratio of increase in the use of the telegraph, it is evident that a higher rate would have yielded larger returns, which have inured to the public in the shape of reduced charges. The public was also benefited by the transmission of news, the number of papers served with telegraphic advice being increased from 173, in 1869, to 518, in 1880, the amount of news being largely increased, while the charge for this service was largely decreased. The private companies previously to the acquisition of the lines by government sent out about 6,000 words of news daily, when Parliament was in session, and 4,000 at other times. Under the government, 25,000 words of news per diem are sent when Parliament is in session, and 21,000 at other times.

In the United States our telegraph service, like that of operating railways, has been delegated to corporate organizations, and in the absence of proper supervision and control serious abuses have crept in, and the public has been taxed much higher for the use of these inventions (which it may be said have become necessities of commerce), than is necessary to yield a liberal return upon the capital actually invested. What this is may be indicated by the remarks of President Norvin Green, of the Western Union Company, at the last annual meeting of that company, Sept. 13, 1882:

The same rate of increase for the next five years will produce gross revenues of thirty-one and a half millions and net profits of sixteen millions per annum. But as the growth of the company has been in an increasing ratio—each five years showing a larger percentage of increase than the preceding five years—we may reasonably expect a still greater ratio of growth, and, therefore, even larger figures for the year ending in 1887 than those above presented, enormous as they now appear.

It is estimated by good judges that there has never been paid in by stockholders \$16,000,000 since the beginning of the Western Union Company, and that its present property represents simply water and the amounts extorted from the public to extend its lines, besides paying dividends.

This great system, as well as the ocean cables connecting us with the rest of the world, are now virtually controlled by one man, and this individual, whose name has become a synonym for unscrupulousness and rapacity, in common with a few others with similar character, now aim at, and have largely succeeded, in controlling the channels of intelligence, of thought and of commerce, in a nation of 50,000,000 of people. Commenting upon this, U. S. Senator Windom, in a letter to the President of the Anti-Monopoly League, recently said:

The channels of thought and the channels of commerce thus owned and controlled by one man, or by a few men, what is to restrain corporate power, or to fix a limit to its exactions upon the people? What is then to hinder these men from depressing or inflating the value of all kinds of property to suit their caprice or avarice, and thereby gathering into their own coffers the wealth of the nation? Where is the limit to such a power as this? What shall be said of the spirit of a free people who will submit without a protest to be thus bound hand and foot?

The remedy seems to be the postal telegraph.

OBITUARY.—Mr. John Ellis, a horticulturist who gained quite a wide acquaintance through his work at the State Capitol grounds, at Sacramento, and the University grounds, at Berkeley, died in this city on Dec. 16th. Mr. Ellis will be recognized by our readers as the writer of several letters on horticultural subjects which have appeared in the RURAL during the last three months.

GRASS SEED EXHAUSTED.—The supply of the two kinds of grass seed noticed in our columns, as to be distributed by the College of Agriculture, has already run short of the demand. No more orders can be filled. This indicates a healthy interest in a most important subject—the improvement of our forage resources.

QUERIES AND REPLIES.

Chufas.

EDITORS PRESS:—A year or two ago, incited by a notice in the RURAL, I wrote to the Agricultural Department at Washington for a package of "Chufa," botanically known as *Sesuvium Esculata*. Last spring I planted in drills 18 inches apart about a half pint of the tubers, from which I had a yield of about 50 lbs. The chufa, or earth almond, as it is sometimes called, is largely cultivated in the south of Europe, where it is indigenous. It grows in the form of and looks somewhat like a bush about two feet high, producing bulbs or little tubers so plentiful that a single root will yield a quart, and that an acre will yield 100 bushels of chufas where but 20 or 30 bushels of corn would grow. Analysis shows that it is a richer food than any of the grains except wheat, 100 pounds containing 27 pounds starch, about 17 pounds fatty or oily matter, 12½ pounds sugar, about 7 pounds mucilage and gum and half a pound of wax—a total of over 63 pounds of food, the residue being, in nearly equal parts, water and fibrous matter which is digestible and valuable to distend the stomach. The Chufa is especially recommended for hogs and poultry, both of which eat it greedily and root it out or scratch for themselves. It is also valuable for other stock and excellent for man, whether eaten raw or roasted. This latter is verified by the way my children and chickens "go for it."

—J. WINCHESTER, Columbia, Tuolumne Co.

Scare-Crow for Geese.

EDITORS PRESS:—I have heard and read considerable about the depredations of wild geese. I have tried all kinds of scare-crows imaginable myself, but never found anything that so completely paralyzes them as the tin can arrangement, which I will give your readers a description of. Take a stake or post five or six feet long. Sharpen one end; nail a cross piece about four feet long within a foot of the top of your post at about the same angle you would hold a gun on your shoulder. On the long end of the cross piece fasten a wire from which is to hang a can, which I now describe. Take a five gallon coal oil can; punch a hole with an awl or nail in the center of the bottom and top. Run the wire from the cross-piece through the holes of can and twist at bottom so the can cannot drop off, and the thing is complete. The least bit of wind revolves the can, and the glare of the sun or moon on the can is a perfect success. Put the scare crows about rifle shot apart, and herding geese is a thing of the past.—C. HATCHES, Yolo.

IMPORTING INSECTICIDAL ANTS.—We had a paragraph not long ago about the use the Chinese make of some species of ants which devour the injurious insects on their orange trees. We learn now from a sketch of the proceedings of the Philadelphia Academy of Sciences that at a recent meeting Dr. H. C. Cook considered the practicability of transporting to and domesticating in this country the species of "insecticidal" ants used by the natives of China for the protection (from various grubs) of their orange groves. From considerations connected with the geographical distribution of this class of insects—the broad dispersion of certain species over the most varied conditions of their environments and through the most varied conditions of climate—the speaker was led to believe that there were no insuperable obstacles either to such transportation or domestication. In this connection it may be remarked that California has insecticidal ants, for Mr. Cooke has seen ants carrying the grubs of the codlin moth away, and even following them into the apple and ferreting them out, as it were. The old text bids fair to be rewritten: Go for the slug, thou ant.

THE NORTHERN PACIFIC.—The United States Commissioners to inspect the recently completed hundred-mile section of the Northern Pacific railroad, reaching west to within seven miles of Livingston, have arrived at St. Paul, en route home, after the performance of their official duty. Colonel Smith, in an interview, said he was much surprised to find so fine a road traversing such a splendid country. He had traversed the Southern, Union and Central Pacific railways, but none of them passed through so fine a territory as the Northern Pacific. The people generally would need to enlarge their comprehension of things before they could fully appreciate the certain future of that remarkable country. He could estimate there was, comparatively speaking, no waste of land between St. Paul and Livingston.

LEMMON HERBARIUM.—Prof. J. G. Lemmon writes us that he has moved his herbarium and plant emporium to 1205 Franklin St., Oakland, one block east of the postoffice and opposite the Presbyterian church. He says his new potato, discovered in Arizona and described in the RURAL last September, is exciting much interest.

OLEOMARGARINE.—An enthusiastic friend in Nevada writes: "I approve warmly the course pursued by the RURAL PRESS of pitching in red hot on that fraud and humbug, bull-butter or oleomargarine."

Pruning Orange Trees.

EDITORS PRESS:—Will some of your subscribers be kind enough to inform me how orange trees should be pruned, if at all? Trees are from two to eight years old, and have never been pruned much.—SUBSCRIBER, Solano county

In answer to the foregoing we make extracts from the chapter on pruning in Mr. Garey's "Orange Culture in California," which is the latest and most comprehensive treatise on orange growing in this State. Mr. Garey writes: November, December or January is the proper season for general pruning. The trees grow less during these months than at any other time. January is immediately prior to the season of blooming. The annual pruning should be done before the fruit forms. At all seasons of the year, however, all superfluous sprouts on the trunk, and all stray branches that threaten to throw the tree out of balance, should be removed without delay. Pruning should be done with a sharp implement, to make a smooth cut that will heal and be covered with bark in a short time.

There are involved in pruning several principal principles, among which are the following:

First—The removal of the branches from the trunk of the tree, to admit of cultivation close to the tree with a horse and cultivator.

Second—The removal of part or all of the limbs that cross or rub one another, or that grow too close together, diverging from one point.

Third—Thinning out the center of the top of the tree, cutting out all non-producing branches, to admit an ample supply of air and light.

A wide diversity of opinion exists on the first proposition. There are strenuous and enthusiastic advocates of low pruning, allowing the branches to grow within two or three feet of the ground. The usual arguments in favor of this method are, that it shades the trunk of the tree from the direct rays of the sun, and that it also shades the ground, thereby preventing evaporation, as it is claimed, to a great degree, hence, a moist condition of the soil.

The advocates of what is termed "high pruning" are no less enthusiastic in defense of their theory. They argue that it admits of better and more thorough cultivation, even close to the tree, and at less expense than if the top be allowed to form near the ground. They say the entire surface of the ground, and especially the soil near the trunk of the tree, should be well cultivated, not only for the purpose of destroying the weeds, but to pulverize the soil for the retention of moisture; and that the direct rays of the sun should, as far as possible, fall upon the whole area of ground in the orchard. Our most experienced orange growers think the soil needs the warmth of the sun, as well as cultivation, that the trees may receive the full benefit of the moisture in the ground, and that the fruit may be fully developed.

Before young trees are transplanted to the orchard they should be allowed plenty of limbs, which make them develop a stocky trunk and a large quantity of roots. When about to be planted in an orchard, they may be deprived of a portion of their lower limbs, and then be pruned up gradually till a horse or mule can pass readily under the branches. This is about the best rule to guide the orange grower. When, after years of growth, or from heavy bearing, branches become too low, the ends can be trimmed from underneath till the orchard will present a regular and uniform appearance. Properly trained orange trees do not need stakes to support them; they will support themselves, and with a little assistance, they will grow symmetrically and well proportioned.

The center of the top of an orange tree, more particularly of one that is fruiting, should receive an annual pruning of the superfluous inner branches, and such a cutting out of the inside limbs as will leave the inside of the top open and clean, and admit air and sunlight throughout the interior of the tree. All branches inclined to grow out so as to present an unsightly appearance must be cut back.

A VALUABLE MEDICINAL PLANT.—During the French invasion of Mexico a plant was discovered which was found to possess the property—when chewed or crushed—of stopping hemorrhages. To the native Mexicans this plant was known by a name which may be rendered as "fowlwort." The discoverer carried a specimen to Versailles and planted it in 1867, and it has since flourished, flowered and fruited without apparent change in its peculiar qualities. The action of this plant is said to exceed that of all styptics known, and this valuable property is likely to give it a wider extension, especially as it seems to be so readily acclimated in foreign lands. Its botanical name is *Fradescantia erecta* (Jacq.)

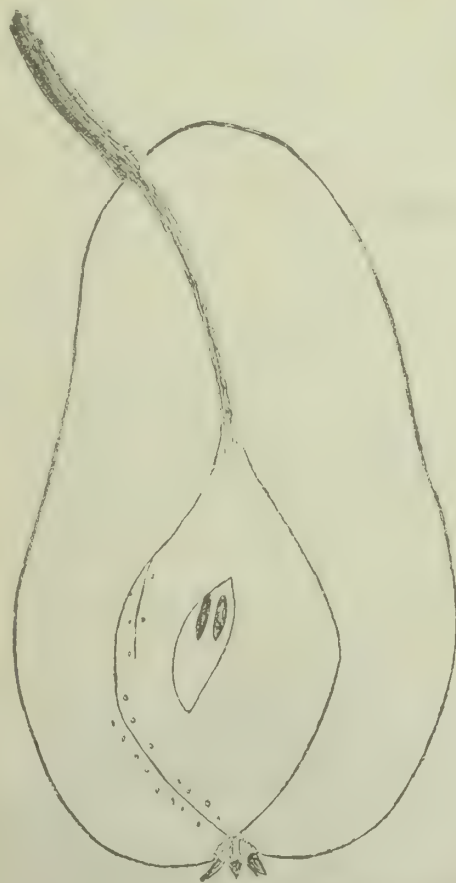
ENTOMOLOGICAL.

How Scale Insects May be Carried.

A friend sends us a clipping giving the observations of H. G. Hubbard, of Crescent City, Florida, on the ways in which scale insects may be moved from tree to tree. He says: I watched to-day a colony of *Hyperaspidius coccidivorus* (Ashmead) which has for two months or more been increasing on the trunk of a tall seedling orange tree. The main trunk of the tree is covered densely with chaff scale, and upon it the larvæ and imagos of the beetle are feeding. The greater number are now in imago. I found but one pupa, although larvæ are still abundant.



CALEBASSE MONSTREUSE.



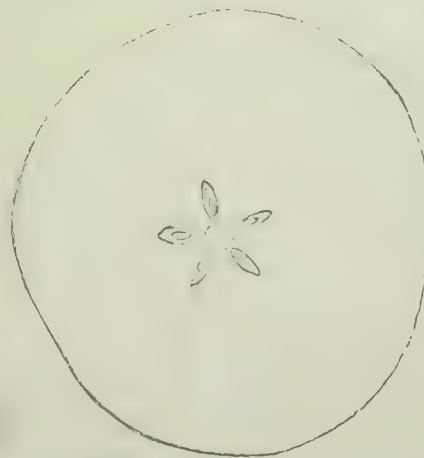
BROCKWORTH PARK; OR, BONNE D'EZE.

The beetles, both larvæ and imago, feed upon the Coccids in all their stages. They never bite through or tear off the scale, but seem to push their heads under between the bark and the scale. Larvæ of the scale insect are quite abundant on the trunk, and there are sucked by the Coccinellid. Although this is not properly a breeding time of the scale, there are considerable numbers of scale larvæ wandering about, and I noticed again and again that they frequently mount upon the bodies of the Coccinellids while the latter are feeding and without attracting the attention of the beetle. It even seems to me that they are attracted by the smooth and shining surface of the *Hyperaspidius* elytra, as I sometimes saw three or four of the scale larvæ together upon the back of a single individual of this extremely small beetle. As several large Coccinellids, *Chilocorus divulgerus* et al. are extremely common in all our groves, and all feed more or less upon Coccids, it does not seem surprising that the scale should spread from tree to tree. Another method of transportation has recently oc-

curred to me. The shrike or butcher-bird is very fond of selecting orange thorns as places to store insects. The bird is extremely common and of course preferably selects orange trees that have long straggling branches, in fact, precisely those that are most thickly infested with scale. I know of one grove much infested with scale, and where at any time may be collected a double handful of dead or living insects (Orthoptera and common beetles like *Panæus*) from the orange thorns upon which they have been impaled. The thorns on infected branches are always thickly coated with long scale, and in impaling a hard shelled insect like *Panæus* many scales are torn off, and both scales and their eggs adhere to the insect. The shrike sometimes transfers the insects it has impaled upon one tree to a thorn upon another tree, or after making a meal of its prey which it takes off a thorn, the bird flies off and



CALEBASSE MONSTREUSE.



wpids its bill on the next tree. In this way, as well as upon its feet the bird must spread scales from tree to tree.

Matthew Cooke Withdraws his Resignation.

A special meeting of the State Board of Horticultural Commissioners was held in San Francisco on the 9th. Dr. Chapin reported that experiments were under way at San Jose, determining the proper procedure for exterminating the cotton cushion scale. Matthew Cooke, the Chief Executive Officer, by request, withdrew his resignation until the next quarterly meeting. Mr. Cooper moved that, in order to make the meetings of the Horticultural Board come before the Viticultural Board, the regular quarterly meeting, with the exception of the next, which will be held in March, be changed to the Thursday preceding the last Friday of February, May, August and November. The motion was carried, and the Commission adjourned.

Two Little Known Pears.

We give on this page outlines of two more pears tested in the University orchard at Berkeley, and found worthy of attention from planters. Mr. Klee's descriptive notes are as follows: Brockworth Park or Bonne d'Eze.—This pear, whatever its origin may be, must to all intents and purposes be considered the same as the old Bonne d'Eze. The growth of the tree, time of ripening, form and flower are identical with this. Our reasons for producing this cut and description are two-fold. First, to enable those who are familiar with Bonne d'Eze to convince themselves of the identity of the two; secondly, to call the attention of those who are not aware of the good qualities of the fruit.

The tree is of compact habit; quite vigorous; specimen of fruit of average size; form varying from oblong to ovate pyriform; stem variable from short to one-half the length of the fruit, generally inserted on the side, sometimes right on the summit. Skin rather thick; color, when ripe, a greenish yellow, more or less patched with russet and often with a bright cheek on the sunny side. Calyx open; lobes distinct; basin shallow; flesh dull white, melting sweet, very juicy, with a sub-acid flavor (resembling *beurre gris*); rather coarse grained, a little gritty at the core and calyx. This pear ripens earlier than the Bartlett, a little after Anne Agereau, and keeps for fully one month after picking. Being a good bearer, this plant is entitled to a place in the family orchard, and would doubtless be a pear worth adding to our early market fruits.

Calebasse Monstreuse.—Tree of compact growth, coming early into bearing, specimen of average size, often much larger; form oblong, sometimes almost club shaped and curved. Stem short and stout, passing gradually into the long neck. Skin thick, completely covered with russet, sun side often very red; calyx green; lobes distinct, core medium; seed vessels often only four in number, seeds perfect. The flesh very firm, but when thoroughly ripe juicy and of a fair flavor. It is a first-class cooking pear. Picked at the end of August, it becomes fit for cooking in a couple of weeks, one or two weeks more making it perfectly ripe. Being produced in abundance and regularly every year, this handsome, large pear ought to be a desirable market fruit. The specimen grown here differs considerably from the fruit described by Downing under the name of Van Marum.

The Decline of China.

The correspondent of the London Times at Shanghai says: "There is every reason to believe that China has fallen off enormously in wealth and population during the last 50 years. The last complete census of the Empire, taken in 1812, gave a total of 360,000,000. Since that time there has been an internecine civil war, which caused the death of 30,000,000 of people, while other wars have also made serious inroads, so that by many it is thought the population cannot now exceed from 250,000,000 to 300,000,000.

By law every province ought to make an annual return of population, but this seems to have fallen into desuetude. Only one province so far has resumed the practice, viz: Chekiang. In 1812 this province stood for 26,257,000, and it is now reported as containing only 11,570,000 inhabitants. Chekiang is a very fertile province, and the center of the silk industry, so that the population might be expected to fill up by immigration more rapidly than in other places.

If, therefore, notwithstanding all these advantages, the population in this one province has decreased by 15,000,000, it is not unreasonable to suppose that the falling off over the whole eight or ten which are known to have suffered is at least 100,000,000, and that the present population of China does not exceed 250,000,000. The returns of land tax payable are further confirmatory of this conclusion. In 1812 the land tax payable in Chekiang was 5,850,000 taels; now it stands at only 2,120,000 taels. It is said that ever since the Taiping rebellion the financial prosperity of the country has steadily declined. Though the officers of the Government have striven in every way to raise revenue, the receipts of the public exchequer are more insignificant than ever, and the people are in a state of poverty that has no precedent in the history of the Empire. Under these circumstances we cannot wonder at Chinese emigration.

A. M. PRESTON, Secretary of the Immigration Association, has returned from the East.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 511.)

Mr. Gray, of Chico: In Sacramento we have quite a good many of the peach worm, and we have also found them in the apricots this past summer; we never knew before that we had anything of the kind, but they work into the stem end, and under the skin, and are quite a damage to the fruit.

In regard to cultivating, it is stated by Mr. Shinn in the paper that he objected to anything being raised in among peach trees; this season I have been raising pumpkins in the rows. I was led to think that it would be a good plan by the reports of the convention last year, when they recommended wrapping the young trees on account of their burning. It is quite a large job to do it when a man has a good many trees. The burning seems to be from the reflection from the sandy soil instead of striking upon the butt of the tree, and I find by planting something in the rows that shades the ground thoroughly that the trees do not burn, and it saves a great deal of work besides.

Mr. Holt: My experience in peaches is rather limited. In 1867 I planted in southern California nearly 500 peaches—the Briggs' Early May, Alexander and the Anderson. I do not know whether you call it the curled leaf that they had in 1877 or not, but they forgot to leave out till about the 14th of June. Those three varieties did not have a single leaf out until about the 15th of June. After that they bore a crop—Briggs' Early May, ripening after the 15th of June, made rather a late peach. I suppose it may be classed as curled leaf, although when it did come out no curled leaf appeared at all; it grew nicely, but owing to the climate or something, I never found out, we had a very late crop of peaches that year.

Mr. Human: I have grown peaches all my life, though not in this State, and I hear so much about the curled leaf that I cannot forbear mentioning a remedy that we have in Missouri for the curled leaf. That is a severe shortening in of the tops; it will be found almost a sure remedy against the leaf curling. I merely mention that if the tree is good and vigorous you will have no trouble with the curl by shortening in our trees.

The next subject for consideration was opened by the reading of a paper on Apple Culture by M. P. Owen, of Santa Cruz, which paper was ordered to take the usual course, and is as follows:

Shall We Give Up the Apple?

Mr. President, Ladies and Gentlemen: Having been called upon, since my arrival here, to offer a few remarks upon the cultivation of the apple—for the want of time and data to prepare something more worthy of your consideration and the subject, I ask leave to offer these few suggestions for the purpose of merely calling your attention to the subject under consideration.

Now, it being a settled fact that a great portion of California is favored with a climate and soil peculiarly adapted to the growth of nearly all the choice fruits known to the United States or Europe, and especially the prune, apricot, peach, pear and grape; in consequence of this fact the people appear to be turning their attention almost exclusively to the growth of these fruits, to the neglect of the standard fruit—the apple. Now, would it not be well to consider this fact a little with regard to the result of this course of procedure? While it is generally supposed that the market for apricots, prunes and peaches, dried and canned, is unlimited and their production is very profitable, yet we must confess that it is in a great measure experimental and uncertain; while on the other hand the apple—the standard fruit that everybody has use for—if grown to a good degree of excellence, will always find a paying market all over the world. Those who are blessed with a climate and soil that will grow a good article, and will take pains to select such varieties as the market demands, and give them the proper attention in cultivation, gathering, storing and packing for market, the apple will pay. But we are told that some other fruits pay better than the apple, bringing double the price per pound that the apple will, and are not so subject to the orchard pests that the apple is. With regard to the first proposition we must take into consideration the cost of cultivation, harvesting and preparing for market, and the necessary promptness in attending to it at the right time, in comparison to cost and attention that the apple incurs. With regard to the second or insect troubles we may say that fruit growing in California is in its infancy, and we hardly know what is safest from orchard pests. We well remember that a few years ago we thought the cherry, peach and apricot would go free from the scale bug and other troubles which bother the apple, but how is it now? Who will say that any kind of fruit tree will be free from insect pests within a few years unless we adopt measures to eradicate them, or at least materially check their progress?

With regard to the profit in growing apples I will cite a few instances in my neighborhood: One man sold this fall \$500 worth from 90 trees, planted seven years ago last winter, and another gathered 36 boxes of apples from one Bellflower tree 22 years old and of poor cultivation, and those apples were worth six bits per box at home, which would amount to \$27 each, or \$1,800 per acre, for such trees. When we take into account the cost of planting and cultivating an apple orchard and the gathering

and marketing the fruit, it is not a settled fact that apples won't pay.

It is my opinion that if we can succeed in freeing the apple from the threatening pests, that there will be as much clear profit in growing apples as in growing any other fruit.

Discussion.

Mr. Shinn: I believe with the writer most certainly that he who will plant now an orchard of the right varieties in a place where the apple succeeds will do as well as he will in planting any other tree. Let a man go to San Francisco and see what kind of apples they have there, and he needs no further proof that apple culture ought to pay. There are scarcely any good apples to be had, and there is no question in my mind but what the future market will be worse than it is now until we grow new orchards of the proper varieties. I think there can be no question on that point. Possibly it would not do to grow apples in such immense quantities as you may of peaches and apricots or fruits of that kind that we expect to send to foreign markets or the islands, but there are many apples that we can find a market for, and it is enough to say that the growing cities of our own State will require all the supply of good apples that we will have in this State for a number of years to come.

Mr. De Long: There is one thing as to the apple. We have 1,600 trees in one place of the Northern Spy 22 years old. In 1879 they were badly affected with the caterpillar eating off the entire leaf growth, and since that there has not been a fruit bud on them; we have not got an apple. You can see the trouble; if any suggestions can be offered I would like to hear from the gentlemen present.

Mr. Jessup: If it were my orchard I think I would give it a system of complete, thorough pruning; cut it down and form a new top entirely and leave no brush on it at all. Form a new top, and I think you will have a new crop of fruit.

Mr. De Long: Would you go to the extent of stumping it all down?

Mr. Jessup: I would, every tree.

Mr. De Long: My idea was I would graft one-half the tree.

Mr. Jessup: I wouldn't graft it at all.

Mr. De Long: I was going to graft one-half the tree to another fruit and take the chances on the other if I didn't get anything from that.

Mr. Jessup: You can't get a better apple than the Northern Spy.

Mr. De Long: I have had 23 years of it, and I am sick of it. They never bore an apple till they were 19 years old.

Insecticide.

G. W. Milco, of Stockton: Mr. President and gentlemen of this convention, I desire to call your attention to something that I have been engaged in the last 12 years in disseminating. It is a plant that I do not know that many of you have had the opportunity of seeing. It has been described in our RURAL PRESS in San Francisco and many other papers, but I do not believe that I ever got a chance to say anything myself on the subject before an audience. I desire to state a few facts in regard to this plant. When I commenced experimenting with the growth of this plant, of course it took a good while to find the proper soil. The plant is a native of my own country, in the southern part of Austria, on the east side of the Adriatic sea. There this plant was known to exist for years by the natives of the country, and it was used for insect destroying purposes; but I was the first to introduce it from that country into California. It was years and years before it was known outside of the country where it was native, still there were some few plants growing elsewhere. One variety is the *pyrethrum carneum*, another is *pyrethrum roseum*; this kind is called the *Pyrethrum cinerascens folium*. After a length of time some of the English botanists were sent by the English Government to travel and collect herbs through Europe, and in traveling over this country where this plant was growing wild in the hills and in cultivated places, they noticed that the natives were gathering this plant for insect destroying purposes, and tried it, and reported the result of the experiments to the English Government. In a short time English speculators came there and they undertook to buy the plants—that is, the blossoms, stems, roots, leaves and everything—and they took them back to England and commenced making an insect destroying powder out of it. After that the Austrian Government prevented the pulling of a single plant (that is, there was a heavy penalty imposed upon any person pulling any plant), and encouraged the growth of it, and since that time the plant has been extensively cultivated. As near as I can get at it there is something in the neighborhood of 165,000 acres now in cultivation of this plant. So much has it extended that a great many grain fields have been given up to it.

I have been a resident of this State the last 30 years. I came here when I was a boy, and after a few years, when the plant was cultivated to some extent, I sent home to my father, who is still living there, for some seed, and after receiving a small quantity I undertook to try it and see if it would do well in this country. My first point was to ascertain the soil that it would thrive best in, and also the properties of the plant; and the first pound of powder that I made from the blossoms of the plant I triturated in a mortar and sent to the United States Entomological Commission, composed at that time of Prof. C. V. Riley, Prof. Becker and Prof. Rhodes, who they experimented on it and reported from time to time, and what was done

with that encouraged me very much indeed. They told me in their correspondence that the powder was very efficient. After that I had a great deal of correspondence with other men of science, amongst whom was Prof. Hilgard. He recommended the plant, that is the growth of the plant, very much; that he had found the powder very efficacious for almost every insect that he tried. Since then I have experimented more or less on different soils, and I find that it will do well upon any soil for the first year; it will do fine upon any of the black soil and grow to be a large plant, but after the first year, like any of our heavy soils like adobe, it will always die. Several around Stockton, Mr. W. B. West, a nurseryman, Mr. George Ladd, who is present here, have tried it, and we find that the plant will not do as well on the black soil as it will on the sandy or loamy soil.

I originally commenced to grow it to any extent upon about ten acres of bottom land on the Mokelumne river, and found that the plant did very well; but I found after the first year there was a good many plants lost which we could not account for. Finally, in our experimenting we found that the plant grew better on the higher soil. Hence I was obliged to look for ground that would not be in a low position. Now then, after a while I took in Mr. Peters, of Stockton, in partnership with me, who was well able to back the enterprise with all the capital that was necessary. I had originally myself spent nearly \$30,000 in experimenting with the article. When Mr. Peters came in with me we went up to Merced county, and we secured a tract of land situated on the Farmers' canal. The only objection to the ground, as near as I can find, was the occasional wind we have there. The wind will destroy it if the ground is not covered in time by the plant; but when the plant is once a year old it is a wind break of itself; but before it gets large enough it is in danger of being blown out. Now then, we tried it, and it is three years since we undertook the growth on a large scale; now we are growing it by the ton, and I expect our next crop will be from 30 to 50 tons. As far as we went we had no difficulty in selling the powder as fast as we could make it; in fact, this time last year we were entirely out. We have now contracted with a firm in San Francisco to take all the powder that we can make, at a price that will leave us a profit of from 20 to 25 cents a pound, after all the expenses are paid for the last four years. Now, what I want to call your attention to is this: I do not desire to take up much of your time, but since this meeting is called for the purpose of considering these insects, I consider that we have taken more interest in this matter than almost anybody that is present here, because we are growing this thing; it is true we are growing it for profit, but we have got something that will kill any living insect. I don't care what it is, if it is properly applied.

Mr. Chapin: Will Mr. Milco state what he has stated previously, that he means by live insects those that are crawling that are not protected.

Mr. Milco: Yes, that is what I know myself. I claim that, so far as my experiments went, that it will kill any living insect—I mean any creeping insect. Since we are on that subject I will read you an article from Prof. Hilgard on scale insects. [Here the speaker read letters and papers from Prof. Hilgard, Prof. Riley and others as to the subject under discussion.] We are growing large quantities of this plant, and I desire as many of you as can to look into this matter and try it for your own benefit on a small scale. Try it, and if it does the work you want you can not only buy the powder at a price at which it will be cheaper to you than any solution you can find to-day on the American continent, I don't care what it is—if, as I say, you find this to be the thing, you can not only provide yourself with the powder, but, if you choose, you can go on and raise the plant, because it will grow with you just as well as it will with us. I want you to consider this is most important for you as fruit growers. We are fruit growers, too, I assure you, and we are just as much interested in that as you are, because we will likely have, in the course of two or three years, a place that will have 200 or 300 acres of trees; and I want you to consider that this plant is going to do the work in the future. This is not an article that will scare you away from your trees or your house. It is an article that will destroy, will have no mercy on any insect. I do not care what insects you try it on, if you try it in the proper way it will destroy them; and I hope that those who are interested in this plant will take it and grow it and raise it for themselves.

Discussion.

Mr. Phelps, of San Joaquin: We have heard a good deal about the efficacy of insect exterminators, but the trouble why the people don't try to exterminate the insects with them is because they don't believe in them. I am one of the Commissioners of San Joaquin county, and find it is impossible to get men to experiment on their orchards, because they say they have tried all of these remedies and they don't have the effect. We want to see some actual tests; we have the insects right here, and here is a man comes and says he has the remedy we have been seeking so long. I hope that there will be experiments to try it. We tried to exterminate the squirrels in our county. I expended hundreds of dollars myself, and never found anything that would exterminate squirrels until Prof. Hilgard told me about bi-sulphate of car-

bon. Now we have killed all the squirrels in San Joaquin county with this bi-sulphate of carbon. That is all the people want; they want to know they have got a remedy here that has some efficacy; then there will be no more trouble; there will be no trouble about the codlin moth or any of these insects if you only show that this is something that is efficacious.

Mr. Hasman: I wish to add my testimony to the efficacy of this. We tried it in the College of Missouri on several species of insects, of course with imported powder which Prof. Riley sent us on purpose to be tried, and we found it efficacious on every insect we tried. We tried it on the aphid, the pest of the greenhouse; also on what are called the seven-year locust, and it was efficacious in every instance.

Mr. Blowers: I have used it in my dry-house and in my dwelling-house for some two or three years, and find I can kill any insect that has the audacity to get in reach of it. I used it to destroy the moth of the fruit worm, and I think my dried fruit is entirely free.

(CONTINUED ON PAGE 521.)

STRONG FACTS!

A great many people are asking what particular troubles BROWN'S IRON BITTERS is good for.

It will cure Heart Disease, Paralysis, Dropsy, Kidney Disease, Consumption, Dyspepsia, Rheumatism, Neuralgia, and all similar diseases.

Its wonderful curative power is simply because it purifies and enriches the blood, thus beginning at the foundation, and by building up the system, drives out all disease.

A Lady Cured of Rheumatism.

Baltimore, Md., May 7, 1882.
My health was much shattered by Rheumatism when I commenced taking Brown's Iron Bitters, and I scarcely had strength enough to attend to my daily household duties. I am now using the third bottle and I am regaining strength daily, and I cheerfully recommend it to all.
I cannot say too much in praise of it. Mrs. MARY E. BRASHEAR, 173 Prentiss St.

Kidney Disease Cured.

Christiansburg, Va., 1881.
Suffering from kidney disease, from which I could get no relief, I tried Brown's Iron Bitters, which cured me completely. A child of mine, recovering from scarlet fever, had no appetite and did not seem to be able to eat at all. I gave him Iron Bitters with the happiest results.
J. KYLE MONTGOMERY.

Heart Disease.

Vine St., Harrisburg, Pa., Dec. 2, 1881.
After trying different physicians and many remedies for palpitation of the heart without receiving any benefit, I was advised to try Brown's Iron Bitters. I have used two bottles and never found anything that gave me so much relief.
Mrs. JENNIE HESS.

For the peculiar troubles to which ladies are subject, BROWN'S IRON BITTERS is invaluable. Try it.

Be sure and get the Genuine.

COMMERCIAL HOTEL.

"Farmers' Headquarters."

MAIN STREET, - - STOCKTON.

Rates, \$1.25 to \$2.00.

Free Coach from all Railroad and Steamboat Stations.

A. & J. HAHN, Proprietors.

AN OFFER TO FARMERS.

I have invented a Self-Supporting Board Fence, needs no posts, can be made in the barn on rainy days; costs 30 cents a rod less than post and board fence. It is not patented, but for 30 cents I will send ILLUSTRATED FENCE TREATISE, telling how to make it and one of the following Premiums: 1st, a one-foot boxwood pocket rule; 2d, Kendall's Home Book, 100 pages, 35 illustrations; 3d, one package of Sugar Trough Gourd, Acme Tomato, Prize Head Lettuce, Verbena, and Phlox, or all the above for 60 cents.
Address: WALDO F. BROWN, Box 75, Oxford, Ohio.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping done at the office of the MINING AND SCIENTIFIC PRESS, San Francisco, at favorable rates.

YOUTH'S COMPANION.

ANNOUNCEMENT, 1883.



REFERENCE to the contributors announced below will show that nearly all of the most distinguished and popular authors of this country, and many of those of Great Britain, have been engaged as contributors to the COMPANION for the year 1883. The Announcement will be found in many respects, we think, an extraordinary one; but it includes only a part of the features of the volume for the coming year.

Illustrated Serial Stories.

A Serial Story of Boy Life in America, by	J. T. Trowbridge.
A Serial Story of Boy Life in Great Britain, by	William Black.
A Serial Story of New England Life, by	Harriet Beecher Stowe.
A Serial Story for Girls, by	Harriet Prescott Spofford.
A Serial Story of Southern Life, by	Marie B. Williams.
Amusing College Stories, by	Henry A. Gordon.
Stories of Old-Time Poor-Houses, by	J. D. Chaplin.
Old New England Peddlers' Tales, by	Wm. A. King.
Tales of the Old Dutch Farmers of New York, by	Eugene M. Prince.

Reminiscences and Anecdotes.

(Illustrated.)

Yankee Drolleries at Old-Time Fairs and Shows, by	James Parton.
Stories of Old-Time Quack Doctors and their Remedies, by	Edgar Knowles.
On the Stump. Humorous Anecdotes of Electioneering, Stump Speaking, etc., by	Hon. S. S. Cox.
Victor Hugo at Home. A chatty description of the home life of the great poet, by his Private Secretary.	Richard Lesclide.
Word Pictures of the House of Commons. As seen from the Reporters' Gallery, by	H. W. Lucy.
Brilliant Articles. Reminiscences of Dean Stanley and Picturesque Associations of Westminster Abbey, by	Canon F. W. Farrar.
The Royal Family of Denmark. Articles of personal anecdote, by the Danish Minister at Washington,	Hon. Carl Bille.
Great Southern Leaders. A series of articles containing personal reminiscences of Gen. Robert E. Lee, "Stonewall" Jackson, John C. Calhoun, etc., by	Hon. Alexander H. Stephens.

Illustrated Travel and Adventure.

A Serial Story of Adventure, by	C. A. Stephens.
Life in an Irish Fishing Village, by	Julian Hawthorne.
Tales of Old Ships and Sailors, by	Capt. F. Luce.
Old Times on the Missouri, by	A Missourian.
After the Mindanao Pirates in a Dutch Gun-Boat, by	Lieut. P. F. Grinnell.
Adventures in a Whaling Cruise in the North Pacific, by	Macomber Brett.
The Fiftieth Tiger. A narrative of Adventure by the Special Correspondent of the London Telegraph.	Phil Robinson.
Child Life and Home Life in Japan. Curious Pictures and Domestic Incidents, by a traveller in that country,	Prof. E. S. Morse.
Railway Heroes. Thrilling stories of railroad men. Among others will be "The Fireman's Story," "His Life or Theirs," "Skip Dustin, the Water Boy," and "Express Messenger Riley," by	Walter A. Moore.

Special Articles.

Important articles will be given by two of the most distinguished Neurologists in the world, describing Nervous Diseases, showing the ordinary causes of these forms of human suffering, and giving general suggestions as to their treatment. These articles will not be merely technical treatises, but will be enlivened by curious and illustrative anecdotes.

Common Nervous Ailments. A Series of Papers, by	Dr. Brown-Sequard.
The Short History of a Nervous Man. The Proper Use of the Mind, Hallucinations and Delusions, The Cause of Sleep and Sleeplessness, Somnambulism, etc., by	Dr. William A. Hammond.

The Help Series.

The Profits of Literary Labor, by	James Parton.
Salesmen and Saleswomen in City Stores. Their wages and opportunities, by	Charles Vance Elliott.
A Medical Education. How to Choose a College. Advantages of European Study, by	Dr. William A. Hammond.
Girls Who Earn a Living in Art. By the Principal of the Woman's Art School, Cooper Union.	Susan N. Carter.
How to Start. Papers telling how to start in different kinds of business and in trades, with practical details, so that a boy reading these papers may act on them safely.	
What a Technical Education Costs. By the Professor of Engineering of the Institute of Technology, Hoboken.	Robert H. Thurston.

In The Household.

Parlor Experiments in Science. Simple and curious, by	Prof. W. C. Richards.
Entertainments for Charitable Purposes. Advice and suggestions, by	George B. Barlett.
Tableaux with Authors. Directions for Charming Evening Entertainments, by	Kate Sanborn.
Concerning Floors, Doors, and Windows. Giving the latest ideas as to the decoration of these important features of a home, by	Janet E. Ruutz-Rees.
Inexpensive Art Furniture. A series of papers showing that a home may be furnished in the best taste without large expenditures, giving details as to cost, etc., by the Curator of the Liverpool Art Museum.	Charles Dyall.

The Editorials of the COMPANION will give clear and impartial views of current events at home and abroad.

The Children's Page sustains its reputation for charming pictures, poems and stories adapted to the little ones.

SPECIAL OFFER.—To any one who subscribes now, and sends us \$1.75, we will send the Subscription Price \$1.75. Specimen copies free. Companion free to January 1st, 1883, and a full year's subscription from that date.

Please mention in what paper you read this advertisement.

41 Temple Place.

Address, YOUTH'S COMPANION,

Boston, Mass.

Musical Gifts

FOR CHRISTMAS.

GEMS OF ENGLISH SONG.

The newest and best general collection.

MUSICAL FAVORITE.

The newest collection of the best Piano music.

MINSTREL SONGS. Old and New.

The most popular melodies in the world.

FRANZ'S ALBUM OF SONGS.

Unrivalled array of German gems.

BEAUTIES OF SACRED SONG.

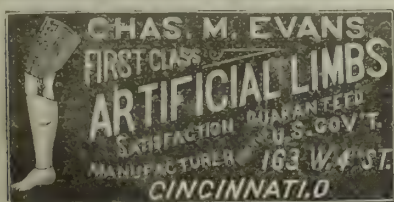
Large numbers of the best songs.

The above are types of about 30 volumes, each containing more than 200 pages, sheet music size, and filled with the very best selected music of its class, all permanently valuable, and all neat and elegant books. Price of each, plain, \$2; in cloth, \$2.50; gilt, \$3.

THE NORWAY MUSIC ALBUM is a splendid and unique book, filled with Norse music and Runic rhymes, such as Longfellow loved and Ole Bull best interpreted, and costs \$2.50 plain, \$3 in cloth, \$4 gilt. Send for Lists, describing our attractive and useful Books of Musical Literature (\$1 to \$2), our collections of classical music, as Sonatas of Mozart or Beethoven (\$5 per vol.), etc., etc. Any book mailed for the retail price.

OLIVER DITSON & CO., Boston.

CHAS. H. DITSON & CO., 843 Broadway, New York.



Agents Now Wanted.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to our business. Apply soon, or address this office, giving address, age, experience and reference.

DEWEY & CO., Publishers,
No. 252 Market St., S. F.

MATTHEWS' SEED DRILL.

The Standard of America.

Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by
EVERETT & SMALL, Boston, Mass.
Hawley Bros. Hardware Co., San Francisco, Cal. and Knapp, Burrett & Co., Portland, Oregon. Agent for Pacific Coast.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.

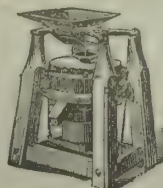


Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills. Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved. Write for Circulars and Price Lists, and address of nearest Agent. [Name this paper.]

RUSSELL & CO., Massillon, O.

BERRY & PLACE MACHINE CO., Agents for the Pacific Coast.



Queen OF THE South PORTABLE FARM MILLS

For Stock Feed or Meal for Family use.
10,000 IN USE.
Write for Pamphlet.
Simpson & Gault Mfg. Co.
Successors to Straub Mill Co.
CINCINNATI, O.



EGGLESTON'S ELASTIC TRUSS
Has a Pad differing from all others, is cup shape, with Self-Adjusting Ball in center, adapts itself to all positions of the body, while the Ball in the cup presses back the Intestines, just as a person would with the Finger. With light pressure the Hernia is held securely in place. It is easy, durable and cheap. Sent by mail. Circulars free.
EGGLESTON TRUSS CO., Chicago, Ill.

Commission Merchants.

Grangers Business Association,
SHIPPING and COMMISSION HOUSE.

No. 38 California St. SAN FRANCISCO

Consignments of GRAIN, WOOL, DAIRY PRODUCE, Dried Fruit, Live Stock, Etc., solicited, and liberal advances made on the same.

Careful and prompt attention paid to orders for the purchasing of Grain and Wool Sacks, Wagons, Agricultural Implements, Provisions, Merchandise and Supplies of all kinds.

Warehouses and Wharf,

At "THE GRANGERS," Contra Costa Co.

GRAIN RECEIVED ON STORAGE, FOR SHIPMENT AND FOR SALE ON COMMISSION. Insurance effected and liberal advances made at lowest rates. Farmers may rely on their grain being closely and carefully weighed, and on having their other interests faithfully attended to.

JAS. P. HULME, Late Miller & Co. JACKSON HART.

HULME & HART,

(Successors to MILLER & CO.)

Wool, Grain,

AND GENERAL

Commission Merchants.

10 Davis Street, near Market,
SAN FRANCISCO.

ESTABLISHED 1860.

P. STEINHAGEN & CO.,
(Successors to J. W. GALE & CO.)

Fruit and General Commission Merchants,

And Wholesale Dealers in California and Oregon Produce, Also, Grain, Wool, Hides, Beans, Potatoes, Cheese, Eggs, Butter and Honey.

Brick Stores: No. 402 Davis Street, and 120 Washington St., S. F.
Prompt Returns. Advance Liberally on Consignments.

DALTON & GRAY,

Commission Merchants

And Dealers in

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans, Potatoes.

404 & 406 DAVIS STREET,

P. O. Box 1938 SAN FRANCISCO.

CONSIGNMENTS SOLICITED

PETER MEYER. LOUIS MEYER.

MEYER BROS. & CO.,

—IMPORTERS AND—

Wholesale Grocers,

—AND DEALERS IN—

TOBACCO AND CIGARS.

412 FRONT STREET,

Front Street Block, bet. Clay & Washington, San Francisco.

Special attention given to country traders.

P. O. Box 1940.

MOORE, FERGUSON & CO.,

COMMISSION MERCHANTS

Grain, Flour, Wool, Etc.

[Members of the San Francisco Produce Exchange]

211 and 213 Clay St., S. F.

Liberal advances made on Consignments.

DAVIS & SUTTON,

No. 75 Warren Street, New York.

Commission Merchants in Cal. Produce

References.—Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed; Sacramento, Cal.; A. Lusk & Co., San Francisco, Cal.

AGENTS WANTED EVERYWHERE to sell

the best Family Knitting Machine ever invented. Will knit a pair of stockings with HEEL and TOE complete, in 20 minutes. It will also knit a great variety of fancy-work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 163 Tremont Street, Boston, Mass.

WAKELEE'S

PATENT

AND

Squirrel



Gopher

EXTERMINATOR.

In 1-lb. and 5-lb. Cans.

THE BEST IS THE CHEAPEST. FOR SALE BY ALL DEALERS.

WAKELEE & CO., Chemists,

Occident Hotel, S. F.

SAN LEANDRO PLOW CO.,

Manufacturers of

Gang, Single and Sulky Plows.

Also Manufacture Wagon Beds, Harrows, Seed Sowers and Various Agricultural Implements.

A SPECIALTY

Made of Furnishing Plow and other Extras to Order. Castings of all Descriptions Furnished with Dispatch and at Reasonable Rates.

ORDERS RESPECTFULLY SOLICITED.

ADDRESS ALL COMMUNICATIONS TO

San Leandro Plow Co.,

SAN LEANDRO, CAL.

PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Ave., San Francisco.

Free Coach to and from the House

J. W. BECKER, Proprietor

PACIFIC COAST LAND BUREAU.

President, Wendell Eaton, Vice President and General Manager, Geo. W. Frink; Treasurer, Anglo California Bank, Secretary, F. B. Wilde, 22 Montgomery street, San Francisco; San Luis Obispo Correspondents, C. H. Phillips & Co.

SAN LUIS OBISPO LANDS.

180,000 Acres of Land in the Coast. These lands can be subdivided and are suitable for small homes. Every branch of farming can be made prosperous, from stock raising or dairying down to fruit culture. On the coast of San Luis Obispo and Santa Barbara counties there is a territory 100 miles in length, and, on an average, 20 miles in width, unsurpassed in soil, climate and varied resources, well-timbered throughout, and abundantly watered by living streams of pure crystal water. This section is healthy in the extreme, malarial diseases being unknown. Irrigation is not resorted to, and failures in diversified farming are unknown where industry, economy and intellect have been combined.

For Sale.—The prices vary from \$2 to \$30 an acre. Some choice lands higher. We will sell on terms of one-fourth cash, and balance at the end of two, three and four years, when desired. Interest equivalent to 8% per annum.

Good Wheat Lands at from \$12 to \$30 per acre. Good Vine Lands at from \$2 to \$30 per acre. Good Grazing Lands at from \$3 to \$10 an acre; 1,200 acres fine grazing land, 5 miles from San Luis Obispo, \$6.50 an acre; 840 acres fine grazing land, 7 miles from San Luis Obispo, \$6 an acre; 1,000 farms at from \$500 to \$5,000. All at low prices and on easy terms.

These lands are offered at one-third the price of lands in other counties in the State, and, as regards soil, climate, water and timber, this section is not excelled on the Pacific Coast.

Send for Catalogue.

M. COOKE R. J. COOKE

PIONEER BOX FACTORY,

Corner of Front and M Streets, Sacramento

ALL KINDS OF

Fruit and Packing Boxes Made to Order, AND IN SHOOKS.

Communications Promptly Attended to.

COOK & SONS, Successors to COOK & GREGORY

BOONE & MILLER,

Attorneys & Counsellors-at-Law,

Rooms 7, 8 and 9.

No. 320 California Street, S. F.,

(Over Wells Fargo & Co.'s Bank)

Special Attention Paid to Patent Law.

N. B.—Mr. J. L. Boone, of the above firm, has been connected with the patent business for over 15 years, and devotes himself almost exclusively to patent litigation and kindred branches.

LAND

Good land that will raise a crop every year. Over 12,000 acres for sale in lots to suit. Climate healthy. No drouths, bad floods, nor malaria. Wood and water convenient. U. S. Title, perfect. Send stamp for illustrated circular, to EDWARD FRISBIE, Proprietor of Reading Ranch, Anderson, Shasta County, Cal.

F. A. HILL, Superintendent

E. P. PALMER, Secretary.

BENICIA AGRICULTURAL WORKS,

Removed from San Leandro to Benicia, Cal. Formerly Sweepstake Plow Co.

Manufacturers of

AGRICULTURAL IMPLEMENTS,

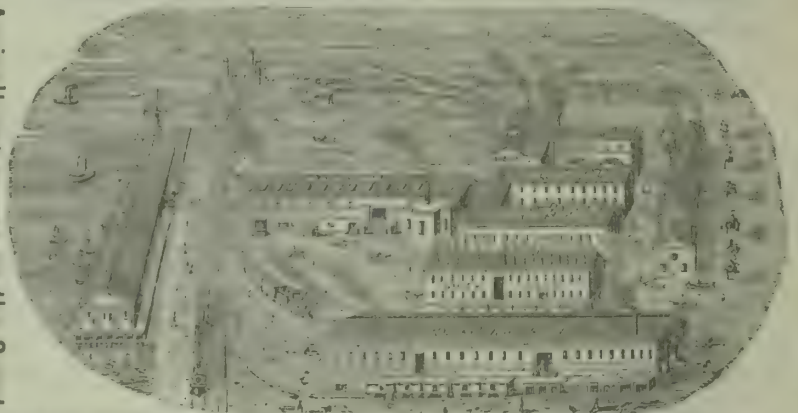
Gang Plows, Road and Field Single Plows, Iron and Wood Frame Harrows, Cultivators, Seed Sowers, Hay Presses, Haying and Harvesting Machinery, Headers, Iron Farm and Freight Wagons, Patent Iron Gear Spring Wagons.

Spring and Thoroughbrace Wagons

OF ALL KINDS

Buckboards, Barrows, Store and Warehouse Trucks, Grain Cleaners, Barley Crushers, Fresno Ditching and Grading Plows, Sweepstake Quartz Mills, Etc.

Agricultural works on the Coast.



The Largest and Most Complete

THE BUILDINGS are over 1,000 ft. in length, and have a floor surface of 107,402 square feet, or nearly 2½ acres. The wharves, connected with the works by rail, are over a ½ mile in length, and have a door surface of more than 40,000 square ft. including warehouses. The machinery is entirely new, of latest improved patterns throughout. With this Mammoth Establishment and skilled mechanics in every department, we are prepared to build every kind of implement to order, and parties desiring suggestions or assistance in perfecting inventions will have the most kind and experienced assistance, thereby saving time, labor and coin. Our facilities are such as to insure rapid work and prompt shipment, either by rail or water, thus making a good leaving for parties in the interior who order goods from these Works. We particularly invite correspondence from the country, and prompt responses will be sent to all inquiries. We are sole manufacturers of the Unadorned Hill's Eureka Sulky Gang Plow, the most popular Gang in the State, of which there are a greater number in use than any other make. Also, our victrola at plowing matches, and has made a clean sweep of premiums since 1870, and at the late State Fair at Sacramento was awarded the gold medal.

WE MANUFACTURE

Hill's Eureka Single Sulky Deep Tiller. Hill's Sweepstake Road and Breaking Gillis' Improved Horse Powers. Cultivators. Hill's Improved Seed Sowers. Hill's Improved Headers. Wood and Iron Harrows, etc.

Remember that Water Communication insures Cheap Freights. That dealers, farmers and others living at, or near the Sacramento or San Joaquin rivers or their tributaries, can make a GREAT SAVING OF FREIGHT by buying Goods manufactured by the BENICIA AGRICULTURAL WORKS, either direct, or through Mr. BAKER & HAMILTON, agents, San Francisco and Sacramento. The overland train passes between wharf and works, so that parties from the interior, or from San Francisco, will be landed at the door of the factory. Wholesale and retail dealers, farmers and consumers are cordially invited to call at the works and examine for themselves. Our line of manufacture embraces all of California's Standard make of Agricultural Implements. We aim to excel all in our line of Manufacture in producing the best implements, with all the latest Practical Improvements, which are peculiarly adapted to our soil and the Pacific Coast, both in tilling ground and in harvesting the grain; producing articles which combine all that genius, enterprise and science can insure. A guarantee to the purchaser, and a credit to the manufacturer. Correspondence is invited that we may send Circulars and descriptive lists. Address,

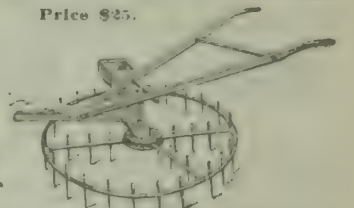
BENICIA AGRICULTURAL WORKS,

Or Agents, BAKER & HAMILTON, San Francisco and Sacramento.

BYRON JACKSON,

Manufacturer of

Agricultural Machinery.



Jackson's Vineyard Harrow.

SENT ON TRIAL.

WOODEN HARROWS,

With Solid Steel V-Shaped Teeth.

IRON HARROWS,

With Solid Steel Teeth.

VINEYARD HARROWS,

Rotating Either Way.

ADDRESS,

BYRON JACKSON,

625 Sixth Street.

SAN FRANCISCO.

BUY THE
LIGHT RUNNING
SIMPLE AND ELEGANT
HOUSEHOLD
SEWING MACHINE,
GEN'L AGENTS, 9, 11 & 13 FIRST ST.
SAN FRANCISCO, CAL.

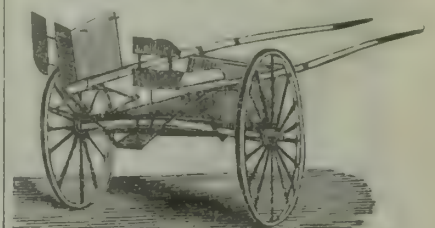
CANCER Scientifically Treated and Radically Cured. No knife, no caustic, no pain. Look sent free, containing convincing testimonials from responsible persons. Address, DR. J. McLEISH, No. 215 West Fourth Street, Cincinnati, O.

How to STOP THIS PAPER.—It is not a difficult task to stop this paper. Notify the publishers by letter. If it comes beyond the time desired you can depend upon it we do not know that the subscriber wants it stopped. So be sure and send us notice by letter.

H. PRINDLE,

ENTERPRISE CARRIAGE SHOP,

No. 287 St. John St. SAN JOSE, CAL.



(Patented September 14, 1880)

Carriage making, blacksmithing and horse shoeing, repairing and new work promptly and cheaply executed. Manufacturer and Exclusive Owner in Santa Clara Co., of FUTNAM'S PATENT CART. For cheapness, convenience and durability, this vehicle cannot be surpassed. The improvements upon the accompanying cut admit access to the seat from the rear. Sole agent for Santa Clara Co., for J. A. Bliz's Gigs.

DON'T FORGET Where to Send NEW CARDS, postmarked for 1883, for 10c. To receive all. All Chromes. The loveliest of the season. In quality is our aim. Send for our new book, "The Art of the Artist," by Royal Edge Imported from London, U.S.A., with 21 page illustrated book. Let. 25c. Order 10c. E. E. EATON & CO. Northern Cal.

The Fruit Growers' Convention.

(CONTINUED FROM PAGE 518.)

Mr. Jessup: I have had some experience with that powder; it will do more than kill insects, it will save houses; one of my neighbors about a year ago had his house, and he was going to burn it up; said he would have to burn his house up, it was alive with cockroaches as big as squirrels; he knew of but one way and that was to burn up the house and get rid of the cockroaches. I said you needn't do that, I have got a remedy to fix all that, and told him of this Mr. Milco's powder. I had bought a six-pound can from Mr. Rhodes here, and I have tried it and found it very effectual, and on that I said it would kill cockroaches; he said I wish you would let me have some, and on that I let him have a pound of it, and told him to scatter it around wherever he could see the cockroaches; he scattered the whole pound around, and there was a good many cockroaches the next morning he swept them out. I said you have used enough of it to kill all the cockroaches in California, you need sprinkle but very little, and then in the morning scrape off the cockroaches and leave the powder. He said after a while, it is no use; I have got just as many as I had when I started in. Well, said I, there must be a store behind and they are coming out, and I let him have some more, and I gave him I guess altogether about two or three pounds, and he finally came and told me he believed it had killed all the cockroaches; he could see no more of them, but in two or three weeks after that he said the cockroaches are coming back just as thick as ever; I don't believe that stuff is any good at all. Well, I told him it would kill cockroaches. He said he had killed a bushel of them, but still they came. I said it was just the seed coming on, and I let him have some more, and I didn't hear anything of it for a month or two, and he asked me who had that, and I told him Mr. Milco, of Stockton. He said I want his address; I want to get some of it. Then I asked him how about the cockroaches, and he said I have not got one. So the powder has saved my neighbor's house, and my neighbor's house is worth \$5,000 to \$8,000.

Here the convention adjourned until the following morning at 9 o'clock.

THIRD DAY—THURSDAY.

The convention met at 9 A. M., pursuant to adjournment, the President in the chair. On motion, the reading of the minutes at this time was dispensed with. S. F. Lieb, Esq., of Santa Clara county, was introduced to the convention, and delivered the following address:

Address of S. F. Lieb.

Owing to the absolute necessity of my being in the court room in a very few minutes, I will not detain you long; in fact, I am not expected to make a very long address. I understand that the purpose of my address here to-day is simply to speak as to the practicability and the constitutionality of laws for the purpose of eradicating the fruit pests of this State, and preventing others from coming here, and, without any preliminary remarks, I will enter at once into the discussion of that subject. That such laws can be made practicable is demonstrable. They may be the same as other laws, which when first enacted are more or less crude, but which are amended as we find the wants of the subject require. The party who starts out to draft a perfect law on any subject, starts out to do an impossibility. There never was a law, I suppose, passed on any important subject in the world that experience didn't suggest the necessity of amendment, and amendment in due course came. As to the constitutionality of the law, it strikes me to be entirely so. Such a law would be constitutional, unless there is some objection to it in the United States Constitution, or in the State Constitution. Now, the United States Constitution, as we all know, is a grant of power, a simple grant. Congress as such, the Federal Government as such, has no power to do anything. I care not what it is, or on what subject, unless the finger can be put upon the particular provision in the Federal Constitution authorizing it. To start out with, the Federal Government had no power, either through Congress or any other department, except such as we find given by some specific clause to be found in that instrument. There is nothing, so far as I have been able to find, in the Constitution of the United States which in any way effects such laws as the one under discussion, except one, and that is where it gives to Congress the exclusive control of regulating commerce between the different States or with foreign nations or with Indian tribes. That would only effect us here in so far as we sought to prevent the importation of trees from other States, to prevent the introduction of new fruit pests here.

Now, on that subject I wish to say a word outside of the constitutionality of the law. There is a little insect back East, and over I suppose a considerable portion of it, the coming of which I dread almost worse than I would the plagues of Egypt; we used to call it the curculio, or plum weevil. I know back on our old farm we had a lot of plum trees; every year they would be loaded, and I would think there would not be enough curculios to go around and sting them all, and used to think that particular year they were so loaded we would get at least a few ripe plums, but I never saw a ripe plum upon any of those trees. I never saw one escape that little crescent-shaped puncture which we would see in the plum as

the plum grew larger—grew larger with it—and the plum would finally fall to the ground. If that insect comes here we may as well take up our plum orchards and our prune orchards, at least. The question is, how are we to stop its coming, for come it certainly will if we import without any restriction whatever Eastern trees. It certainly will come; you cannot help it. Now, it has been said in the discussions here that you must find the specific evil in these specific trees that are being shipped before we can stop importation. Now, it is true we could not declare a quarantine against the whole East simply because this insect exists in the East. They tried that in Illinois against the Texas cattle trouble. The State of Illinois passed a law that no cattle whatever should pass in or through her territory from Texas, and the Supreme Court of that State sustained the law in the case of Zeaselos Alexander, 54 Ill. Sup. Ct. Reports, page 254. But the State of Missouri tried the same thing by enacting such a law, and the Supreme Court of the United States (in the case of Railroad Co. vs. Huesen, 95 United States Sup. Ct. Reports, page 465), very properly decided that the law was too broad; that they had power to protect themselves from the introduction of an evil from another State, but they must not make it general; they must make it so specific and so reasonably exact as to effect the object and to effect no more, because the moment they go beyond self protection, then they are regulating the commerce between the federal States, liable to be said to have infringed the Federal Constitution; but on the other hand it is not necessary that we should examine each parcel. It is enough if it comes from an infected district. Be careful that our law does not quarantine the introduction of trees from too broad a scope, but simply the infected parts of the East; and we must take care to find out what those infected parts are in advance, so as not to make our law too broad. It is impossible, however, to take each specific tree and examine it with a microscope, if you please, to see if you can't find some of these insects upon it.

I can take a parallel case which you all are familiar with; for instance, the yellow fever broke out at New Orleans; the authorities of another State or city will quarantine against any passenger coming from that infected place. You don't take each passenger, of course, and examine him with a microscope to see if he has the germs of the yellow fever about him. It is enough to say that he comes from the infected district to keep him from coming at all; and the same thing is true as to other diseases. For instance, cholera; we quarantine against specific places that we know are infected with the cholera, or the smallpox, or various diseases of that kind, and the same principle is applicable as to the introduction of trees when they come from the various infected districts. And that is what you must be guided by in this law to ascertain beyond all question what particular districts are infected from which trees are sought to be shipped, and quarantine the introduction of any trees from these infected districts, just as we would to protect ourselves against the introduction of the cholera, or yellow fever, or smallpox, or any other contagious disease. This is what we call a police power. It is a protestation power which each State reserves to itself, and in the lawful exercise of which she cannot be considered as infringing upon the Federal Constitution by regulating commerce between the several States as long as, as I said before, she confines herself to legitimate protection, and does not make her law too broad.

Therefore, I say it is a necessity and entirely within our power to protect ourselves against the importation of trees which will bring these pests from certain declared infected districts where they now exist. Public opinion ought to frown down shipping from such places; the idea that a man for the sake of saving a few dollars in trees, and not getting as good at that, will take the chance of bringing an insect, a pest, here which will destroy millions of property and suppress one of the great interests of this State! Public opinion ought to frown it down, but as men are so full of avarice, and as public opinion may not be entirely effectual, we probably should have some law to aid us in that respect.

So much for the Federal Constitution.

We now come to the State, and that brings us down to the proposition of the State laws for the purpose of eradicating those pests which we now have. To do anything in that line we must have uniformity for strength; it is of no use for those who are assembled here, who take an interest in this matter, to clean your orchards of all pests and have your neighbors, intermingled here and there, keep their orchards simply as breeding places to spread therefrom over all your orchards and the rest of the country. Let me illustrate: Suppose one man owned all the orchards in this State; wouldn't we say he was very foolish to keep this orchard here clean and the next one to leave as a breeding place, and the next one clean and the next one diseased, alternating throughout the country? We would say "That man is a fool; if he is going to fight with these pests at all he must do it throughout; he must do it generally or not at all." Now what difference does it make to the scale bug or the codlin moth, or a thousand insects in this State, whether the orchards are all owned by one man or by a thousand? We have got to treat them as though they were owned by one man—that is, uniformly, and in self-protection we are entitled to do it.

There is a principle of law that is well

founded, and finds a ready response in the human heart and in justice, that every man should use his own so as not to interfere with his neighbor. I have a right, if you please, to raise an orchard, but I have not a right to raise insect pests for my neighbor to destroy his. I have not a right to use my property to destroy his orchard, and it is not the right of anyone. Any man, when he becomes a member of society, of necessity relinquishes some rights which he otherwise would have as an individual. The fact that he comes into a community of itself is a stipulation on his part that he will so use his own in that community as not to be detrimental to his neighbor or to the public. Therefore, I say it is a right, it is a necessity, and it is a law which, being based upon natural justice and right, must be sustained by the courts if properly drawn.

But it is said you can't destroy an orchard, that that would be to take property for the public good without pay for it. Nothing of the sort. We don't use that orchard when we destroy it. It is for the public good. Take a fire that originates here, and it is coming down this block, if you please; you must stop its progress, and to do so we blow up this building with giant powder and make it a ruin to save the balance of the town; in such a case the owner of a building has no claim upon the public. It was a necessity, and that, too, in a case where the owner of the building was not at any fault; whereas, the owner of a fruit orchard which is full of pests is, to some degree at least, in fault, and if he does not eradicate them it is our right to do so. [Applause.] That is the common law, that you can blow up any amount of buildings to stop a fire, and there is no claim against anyone; it is a public necessity. Now apply the same principle here; if an orchard stands in the way and it is breeding these pests, if it is necessary to eradicate that orchard entirely, the power certainly would be much stronger to do it to stop the spread of a fire by destroying a building. Since the last war one of the few bills that General Grant vetoed was for the purpose of repayment by the United States for property destroyed in some way through some war measure belonging to some loyal person; he said, "My property has been destroyed I was a loyal person; I was a loyal Union man, and I want my pay from the Government for destroying it." The bill was passed and General Grant wrote one of the best opinions. I don't know whether he wrote it or not; he may have had the advice of eminent lawyers in the cabinet that it was the public right to do so; that it fell under the same provision as the right to destroy fires; it fell upon him and he must suffer, and they didn't pass the bill over the veto.

Let us consider similar cases of right and the necessity not only to regulate but to destroy property for the protection of others. Take, for instance, the glanders. One of the Board of Supervisors got me to draw him a bill some years ago for protection against glanders; that if you find a horse with the glanders, take him right out and shoot him; destroy him right then and there. That law passed, and has been enforced. It is constitutional; it is the same as to fruit pests in orchards. If a man has an orchard spreading pests all around, it ought to be speedily cured or destroyed just as much as that glandered horse ought to be. There is no difference in right in the two cases.

I have but a word to say further in conclusion, and that is, that I have examined this question some little. I have embarked some little in this enterprise, planted some 50 acres in fruit, simply for diversion, it is true, to rest a wearied body and a wearied brain occasionally, but I am interested in it, and I have, therefore, given it some attention and some study, and I am entirely satisfied that the members of the committee, of which I believe I have the honor to be one, can by consultation, by the exchange of views, by printing a bill, circulating it around among us for amendments, suggestions and so forth, and having in view the constitutions of the United States and of this State, regulate the whole subject fairly, honestly and efficiently, and further, that we can at the same time provide that whatever expenditures are necessary to carry it into effect shall be paid, and on the other hand to protect the people from any salaries being paid where they are not earned. We believe, in the first place, in making liberal appropriations for the purpose of securing these ends; but, on the other hand, in making ample provisions for seeing that every dollar that is paid is earned, and earned in the public service and for the public good. [Applause.] The two things can well go together, and ought to go together, and I believe before the next Legislature meets that we will have prepared the draft of a law which will be constitutional, practicable and just. And I hope the committee of which I am one will be augmented twice or thrice, because the more suggestions and the more brains we can have to bear upon it the better. If we can only get the Legislature to give us the needed relief I think we can march on in the agricultural industries of this State to victory and assured success. But if, on the other hand, we are to be cramped and each individual must work for himself and his neighbor, use his orchard as a breeding place to distribute the pests all over the country, I think we might as well quit the fruit industries now, here and forever. [Applause.]

On motion, the thanks of the convention were tendered Mr. Lieb for his address, and he was re-

quested to draw up a bill for the consideration of the Committee on Legislation.

The minutes of the preceding session were here read, and after being corrected, were approved as corrected.

Committees.

The Chair appoints as Committee on Commission Merchants, Robert Hall, of San Francisco; J. M. Hixson, of San Francisco; M. T. Brewer, of Sacramento; Geo. R. Starr, of San Francisco; L. G. Sresovich, of San Francisco.

The Committee on Legislation, as added to last evening, stands as follows: L. M. Holt, of San Bernardino; A. T. Hatch, of Solano; F. C. De Long, of Marin; G. M. Gray, of Butte; Wm. Johnston, of Richland, Sacramento; C.; W. J. Tusks, of San Francisco; S. F. Leib, of Santa Clara, and S. F. Chapin, of Santa Clara.

The members to be appointed from the members of the Senate and Assembly will now be announced, as follows: J. H. M. Townsend, of San Jose, Santa Clara county; Joseph Rautier, Patterson Station, Sacramento county; Stephen Bowers, San Rafael, Marin county; John Wolfskill, Bernardino, San Diego Co.; David McClure, San Francisco; J. M. Dudley, Dixon, Solano county; L. C. Granger, Oroville, Butte county; G. W. T. Carter, Byron, Contra Costa county.

On motion, it was ordered that Dr. Chapin be declared the Chairman of the Committee on Legislation, and that it be subject to his call.

(TO BE CONTINUED.)

A PURE strengthening tonic, free from whisky and alcohol, cures dyspepsia and similar diseases. It has never been equalled. Brown's Iron Bitters.

THE HARMON SEMINARY.—A musicale, closing the half year, was given at the Harmon Seminary on Wednesday evening, the 20th inst., which, like all entertainments at that institution, was marked by much taste, and elegant in its appointments. The programme was made up of performances, instrumental and vocal, by the pupils—which were in the highest degree creditable to them, to their instructors and to the liberal management of the principals—varied and enriched by pieces from Prof. Toepke, Prof. Zsch, the Misses Harmon and Miss Knapp. Whilst the performances of these last named were all of distinguished merit and greatly delighted the intelligent audience, it is allowable, for the encouragement of so young a debutante, to say that the rendering of the cavatina from "Semiramis," by Miss Sophie Harmon, was of rare excellence, and its enjoyment was manifested by her enthusiastic recall to the rostrum. The seminary has had a successful first term, and an increased attendance is expected for the next, which will begin January 11th.—Oakland Tribune.

CARRYING CAPACITY OF ELECTRIC WIRES.—Prof. Forbes has been experimenting with wire to determine the thickness required for carrying different electric currents without overheating, and announces as a result that if you carry a definite amount of current through a wire of a certain diameter without heating it over a temperature of over 150°, then, in order to carry a current twice as great without overheating, the wire used must be twice the diameter or four times the section. This is an important matter, if true, for the size of conductors is a very important element in the cost of a plant for electric lighting, and conductors liable to be overheated greatly increase the cost of the current, besides being dangerous.

NEW USE FOR COTTON SEED OIL.—Cotton seed, from being considered a useless waste, to be got rid of by burning or otherwise, is fast becoming a valuable product, and will soon be made to add largely to the profit of the cotton crop. New uses for the seed are constantly being opened up. It is now reported that a factory has been opened at New Orleans to make illuminating and lubricating oil out of cotton seed. The apparent decadence of kerosene and whale oil for moveable lamp use may possibly soon open up a valuable market for cotton seed oil for that purpose. It seems to be a rule that every approaching need is sure to be met and supplied either by natural discoveries or by the inventive genius of man.

A NEW WHEEL.—An Italian has invented a new carriage-wheel, in which the iron rim is united to the hub by semi-circular slat spokes. The curvature allows them to serve both as spokes and springs. The result of experimental trials is said to have surpassed the anticipations of the inventor. In great speed, especially, the irregularities of the road produce no shock. Elasticity, solidity and complete absence of noise are enumerated among the special advantages of the new invention.—Les Mondes.

A Knabe in the White House.

There was seen yesterday at Messrs. Knabe & Co.'s factory a magnificent concert grand, just finished by them for the Presidential mansion. President Arthur, who is a thorough connoisseur of music, in selecting a piano for the White House decided in favor of the Knabe Piano as his preference, and ordered accordingly the instrument referred to. It is a concert grand of beautiful finish in a richly carved rosewood case, and of superb tone and action—an instrument worthy in every respect of the place it is to occupy. It was shipped to its destination yesterday.—From the Baltimore American.

Lands for Sale and to Let.

Redlands.

Good water, rich soil and magnificent view.
High elevation, dry air, few fogs and northerly.

No brush or fences on the land, which is especially adapted to the culture of the orange and raisin grape.

Near to church, school, store and depot.
Hotel open. Telephone Communication.

Stage from San Bernardino Tuesdays, Thursdays and Saturdays.

SEND FOR CIRCULAR.

JUDSON & BROWN,

Redlands,

SAN BERNARDINO, CALIFORNIA.

Good Crops Every Season Without Irrigation.

Free by mail, specimen number of "The Californian Red Estate Exchange and More," full of reliable information of climate, productions, etc., of

SANTA CRUZ COUNTY.

Address "Exchange and More," Santa Cruz, Cal.

Educational.

STOCKTON BUSINESS COLLEGE,
TELEGRAPH INSTITUTE AND NORMAL SCHOOL.

The largest Business Training School on this Coast. Open day and evening. Tuition less than one-half the usual rates. Excellent board at \$10 per month. Send for Circulars containing full particulars. Address

P. O. Box, No. 15. F. R. CLARKE, Stockton, Cal.



417 Kearny Street, San Francisco.

The only Business College on the Pacific Coast in which Text Books are furnished FREE to students.

Send for Circulars.

THE DAVIS
IRON WAGON.

E. A. SCOTT & CO.,

Proprietors for the Pacific,

P. O. Box 293, Sacramento, Cal.

LA FRANCE STEAM FIRE ENGINE.
Hayes' Fire Truck.

Circulars Forwarded Free to any Address.



Best in the World! Latest Improvements. Powerful. Warranted one year.
RUPTURE Guaranteed cured in 30 to 90 days by Dr. Pierce's Method.
Pierce's Journal for November, with full particulars, free. MAGNETIC ELASTIC TRUSS & BELT CO., 704 Sacramento St., San Francisco, Cal.

Silos Reservoirs, Head Gates,
ARTIFICIAL STONE AND CONCRETE.

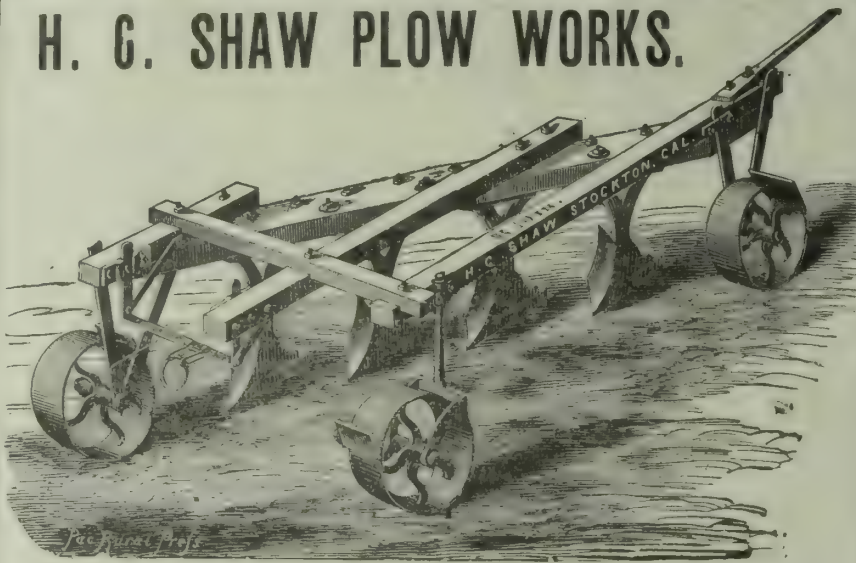
RAN-OME, 402 Montgomery St., S. F. Send for circular

YOUR NAME On 50 large size CARDS. Remembrance, Sentiment, Handkerchief, &c. No. 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50. Please send 20c. for album of 100 samples and list of 200 elegant premiums and list of 200 fine Gilt Bevel Edge Cards, turned corner, 10c. Your Name in this coloring. Agents make 50 per cent. We offer the largest line of cards, the best Premiums and the lowest prices. We fill all orders promptly and guarantee satisfaction. Amateur Printers supplied with blank cards at wholesale prices. Established 1870. NORTHFORD CARD WORKS, Northford, Conn.

To Fish Raisers.

am now ready to sell Carp which were imported by me from Germany in 1872, in lots to suit. Address
J. A. POPPE, Sonoma, Cal.

H. C. SHAW PLOW WORKS.



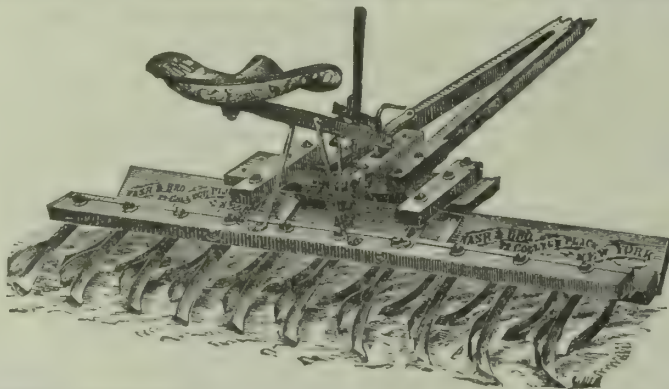
THE H. C. SHAW STOCKTON GANG PLOWS.

4,000 IN USE.

Single and Sulky Plows, Seed Sowers, Harrows, Etc.
201 AND 203 EL DORADO STREET, STOCKTON, CAL.

"ACME"

PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.



For the Orchard, Vineyard, Nursery and Grain Field.

Send for Pamphlet giving Testimonials from the Pacific Coast.

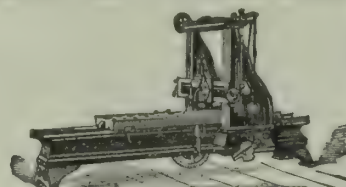
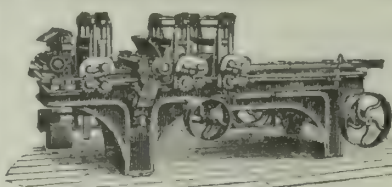
The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of STEEL COULTERS, the peculiar shape and arrangement of which give Immense Cutting Power. The entire absence of Spikes or Spring Teeth avoids pulling up rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

NASH & BRO., Sole Manufacturers,

Manufactory and Principal Office:

Branch Office, HARRISBURG, PENN. | MILLINGTON, NEW JERSEY.

SOLD IN CALIFORNIA BY: G. B. Adams & Son, San Gabriel; Oliver Holden, San Jose, John Tuohy, Visalia; Geo. Bull & Co., San Francisco. Sold in Utah, Montana and Idaho by Geo. A. Lowe, Salt Lake City.



Berry & Place Machine Company,

PARKE & LACY Proprietors.

No. 323 and 325 Market Street, - - - San Francisco, Cal
Importers and Dealers in every Variety of

WOOD AND IRON WORKING MACHINERY,

Stationary, Portable and Hoisting Engines and Boilers,
STEAM PUMPS, SAWMILLS,

Shingle Mills, Emery Grinders and Emery Wheels, Gardner Governors, Leather and Rubber Belting and Packing, together with a general line of Mining and Mill Supplies.

Catalogues and Price Lists furnished on application.

THE BUCK THORN BARBED FENCE.



One Piece Solid Steel. Send for Circular.

J. A. ROEBLING'S SONS CO., 14 Drumm Street, S. F.

DIPHTHERIA

CROUP, ASTHMA, BRONCHITIS.
JOHNSON'S ANODYNE LINIMENT will positively prevent these terrible diseases, and will cure nine cases out of ten. Information that will save many lives, sent free by mail. Don't delay a moment. Prevention is better than cure. I. S. JOHNSON & Co., Boston, Mass.

IMMENSE REDUCTION

In Prices
FOR THE NEXT 90 DAYS,
-BY-

Joe Poheim,

THE TAILOR.

No. 724 Market Street

AND—
203 Montgomery Street.

Suits formerly made to order \$25, Reduced to \$20.
Suits formerly made to order \$30, Reduced to \$25.
Suits formerly made to order \$45, Reduced to \$35.

By all means call and see JOE POHEIM before buying elsewhere. You will get a stylish cut and the best workmanship.

Special attention is called to a large line just imported of Green, Olive, Blue, and all the latest colors of finest woolsens that the market ever produced.

Perfect Fit Guaranteed
OR NO SALE.

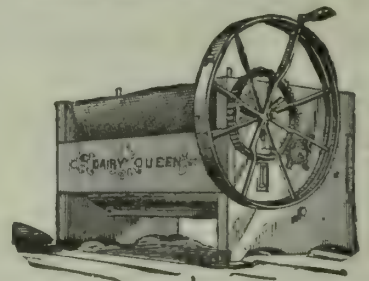
724 Market Street

AND—
203 Montgomery St.,
SAN FRANCISCO, CAL.

"THE DAIRY QUEEN"

Improved Churn and Butter-Worker.

Pat'd U. S., July 6, 1880. Pat'd Canada, Dec. 2, 1880.
RECEIVED TWO DIPLOMAS



This Churn is the most perfect machine of its class ever made, the result of several years' study and experiment, by a practical dairyman. Made extra heavy of the best material. The only NON-CORROSIVE METALLIC CHURN ever offered to the public.

It took the First Premium at the Stockton Fair, Nevada State Fair and the California State Fair, 1881, as a churn, and a Diploma as the best Butter-Worker. For further particulars and circulars address the Inventor and Sole Patentee.

GEO. W. FREEMAN,

Janesville, Cal.,
Or Jas. L. Haley, Janesville, Lassen Co., Cal.,
Benicia Agricultural Works, Benicia, Cal.

REMOVED.

Messrs. Batchelor & Wylie,

MANUFACTURERS OF THE

CALIFORNIA SPRING TOOTH HARROW,

and Agents for the

Albion Seed Sower and Cultivator,

HAVE REMOVED TO

37 Market St., S. F.

THE DAVIS GUN.



The best Shooting Guns for the price. Fine Stub Twist Barrels. Pistol Grip, Patent Fore-end Rebounding Hammer. Choke Bored like the Famous Parker Gun. Every breech-loader has a record of its shooting. 12 gauge, \$32; 10 gauge, \$35; Muzzle Loaders, \$15. Send for Circular and mention this paper. E. T. ALLEN, Sole Agent, Importer of Fire arms and Sporting Goods, 416 Market Street, San Francisco, Cal.

YOUR NAME In Elegant Script Type, on 50 beautiful imported chrome cards, 10c. 14 pks. \$1. 20 pearl bevel gilded cards with lapped corners, 10c. Agents' large album containing all the latest styles of imported bevel edge and satin fringe cards, with illustrated premium list & postage terms to agents, 25c. CARD MILLS, Northford, Conn.

CAUSTIC SODA,

Common and Powdered.

ALL OTHER SOAP-MAKING MATERIALS.

T. W. JACKSON & CO.,

304 California Street, - - San Francisco.

SOLE AGENTS FOR THE PACIFIC COAST.

This paper is printed with Ink Manufactured by Charles Eneu Johnson & Co., 509 South 10th St., Philadelphia. Branch Offices—47 Rose St., New York, and 40 La Salle St., Chicago. Agent for the Pacific Coast—Joseph H. Dorsey, 569 Commercial St., S. F.

BREEDERS' DIRECTORY.

Six lines or less in this Directory at 50 cts a line per month.

CATTLE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poultry, Cattle and Hogs. Write for circular.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R., Sonoma County. Wilfred Page, Manager. P. O. address, Petaluma, Cal. Short Horn Bulls and Cows, Spanish Merino Bucks and Ewes, for sale at reasonable figures.

SYLVESTER SCOTT, Cloverdale, Sonoma Co., Cal., Breeder of Recorded Thoroughbred Short Horn Cattle and Spanish Merino Sheep. Jacks and Jennets for sale at reasonable figures.

MRS. M. E. BRADLEY, San Jose, Cal. Breeder of recorded thoroughbred Short Horn Cattle and Berkshire hogs. A choice lot of young stock for sale.

ROBT. BECK, San Francisco. Breeder of Thoroughbred Jersey cattle. Herd took Six Premiums of the eleven offered at State Fair, 1881.

GEO. BEMENT, Redwood City, San Mateo Co., Cal. Breeder of Ayrshire Cattle. Several fine young Bulls, Yearlings and Calves For Sale.

R. J. MERKELEY, Sacramento, Cal. Breeder of Percheron Norman Horses and Short Horn and Graded Cattle.

R. MCENESPY, Chico, Butte Co., Cal. Breeder of Thoroughbred Devons.

SHEEP AND GOATS.

L. U. SHIPPEE, Stockton, Cal. Importer and Breeder of Spanish Merino Sheep. Durham Cattle, Red Duroc and Berkshire Swine. High Graded Rams for sale.

E. W. WOOLSEY & SON, Fulton, Sonoma Co., Cal. Importers and Breeders of choice Thoroughbred Spanish Merino Sheep. City office, No. 418 California St., S. F.

J. B. HOYT, Bird's Landing, Solano Co., Cal. Breeder and Importer of Shropshire Sheep. Rams and Ewes for sale. Also cross-bred Merino and Shropshire.

POULTRY.

THOS. WAITE, Brighton, Cal. Breeder and importer of pure bred poultry. Langshan eggs, \$5.00 per dozen. Light Brahmas, Plymouth Rocks, Partridge Cochins, W. F. B. Spanish, Brown and White Leghorns, Spangled Hamburgs, Golden Sebrights, Bantams, Toulouse Geese and Pekin Ducks' eggs, \$3.00 per dozen.

O. J. ALBEE, Santa Clara, Cal. Importer and Breeder of Standard Poultry: American Sebrights, Langshans, Plymouth Rocks and Brown Leghorns. Langshan eggs \$4.00 per setting. Other varieties, \$3.00. Fowls and Chicks for sale.

J. N. LUND, cor. Webster and Booth Sts., Oakland, P. O. Box 116, Breeder of Thoroughbred Poultry, Plymouth Rocks, Brown Leghorns, Light Brahmas, Langshans and B. B. Game Bantams. Eggs and Fowls for sale.

FOUNTAIN GROVE POULTRY YARDS, Santa Rosa, Cal. High-class Poultry. Eggs for hatching. Langshans, \$3.50; Light Brahmas, \$2.50; Brown Leghorns, \$2 per setting.

MRS. L. J. WATKINS, San Jose, Cal. Pure-bred, Fancy Poultry; White and Brown Leghorns, Plymouth Rocks, Langshans and Houdans. Eggs and Fowls.

IMPROVED EGG FOOD—Try it for Poultry; 1-lb box, 40c; 3 lbs, \$1; 10 lbs, \$2.50; 25 lbs, \$5. B. F. WELLINGTON, 425 Washington St., S. F.

MRS. M. E. NEWHALL, San Jose, Cal. Bronze Turkeys, Brown Leghorns, Langshans, Plymouth Rocks, Pekin Ducks. Fowls and Eggs in season.

J. M. HALSTED'S NEW INCUBATOR. Price \$30. No. 1011 Broadway, Oakland. Send for circular.

I. L. DIAS, Box 242, Petaluma, Cal., manufacturer new Petaluma Incubator. Send for circular and references.

L. C. BYCE, Petaluma, Cal. Breeder of thoroughbred Poultry. Illustrated circular free.

SWINE.

JOHN RIDER, Sacramento, Cal. Breeder of Thoroughbred Berkshire Swine. My stock of Hogs are all recorded in the American Berkshire Record.

TYLER BEACH, San Jose, Cal. Breeder of thoroughbred Berkshires of stock imported by Gov. Stanford.

POULTRY.

Big Hedge Poultry Yards.

SAN MATEO, CAL.

FOR SALE



20 Houdans, 25 Black Spanish, 20 Langshans, 50 Buff Cochins, 50 Brown Leghorns, 100 Plymouth Rocks, 50 White Leghorns, 25 Golden Polands.

For further particulars address as above.

BADEN FARM HERD

Of Short Horn Cattle and Dairy Cows.

Catalogues and prices on application to

ROBERT ASHBURNER,

Baden Station - - San Mateo Co.

EGGS! EGGS!

For Hatching

From the fine Thoroughbred Poultry as was ever brought to the Pacific Coast. Large Illustrated Circular Free. Send for it.

L. C. BYCE, P. O. Box 71, Petaluma, Sonoma Co., Cal.

IMPORTANT!!!

That the public should know that for the past ELEVEN years our SOLE BUSINESS has been, and now is, importing (OVER 100 CARLOADS) and breeding improved Live Stock—Horses, Jacks, Short Horns, Ayrshires and Jerseys (or Alderneys) and their grades; also ALL THE VARIETIES of breeding Sheep and Hogs. We supply any and all good animals that may be wanted, and at VERY REASONABLE PRICES and on CONVENIENT TERMS. Write or call on us. LICK HOUSE, San Francisco, Cal., October 22, 1881. PETER SAXE & HOMER P. SAXE. PETER SAXE & SON

Oakland Poultry Yards,

Cor. 17th and Castro Sts., Oakland, Cal.



GEORGE B. BAYLEY,

Importer and Breeder of all the best known and most profitable varieties of Land and Water Fowls. Brahmas, Cochins, Houdans, Langshans, Leghorns, Polish Hamburgs, Bronze Turkeys.

And the new fowl, AMERICAN SEBRIGHT or EUREKA.

AGENT FOR THE PACIFIC INCUBATOR,

WHICH IS MADE IN THREE SIZES.

No. 1, Capacity, 550 Eggs, Price, \$90.
No. 2, " 250 " " 65.
No. 3, " 180 " " 45.

Guaranteed to hatch NINETY PER CENT. of all fertile eggs; 9,000 chickens successfully reared from two of these incubators last season. For further particulars send stamp for illustrated circular to
GEO. B. BAYLEY,
Box 1771, San Francisco.

CAUTION!



TRADE MARK

Unscrupulous persons, envious of the Fame and World-wide Reputation of

THE IMPERIAL EGG FOOD

Are, by fraudulently imitating the style of packages even to forging the very trademark of the Imperial, endeavoring to put upon the market

Worthless Stuff of No Value to Fowls,

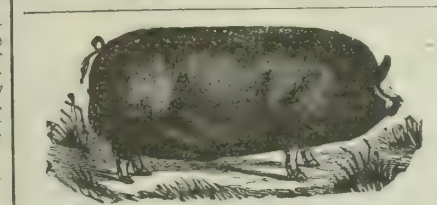
Under a name so similar to the Imperial as to be easily mistaken for it at first sight. We take this means of cautioning our numerous customers against the fraud.

The Imperial Egg Food is now used in every part of the United States, and its sale on this coast is simply wonderful, our order book showing that every customer continues to order, while every letter received is a testimonial for the Imperial. In purchasing, see that you get THE IMPERIAL and none other, no matter how nearly similar in name and appearance. Send for Circulars and testimonials.

Retail Prices of Imperial Egg Food: 1 Pound Package, 50 Cents; 2½ Pound Package, \$1.00; 6 Pound Box, \$2.00; 25 Pound Keg, \$6.25.

Sold by the trade generally, or address

G. G. WICKSON, 319 Market St., S. F.



We have for sale at our farm at Mountain View, thoroughbred

BERKSHIRE PIGS

From our Thoroughbred Berkshire Boar and Sow, which we imported from England in 1880. Pig from Imported Boar and Sow, \$25 each. From Imported Boar and Thoroughbred Sow, \$10 to \$20. Our Imported Pigs are as nice Pigs as there are in the State. Address, I. J. Truman, S. F.



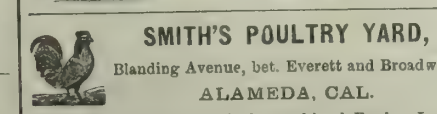
GEORGE TREFZER,

Breeder of High Class

Langshans, Black Cochins, White and Brown Leghorns, Pekin Ducks and Toulouse Geese.

My stock is all first-class, and are mated to secure the best result. Eggs and fowls for sale at very low prices. Send stamp for Circular.

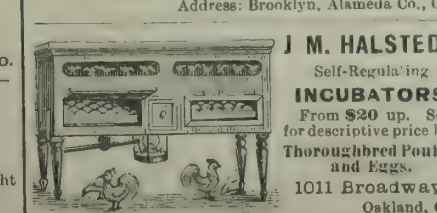
GEO. TREFZER, Napa City, Napa Co., Cal.



SMITH'S POULTRY YARD,

Blanding Avenue, bet. Everett and Broadway, ALAMEDA, CAL.

Importer and Breeder of Thoroughbred Fowls. Langshans (Croad Strain) American Sebrights, Plymouth Rocks, Brown and White Leghorns. Eggs for hatching. A. H. SMITH. CHAS. W. SMITH, Manager. Address: Brooklyn, Alameda Co., Cal.



J. M. HALSTED'S

Self-Regulating

INCUBATORS.

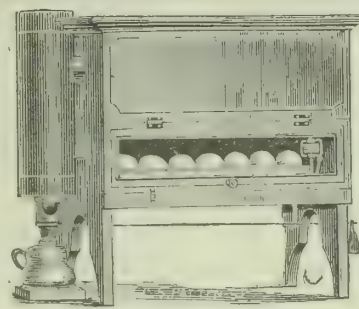
From \$20 up. Send for descriptive price list.

Thoroughbred Poultry and Eggs.

1011 Broadway, Oakland, Cal.

SPLENDID! 50 Late et Style chromo cards, nam' in case, 10c. Premium with 3 packs. E. H. Pardee, New Haven, Ct.

PETALUMA INCUBATOR.



Baby Machine in Operation.

PERFECTLY SELF-REGULATING.

Thirty eggs capacity, \$12; 60 eggs capacity, \$20. Never yet exhibited without competition, and always awarded First Premium; 1882 Silver Medal and Diploma, State Fair, over

PERFECT HATCHER.

1881 Sonoma and Marin District Fair, and 1882 First Premium, Diploma and only Special awarded in the entire Fair, in competition with

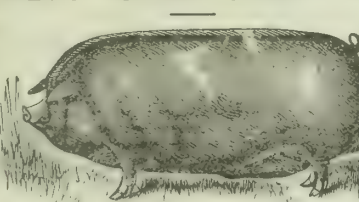
NATIONAL (Axfords)

And others. Over 2,000 chicks hatched at above fairs. Large machines, octagon ovens, heat entering center; 240 eggs, \$60; 400 eggs, \$75; 630 eggs, \$90; Circular free. Address,

I. L. DIAS,

P. O. Box 242. PETALUMA, CAL.

JONESA POLAND CHINA FARM.



ELIAS GALLUP, Hanford, Tulare Co., Cal.

Breeder of pure bred Poland China pigs of the Black Beauty, Black Hoss, Bismark, and other noted families. Imported boars, King of Boony View, and Gold Dust at head of the herd. Stock recorded in A. P. C. R. Pigs sold at reasonable rates. Correspondence solicited. Address as above.

LAUREL RANCH.

Thoroughbred

Spanish Merino

SHEEP.



First Premium Flock for Four Years. Two hundred head for sale cheap for cash, or on terms to suit customers. Orders promptly filled!

J. H. STROBRIDGE, Prop.

Address, E. W. PEET, Manager, Haywards, Alameda Co., Cal. Box 1164.

ITALIAN SHEEP WASH.

EXTRACT OF TOBACCO.

Free from Poison. Prepared

by the Italian Government

Co. Cures thoroughly the

SCAB OF THE SHEEP

THE BEST AND CHEAPEST

remedy known. Reliable testi-

monials at our office.

For particulars apply to

CHAS. DUSENBERG & CO., Sole Agents, 314 Sacramento

Street, San Francisco.



LITTLE'S SHEEP DIP.

Price Reduced

TO \$1.25 PER GALLON.

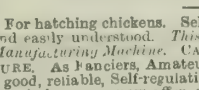
Twenty gallons of fluid

mixed with cold water will

make 1,200 gallons Dip.

Apply to FALKNER,

BELL & CO., San Francisco



AXFORD'S INCUBATOR.

For hatching chickens. Self-regulating, durable, practical and easily understood. This is not a Toy but a Practical Manufacturing Machine. CAN BE RUN IN ANY TEMPERATURE. As fanners, Amateurs and others are ready to use a good, reliable, self-regulating incubator, that can be procured cheap, we now offer one that holds 150 eggs.

The Baby Price, \$28. Send for Circular.

J. P. CLARK, Sole Agent for the Pacific Coast,

630 Howard St., San Francisco.



Dana's White Metallic Ear Marking Label, stamped to order with name, or name and address and numbers. It is reliable, cheap and convenient. Sells at sight and gives perfect satisfaction. Illustrated Price-List and samples free. Agents wanted.

C. H. DANA, West Lebanon, N. H.

THE NEW PATENT California Refrigerator.

Will keep meat and food at an equal temperature without ice. All sizes made to order. Address,

HOBBY & ELLSWORTH, 317 J Street, - - SACRAMENTO, CAL.

GRANGERS' BANK

Of California,

SAN FRANCISCO, CAL.

Authorized Capital, - \$1,000,00

In 10,000 Shares of \$100 each.

Capital Paid up in Gold Coin, \$531,200.

Reserve Fund and Paid up Stock, 21,178.

OFFICERS:

JOHN LEWELLING, President
A. D. LOGAN, Vice-President
ALBERT MONTELLIER, Cashier and Manager
FRANK McMULLEN, Secretary

DIRECTORS

JOHN LEWELLING, President, Napa Co
J. H. GARDINER, Rio Vista
T. E. TYNAN, Stanislaus Co
URIAH WOOD, Santa Clara Co
J. C. MERRYFIELD, Solano Co
H. M. LARUE, Yolo Co
I. C. STEELE, San Mateo Co
THOS. MCCONNELL, Sacramento Co
C. J. CRESSEY, Merced Co
SENECA EWE, Napa Co
A. D. LOGAN, Colusa Co

CURRENT ACCOUNTS are opened and conducted in the usual way, bank books balanced up and statements of accounts rendered every month.

LOANS ON WHEAT and country produce a specialty. COLLECTIONS throughout the Country are made promptly and proceeds remitted as directed.

GOLD and SILVER deposits received. CERTIFICATES of DEPOSIT issued payable on demand.

TERM DEPOSITS are received and interest allowed as follows: 4% per annum if left for 6 months; 5% per annum if left for 12 months.

BILLS OF EXCHANGE of the Atlantic States bought and sold.

ALBERT MONTELLIER

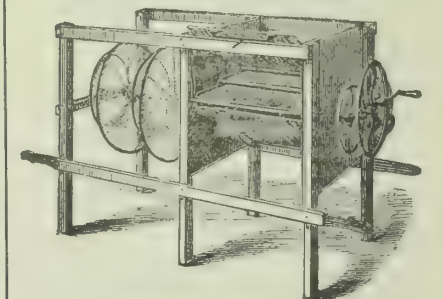
Cashier and Manager.

San Francisco, Jan. 15, 1882.

Fair Premiums.

"California Chief"

GRAIN CLEANER.



Patented July 25, 1882.

This Machine was Awarded FIRST PREMIUM AT THE MECHANICS' FAIR, 1882, And is pronounced by all farmers that have examined same to be THE BEST. Send for circular and prices.

BRUSH & CO., Agents

409 California St., - - San Francisco.

TO POULTRY DEALERS!

The Improved Egg Food

Was awarded the premium at the Mechanics' Fair at San Francisco, the State Fair at Sacramento, the District Fair at Stockton, and the District Fair at San Jose. These premiums were all awarded within the

LAST SIXTY DAYS,

And thousands of people at each Fair personally testified to the fact that they were using the Improved, and that it was the best poultry preparation that they ever used. It keeps hens healthy and makes them lay—really a necessity for young chickens, as well as for all kinds of poultry. Give it one trial, and prove it so.

1 lb. boxes, 40 cts; 3 lb. boxes, \$1; 10 lb. boxes, \$2.50; 25 lb. boxes, \$5.

B. F. WELLINGTON, Proprietor.

Importer and dealer in Seeds, and agent for the Perfect Hatching Co. of New York.

DAVID KERR,

MECHANICS' FAIR, 1882.

Best Truck, Silver Medal.

Best Horse Cart, Silver Medal.

4-Spring Wagon, With Top, Silver Medal.

Best Milk Wagon, Silver Medal.

Carriage, Wagon & Truck Manufactory,

47 & 49 Beale Street, - - SAN FRANCISCO.

FOR SALE!

A first-class, three-fourths Norman Percheron stallion.

Address,

L. V. WILLITS,

Watsonville, - - California.

GILLES H. GRAY.

JAMES HAVEN.

GRAY & HAVEN,

Attorneys and Counsellors-at-Law,

580 California St. SAN FRANCISCO.

I offer the trade this season a large and general assortment of Fruit and Ornamental Trees, and Small Fruits. My Trees are healthy, stalky and well grown. Address,
S. NEWHALL, San Jose, Cal.

Seeds, Plants, Etc.

SEVIN VINCENT & CO.,

Importers, growers of, wholesale and retail dealers in

SEEDS

Field, Grass, Flower and Tree Seeds,

CLOVER, ALFALFA,

BULBS, FRUIT, ORNAMENTAL TREES, ETC.

We call the attention of farmers and country merchants to our unusually low prices. Trade price list on application.

We issue the most complete guide to the Vegetable and Flower Garden ever issued upon this coast. It is handsomely illustrated, and contains full descriptions of Vegetables, Flowers, Grasses, Trees, etc., with full instructions as to their culture; mailed free on application.

SEVIN VINCENT & CO.,
607 Sansome Street, S. F.

For 1883 is an Elegant Book of 150 Pages, 3 Colored Plates of Flowers and Vegetables, and more than 1,000 Illustrations of the choicest Flowers, Plants and Vegetables, and Directions for growing. It is handsome enough for the Center Table or a Holiday Present. Send on your name and Post Office address, with 10 cents, and I will send you a copy, postage paid. This is not a quarter of its cost. It is printed in both English and German. If you afterwards order seeds deduct the 10 cents.

Vick's seeds are the Best in the World! The FLORAL GUIDE will tell how to get and grow them. VICK'S FLOWER AND VEGETABLE GARDEN, 175 PAGES, 6 Colored Plates, 500 Engravings. For 50 cents in paper covers; \$1.00 in elegant cloth. In German or English. VICK'S ILLUSTRATED MONTHLY MAGAZINE, 32 pages, a Colored Plate in every number, and many fine engravings. Price, \$1.25 a year; Five Copies for \$5.00. Specimen numbers sent for 10 cents; 3 trial copies for 25 cents.

JAMES VICK, Rochester, N. Y.



FOR 25 cts. in stamps or money we will send by mail one pkt. each of the following:

Japanese Nest-Egg Gourd, the most beautiful and useful gourd ever seen, exactly the size, color and shape of hen's eggs; Honey Dew Green Citron Melon, the sweetest and best-flavored Muskmelon in cultivation; Cucumber Queen Improved Watermelon, the largest, finest, sweetest and most luscious Watermelon in the world; Golden Dawn Mango, entirely new, the most beautiful pepper ever seen; large, bright golden color and thick-meat. Address SAMUEL WILSON, Seed Grower, Mechanicsville, Bucks County, Pennsylvania.

TURNER'S NURSERIES,
San Bernardino, - - - Cal.,
Box 275.Fruit and Ornamental Trees
OF ALL KINDS.

150,000 Trees in Dormant Bud to be delivered when one year old at the lowest rates. This offer is equal to 1 year old trees for the price of Dormant Buds. Also, 80,000 June Budded Trees at the very lowest rates.

BUDS HAVE ALL BEEN TAKEN FROM BEARING TREES.

Principal Nursery located just south of Colton.
DAVE TURNER.GUARD AGAINST
PHYLOXERA
By Planting Resistant Vines.

I offer for sale all the leading varieties of Riparia, Rupestris and Aestivalis, especially Lenoir, Hartemont and Elvira.

Price List and Circular Sent on Application.

Stock guaranteed true to name and in good condition. Orders should be sent early, as the stock is limited. For particulars apply to

GEORGE HUSMANN,
Napa Cal.

PEPPER'S NURSERIES.

Established in 1858.

I grow all kinds of hardy Fruit Trees, Evergreen Trees and Shrubs, Shade Trees, Roses, Flowering Shrubs, Plants, etc. Grown without irrigation, clean and healthy. The demand is likely to exceed the supply of some kinds of Fruit Trees. Prices and kinds will be given on application. Address W. H. PEPPER, Petaluma, Sonoma County, Cal.

GARDEN SEEDS.

CEO. F. SILVESTER,

IMPORTER, WHOLESALE AND RETAIL DEALER IN

SEEDS,

Fruit and Evergreen Trees, Plants, Etc.

ALFALFA, GRASS AND CLOVER SEEDS

In Large Quantities and Offered in Lots to Suit Purchasers.

Hedge Shears, Pruning and Budding Knives, Green House Syringes, Etc.

Seed Warehouse, 317 Washington St., San Francisco.

FRUIT TREES FOR SALE.

Of the Leading

ORCHARD AND FAMILY VARIETIES,

COMPRISING:

PEACHES.—Orange, Lemon, Crawford, September and Chinese Cling, Susquehanna, Early and Late Crawford, Salway, Smock's Free, etc.

APRICOTS.—Royal, Moorpark, etc.

NECTARINES.—Hardwicke, New White, etc.

PEARS.—Bartlett, Winter Nelis, Seckel, B. Clairgean, etc.

PLUMS.—Yellow Egg, Washington, Jefferson, etc.

PRUNES.—Petite, German, Hungarian, etc. Also,

TREES IN THE DORMANT BUD

—Of all the—

Standard Varieties of Fruits.

A Large Assortment of Garden, Field and Tree Seeds, etc.

R. J. TRUMBULL & CO., Seedsmen,

419 & 421 Sansome Street, San Francisco.

W. R. STRONG & CO.,

WHOLESALE SEED MERCHANTS.

Every Description of Field, Garden, Flower and other Seeds, Flowering Bulbs, etc. can be obtained at our establishment. Fresh, Pure and Genuine at the lowest rates. California Alfalfa, Eastern Clovers and Grass Seeds a Specialty. Seed and Tree Catalogues sent by mail free on application. Also Wholesale Fruit and General Produce Dealers. Special attention will be given and prompt returns rendered for consignments placed with us. Orders for Merchandise of every description promptly and carefully filled at lowest rates. Our constantly increasing line of customer attests to the fairness of our prices and quality of our goods.

Nos. 106 to 110 J Street, Sacramento, Cal.

CAPITAL NURSERIES,
Sacramento, Cal.ORANGE HILL NURSERIES,
Penryn, Placer Co., Cal.W. R. STRONG & CO., Proprietors,
Successors to WILLIAMSON & CO.

A very large and fine stock of Fruit, Shade and Ornamental Trees, Shrubbery, Vines, Plants, etc. All healthy and free from scale bug. Our selection embraces all the leading and many new and choice varieties of Fruit. Priced catalogue on application. Address,

W. R. STRONG & CO., - - - - - Sacramento, Cal.

GARDEN SEEDS.

THOS. MEHERIN,

Importer, Wholesale and Retail Dealer in

SEEDS, TREES AND PLANTS,

Alfalfa, Red and White Clover.

Australian Rye Grass, Timothy and Orchard Grass, Kentucky Blue Grass, Hungarian Millet Grass, Red Top, etc.

Also a large and choice collection of FRUIT and ORNAMENTAL TREES.

BULBS, ROSES, MAGNOLIAS, PALMS, ETC., AT REDUCED PRICES.

Budding and Pruning Knives, Hedge and Pole Shears.

THOS. MEHERIN, 516 Battery St., San Francisco.

Agent for R. D. Fox's Nursery.

FLOWER SEEDS.

FRUIT TREES.

SEEDS

ALBERT DICKINSON,

DEALER IN

Timothy, Clover, Flax, Hungarian, Millet, Red Top, Blue Grass, Lawn Grass, Orchard Grass, Bird Seeds, &c.

POP CORN.

WAREHOUSES:
115, 117 & 119 Kinzie St.
104, 106, 108 & 110 Michigan St.Office, 115 Kinzie St.,
CHICAGO, ILL.SMALL TREES
By Mail or Express.

APPLE and CHERRY SEEDLINGS,

\$5 per 1,000.

PEAR, \$10 per 1,000, Mail or Express Free

Catalogues of numerous other Trees, or Seeds of Fruit and Ornamentals, free.

THOMAS MEEHAN,
Germantown (Philadelphia), Penn.

BY TELEPHONE.—Subscribers, advertisers and other patrons of this office can address orders, or make appointments with the proprietors or agents by telephone, as we are connected with the central system in San Francisco.

PACIFIC COAST HEADQUARTERS

—FOR—

Hansell (Extra Early Red) Raspberry, Fay's Prolific Currant, James Vick and Manchester Strawberries.

All the best Small Fruits. New Illustrated Catalogue free. Address,

C. M. SILVA & SON,
Newcastle, Placer Co., - - - Cal.

W. M. Williams' Semi-Tropical and General Nurseries.

FIVE HUNDRED THOUSAND TREES for sale of the following varieties: Apples, Peaches, Pears, Plums, Apricots, Nectarines, Cherries, Figs, etc., of standard varieties; reas free from scale or other noxious insects. Also, Grape Roots and Cuttings of all leading Raisin and Wine varieties. Seedless Sultanas, Muscatelle, etc. W. M. WILLIAMS, P. O. Box 175, Fresno City, Cal.

Dewey & Co. { 262 Market St. } Patent Agt's

SANTA CLARA NURSERIES,

San Jose, Cal.

On account of having to move from leased ground the coming winter, we offer a large and fine lot of the following varieties of evergreens at greatly reduced rates:

Austrian Pine.....	2 to 3 feet.
Laurestinus.....	2 to 3 "
Lawson Cypress.....	2 to 4 "
Myrtle, Common.....	1 1/2 "
Reptulopsis orata.....	1 1/2 "
Magnolia Grandiflora.....	3 to 5 "
Golden Arborvitae.....	3 "
Monterey Pine.....	3 to 4 "
Monterey Cypress.....	2 to 3 "
Balsam Fir.....	2 "
Blue Gums (transplanted).....	6 "
California Palm.....	2 to 3 "
California Palm.....	3 to 4 "

WE HAVE ALSO FOR SALE

The usual large and well assorted stock of

Miscellaneous Fruit Trees, Small Fruits, Ornamental Shade Trees, Evergreens, Roses, Bulbs, Greenhouse Plants, Etc., etc.

RICHARD D. FOX,
San Jose, Cal.THOS. MEHERIN, Agent,
516 Battery Street, San Francisco.

ROCK'S NURSERIES.

TREES!

For Sale,

A LARGE ASSORTMENT OF

Thrifty, Well-grown Fruit, Shade and Ornamental Trees.

NEW AND RARE EVERGREENS,

Palms, Bamboos, Shrubs, Roses, etc. Small Fruits, including a large variety of Grapevines, for table, for wine and for raisins.

STRAWBERRIES

Of newest and best varieties for market and for profit

Descriptive Catalogues will be sent as follows:

No. 1. Fruits, Grapevines, Berries, etc.....3 cts.
No. 2. Ornamental Trees, Shrubs, Roses, etc.....3 cts.

JOHN ROCK,

San Jose, - - - California

FRUIT TREES.

100,000 Fruit Trees

IN DORMANT BUD.

For sale at Low Prices, consisting of the finest market varieties of

APRICOTS, ALMONDS,

PEACH, PLUM and

NECTARINES.

These Trees are all grown without irrigation, from natural seed imported from Tennessee, and are much more hardy and vigorous than Trees grown from the seed of cultivated varieties.

Send for Catalogues and Prices to

C. W. REED & CO.,

Sacramento, Cal.

THE O. W. CHILDS NURSERY.

FOR SALE.—A first-class, thrifty, healthy stock of Temperate Climate and Semi-Tropic Fruit Trees. Apricot, Peach, Pear, etc., one year old. Orange and Lemon one to four years from bud. Also Seedling Orange Trees.

Semi-Tropic Tree Culture a Specialty.

Price List Mailed Free. O. W. CHILDS, Proprietor.

Address, THOS. A. GAREY, Agent,

P. O. Box 452, Los Angeles, Cal.

RIVER BANK NURSERIES.

The undersigned offers for sale a fine assortment of Apples, Pears, Cherries, Peaches, Plums, Prunes, Apricots, Grapes, Small Fruits, Shade Trees, Evergreens, Roses, Shrubbery and Greenhouse Plants, etc.

NURSEY corner of Twelfth Street and Berryessa Road, and on Milpitas Road, adjoining John Rock's Nurseries.

L. F. SANDERSON, San Jose, Cal.

TREES AND SEEDS TRUE TO NAME.

APPLES—Red, 18 to 20, Jonathan, Harvest, Lenoir, Prolific, Washington, etc. PEACHES—Early, 18 to 20, Elberta, etc. ALMONDS—Early, 18 to 20, etc. PLUMS—Early, 18 to 20, etc. CHERRIES—Early, 18 to 20, etc. PEAR—Early, 18 to 20, etc. GRAPE—Early, 18 to 20, etc. VINES—Early, 18 to 20, etc. BERRIES—Early, 18 to 20, etc. STRAWBERRIES—Early, 18 to 20, etc. CLOVERS—Early, 18 to 20, etc. GRASSES—Early, 18 to 20, etc. SEEDS—Early, 18 to 20, etc. CATALOGUES FREE.

W. A. SANDERSON, Sacramento, Fresno Co., Cal.

Napa Valley Nurseries.

FRUIT TREES, GRAPE CUTTINGS, \$4 to \$5 per 1,000 Rooted Vines, Riparia and other stock. Unirrigated and healthy. For particulars and prices, address, LEONARD COATES, Napa City, Cal.

From July, 1882, to January, 1883.

Temperance..... 76
 Thanksgiving Spirit..... 404
 Thanksgiving Problems..... 353, 386
 Thanksgiving Story..... 408, 427
 Thanksgiving, Thoughts for..... 408
 Thistle Hay..... 200
 Thrashers, Combined..... 56, 80
 Thrashing Notes..... 24, 68, 100
 120, 121
 Timber on Mineral Lands..... 285
 Times and Seasons..... 386
 Toads, Poisonous..... 392
 Tomato Growing..... 136
 Tools, Edges..... 185
 Tooth, Story of..... 467
 Tornadoes..... 141
 Train, How He Saved the..... 403
 Transportation Problem..... 88
 180, 140
 Trees, Annual Growths..... 333
 Trees as Drains..... 140
 Trees, Sunburned..... 304
 Trout Culture..... 301
 Tulare County..... 20, 40, 301
 345, 385, 400, 429, 441, 512
 Tuolumne County..... 50, 169
 216, 241, 283, 301, 462, 512
 Turkey Roast..... 415
 U
 University of Southern Cal..... 84
 V
 Vegetables, Cooking..... 243
 Vegetables, Medicinal Value of..... 103
 Ventura County..... 52, 60, 321
 441, 489
 Venus, Transit of..... 421
 Vinegar, Danger in..... 171
 Vinegar for Sick Room..... 155
 Vinegar, Recipe for..... 171
 Vinegar, Raspberry..... 156
 Vine Cuttings, Care of..... 215
 373
 Vine Planting..... 373
 Vine Planting in Lake Co..... 198
 Vine Pruning..... 100, 120, 153
 Vines, Iron for..... 34
 Vines, Resisting..... 97, 124, 138
 165
 Vines, Son Ma Co..... 361
 Vineyard, Oldest in Cal..... 12
 Vineyard Plow..... 84
 Viticultural Commission..... 35
 465
 Volume Close of the..... 50
 Von Mouse, Death of..... 322
 Voters, Duty of..... 246, 348
 W
 Walnut, Cal..... 166
 Walnuts, Early Bearing..... 204
 Walnut Budding and Grafting..... 318, 353
 Wardens, Proportions..... 274
 290, 318, 333
 Washington, George..... 5
 Water, Color of..... 413
 Watermelons, Lodi..... 205
 Watermelons, Santa Cruz..... 321
 Water Rights in Cal..... 73, 99
 Water, Velocity of Falling..... 410
 Wattle, The Black..... 373
 Weather Proverbs..... 124
 Wheat Cleaning..... 53
 Wheat Freight, Ocean..... 141
 Wheat Ships, Loading..... 100
 Whitewashes, Durable..... 104
 Widow's Mite..... 383
 Willard, Death of X. A..... 384
 Willow as a Weed..... 13
 Wine at Santa Cruz Fair..... 301
 Wine by Electricity..... 51
 Wine Product of Napa County..... 480
 Wire Cloth..... 439
 Wisdom, Power of..... 392
 Woman, Reader's True..... 202
 Woman's Rights..... 38, 202
 242, 366
 Woman Suffrage..... 442
 Woman's Work..... 332
 Women and the Law..... 189
 402
 Wood, Artificial..... 376
 Wooden Buildings, Danger in..... 376
 Wood Preserving..... 28, 141
 Woodwork Polishing..... 303
 Woolly Apple..... 264, 304
 Wool Notes..... 385, 390, 404
 Wool Trade of Half Year..... 21
 41
 Working Clothes..... 203
 Work, Time for..... 155
 Wouldn't Marry a Farmer..... 122
 Wreath, Agricultural..... 304
 Wrinkles, What They Tell..... 427
 Y
 Yaw, Pacific..... 3
 Yolo County..... 52, 60, 345, 385
 513
 Young, J. W..... 370
 Yuba County..... 4, 21, 329
 Z
 Zines, Cause of Dry..... 456

The Rural for 1883.

The many tributes to the value of the RURAL PRESS which we have received from readers, assure us that our promises of a year ago have been fulfilled. This induces us to continue and extend our efforts, for there is nothing so inspiring and encouraging as the approval of those whom we labor to please. The RURAL PRESS for 1882 has contained more pages than any previous year; it has presented important subjects more fully and carefully; it has secured the aid and co-operation of a much greater number of able and practical contributors—and in short, so our readers say, has been a credit to the State and an invaluable aid in the advancement of our agricultural industry, and an influence in the improvement of our homes and the elevation of our people.

Now we propose to make the RURAL PRESS for 1883 much better than the volume which is now closing, and in this effort we bespeak the aid and support of all in whose interest we work. By the aid of special contributors, who are experts in the matters on which they write, we propose to present by far the best collection of farm and home literature which has ever been furnished to Pacific coast readers.

Instead of the regular sized sixteen page sheet of our weekly issues, we shall repeatedly print enlarged editions of

From 24 to 32 Pages,

On special themes which are most timely. They will be in the main as follows, with such changes as may be necessary:

January 13—Agricultural Review.

Statistics of production of 1882, etc., and a forecast of prospects for 1883, so far as discernible.

February 3—Dairy Edition.

The extent of the dairy interests, their practices and materials, the progress of the effort against bogus butter, etc.

February 24—Patriotic Edition.

Washington's birthday, with reviews and illustrations appropriate to the occasion; also references to arboriculture, floriculture, etc., which will be seasonable.

March 10—Southern California Edition.

Semi-tropical illustrations and matters of historical, climatic interest concerning southern California, its natural wealth and resources, and its wonderful recent advancement.

April 7—Spring Work.

Agricultural machinery, haying and harvesting, home seeking, labor statistics, review of manufactures, markets, etc.

May 5—Live Stock Edition

Reviews of all kinds of haired and feathered farm stock, with notes on breeding, feeding, treatment of diseases, etc.

May 20—Tourist's Edition

Fine illustrations of Pacific coast scenery, camping sketches and information, watering places at home and abroad, etc.

June 16—Harvest Edition.

Thrashing machinery, grain cleaners, etc., the outlook for grain values and the records of former years.

The foregoing is an outline of the work, but we shall reserve the right to do much better, if we can. Readers may expect a vigorous and wide awake journal, and may recommend it as much to their friends and neighbors.

